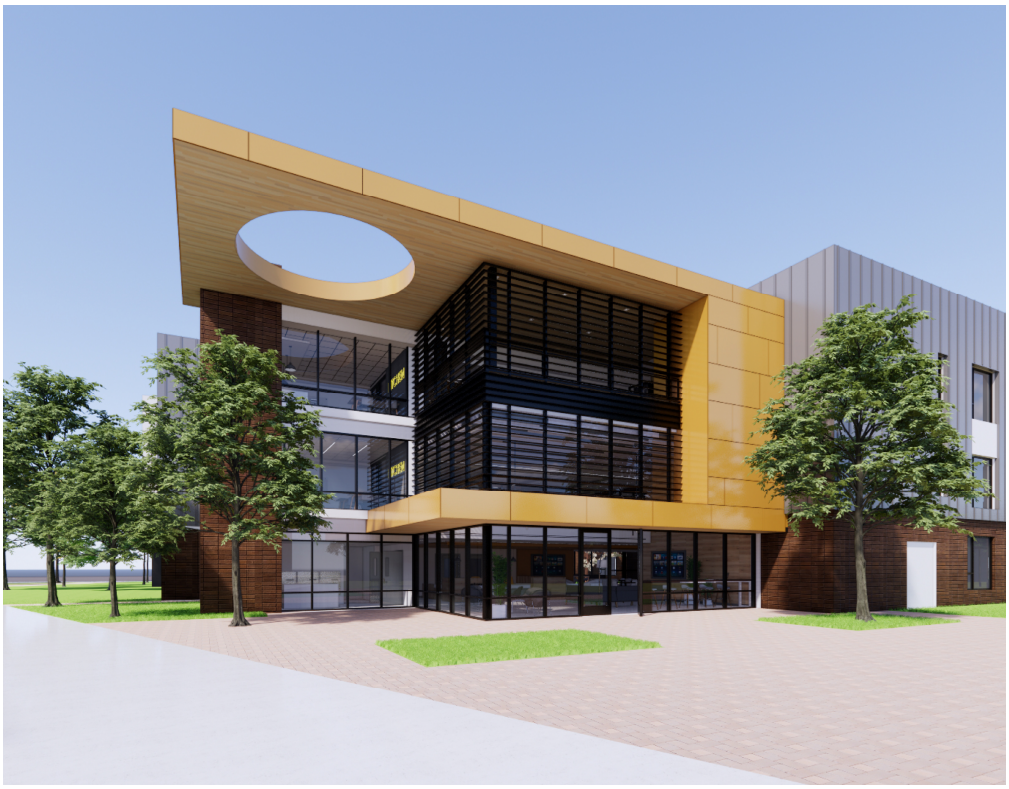
Compton College Student Housing

General Requirements

1111 E. Artesia Blvd., Compton, CA 90221



Specifications

DSA BACKCHECK SUBMITTAL

VOLUME 1

September 05, 2023

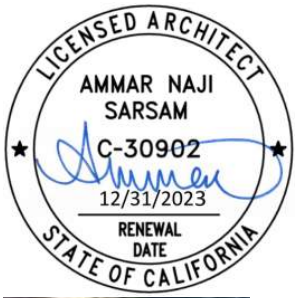
HPI architecture

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 03-123205 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 10/02/2023

ARCHITECT

HPI Architecture
115 22nd Street
Newport Beach, CA 92663
Tel. (949) 675-6442
Fax: (949) 675-4543

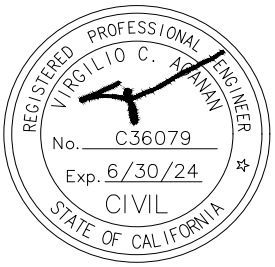
Contacts: Ammar Sarsam, Principal



CIVIL ENGINEER

VCA ENGINEERS, INC.
1041 S. Garfield Ave. #210
Alhambra, CA 91801
Tel. (323) 729-6098
Fax: (323) 729-6043

Contact: Virgil Aoanan



LANDSCAPE ARCHITECT

RLA
8841 Research Drive, Suite 200
Irvine, CA 92618
Tel. (949) 387-1323

Contact: James J. Ridge

STRUCTURAL ENGINEER

JOHN A. MARTIN & ASSOCIATES (JAMA)
950 S. Grand Ave. Ste. 400
Los Angeles, CA 90015
Tel. (213) 483-6490

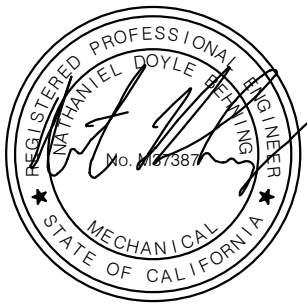
Contact: Shane Fitzgerald

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 03-123205 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 10/02/2023

MECHANICAL/PLUMBING

P2S, Inc.
5000 East Spring Street, 8th Floor
Long Beach, California 90815
Tel. (562) 497-2999

Contact: Nate Behning

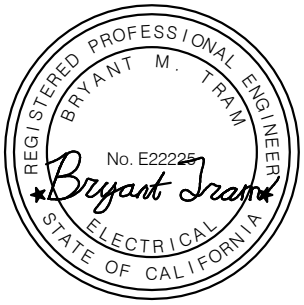


SIGND: 03/22/2023

ELECTRICAL, FIRE ALARM, TECHNOLOGY (DATA/SECURITY/AV), & SOLAR

P2S, Inc.
5000 East Spring Street, 8th Floor
Long Beach, California 90815
Tel. (562) 497-2999

Contact: Bryant Tram



SIGND: 03/22/2023

FIRE PROTECTION ENGINEER

P2S, Inc.
5000 East Spring Street, 8th Floor
Long Beach, California 90815
Tel. (562) 497-2999

Contact: Andres Jimenez

SIGND: 03/22/2023

TRASH MANAGEMENT

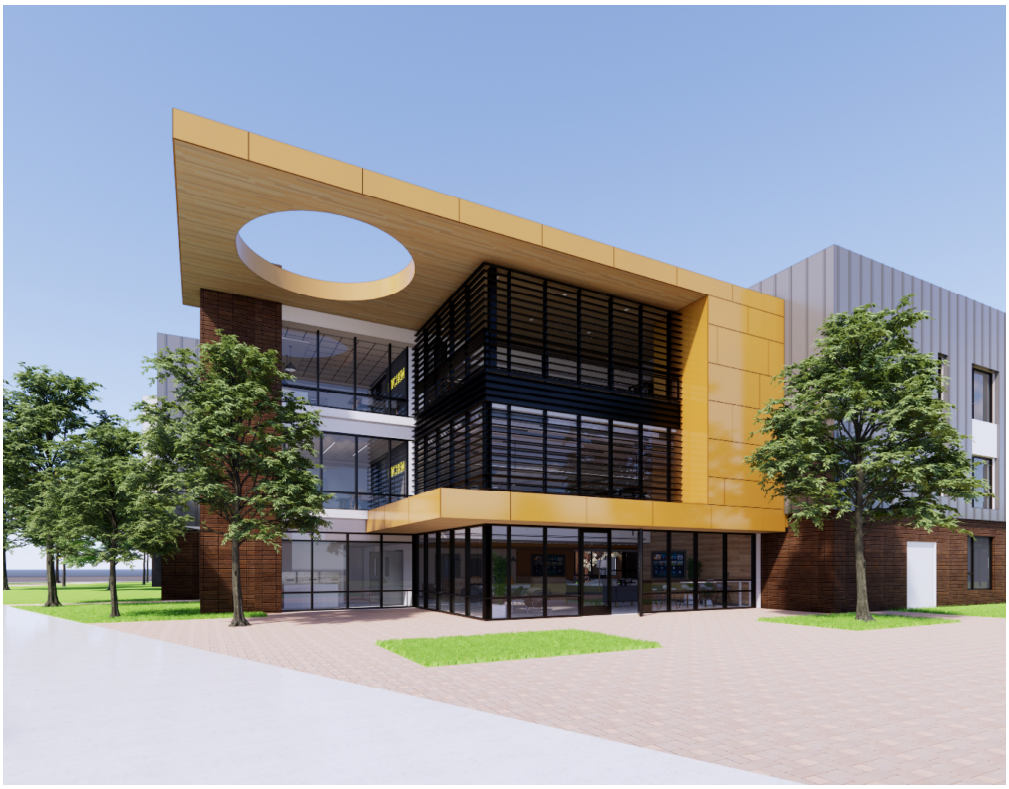
AMERICAN TRASH MANAGEMENT
1900 Powell Street, Ste. 220
Emeryville, CA 94608
Tel. (415) 292-5400
Fax: (415) 292-5410

Contact: Scott Brown

Compton College
Student Housing

Increment 1

1111 E. Artesia Blvd., Compton, CA 90221



Specifications

DSA BACKCHECK SUBMITTAL

VOLUME 2

September 05, 2023

HPI architecture

Compton Community College District
RFP CCC-084
Student Housing Project Re-Bid
Pre-Qualified Bidders Only
Table of Contents

RFP Attachments

COMPTON COMMUNITY COLLEGE DISTRICT
BID AND CONTRACT DOCUMENTS
STUDENT HOUSING RE-BID

PRE-QUALIFIED BIDDERS ONLY

TABLE OF CONTENTS

NOTICE TO PRE-QUALIFIED CONTRACTORS ONLY; CALLING FOR BIDS

DISTRICT	COMPTON COMMUNITY COLLEGE DISTRICT
PROJECT DESCRIPTION	RFP CCC-084 STUDENT HOUSING RE-BID
MANDATORY JOB WALK	**Wednesday, September 04, 2024 at 10 AM** **Meet at the east entrance of Instructional Building 1**
LATEST TIME/DATE FOR SUBMISSION OF BID PROPOSALS	**2:00 PM** **Monday, October 07, 2024**
LOCATION FOR SUBMISSION OF BID PROPOSALS	COMPTON COMMUNITY COLLEGE DISTRICT 1111 East Artesia Boulevard Compton, CA 90221 Building: **C-Row, Business Services Office** Office/Room: **C-34 (Attention: Roy Patterson)**
LOCATION FOR OBTAINING BID AND CONTRACT DOCUMENTS	The District's Website: https://www.compton.edu/district/administrative-business-services/bid-proposal-requests.aspx

NOTICE IS HEREBY GIVEN that the above-named California Community College District, through its Board of Trustees ("the District") will accept Bid Proposals for the Contract for **STUDENT HOUSING RE-BID** ("the Work").

1. Pre-Qualified Bidders. The District has completed a Pre-Qualification process and established the Pre-Qualified Bidders deemed qualified to submit a Bid Proposal for the Work. The District will only consider Bid Proposals submitted by a Pre-Qualified Bidder. A Bid Proposal submitted by a Bidder who is not a Pre-Qualified Bidder will be rejected by the District for non-responsiveness.

2. Pre-Qualified Prefabricated Volumetric Modular Manufacturer and Deep Soil Mixing Subcontractors. The District has completed a Pre-Qualification process for the following first tier Subcontractors ("Pre-Qualified Subcontractors"):

   Volumetric Modular Manufacturer: Licensed as a modular manufacturer of new multi-family housing units by the California Department of Housing and Community Development preferred.

   Deep Soil Mixing: A – General Engineering Contractor or a C-61/D-30 Limited Specialty/Pile Driving, Pressure Foundation Jacking Contractor

   The list and contact information for Pre-Qualified Subcontractors are available at: https://www.compton.edu/district/administrative-business-services/bid-proposal-requests.aspx ("Pre-Qualified Subcontractors List"). Subcontractors identified in the Subcontractors List for the Volumetric Modular Manufacturer and Deep Soiling Mixing scopes of Work must be on the Pre-Qualified Subcontractors List. ***The listing of a Volumetric Modular Manufacturer or Deep Soiling Mixing Subcontractor in the Subcontractors List who is not on the Pre-Qualified Subcontractors List will result in rejection of the Bid Proposal for non-responsiveness.***

3. Submittal of Bid Proposals. All Bid Proposals shall be submitted on forms furnished by the District at or prior to the date and time set forth above.

4. Bid and Contract Documents. The Bid and Contract Documents can be obtained at: https://www.compton.edu/district/administrative-business-services/bid-proposal-requests.aspx. Bid and Contract Documents will be available after Wednesday, August 21, 2024. While the Bid and Contract Documents may be available through other Planrooms or sites, the District does not guarantee the authenticity or completeness of the Bid and Contract Documents obtained from

such other Planrooms or sites. Bidders shall be solely responsible for reviewing the District's website and downloading any and all Project Documents and Addenda from the District's website.

5. Documents Accompanying Bid Proposal. The Bidder has submitted with this Bid Proposal the following: (i) Bid Security; (ii) Subcontractors List; (iii) Bidder verification of prequalification information; (iv) Deep Soil Mixing and Volumetric Prefab Modular Manufacturer Subcontractor Verification of Pre-Qualification Application Information; (v) Non- Collusion Affidavit; (vi) DVBE Worksheets, Attachments A-G; (vii) Copy of Bidder's Illness Injury Prevention Plan.

6. Prevailing Wage Rates. Pursuant to California Labor Code §1773, the Director of the Department of Industrial Relations of the State of California has determined the generally prevailing rates of wages in the locality in which the Work is to be performed. Copies of these determinations, entitled "PREVAILING WAGE SCALE" are available for review on the internet at http://www.dir.ca.gov/dlsr/statistics_research.html. The Contractor awarded the Contract for the Work shall post a copy of all applicable prevailing wage rates for the Work at conspicuous locations at the Site of the Work. The Contractor and all Subcontractors performing any portion of the Work shall pay not less than the applicable prevailing wage rate for the classification of labor provide by their respective workers in prosecution and execution of the Work. During the Work and pursuant to Labor Code §1771.4(a)(4), the Department of Industrial Relations shall monitor compliance with prevailing wage rate requirements and enforce the Contractor's prevailing wage rate obligations.

7. Bidder and Subcontractors DIR Registered Contractor Status. All Subcontractors identified in a Bidder's Subcontractors' List, except for the Volumetric Prefab Manufacturer must be DIR Registered contractors at the time the Bid Proposal is submitted.

8. Contractors' License Classification. The District requires that Bidders possess the following classification(s) of California Contractors License at the time that 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.

9. Owner Controlled Insurance Program ("OCIP"). The District may elect to implement an Owner Controlled Insurance Program ("OCIP") in connection with the construction of the Project. If elected, the District will provide the OCIP. Subject to meeting underwriter and other requirements of the OCIP, the OCIP will provide Workers' Compensation, Employer's Liability, General Liability, Contractors' Pollution Liability, and Builders Risk insurance for the Contractor (along with Enrolled Subcontractors) and other designated parties for Work performed at the Site. The District will pay all premiums associated with the OCIP, unless otherwise indicated in the Contract Documents. Insurance coverage provided under the OCIP is limited in scope and specific to Work performed after the inception date of enrollment into the OCIP. Labor and operations relating to the Work conducted away from the Site ("Offsite Operations") are not covered by the OCIP; the Contractor and Subcontractors shall obtain insurance for Offsite Operations as required by the Contract Documents. In addition to any insurance provided by the District through the OCIP, the Contractor and Subcontractors are responsible for obtaining insurance coverages required by General Conditions, Article 6. The District encourages Bidders to carefully review provisions of the Contract Documents relating to the OCIP and other insurance required to be maintained by the successful Bidder and to discuss insurance requirements with their insurance agents, brokers or insurance consultants to assure that all required insurance policies and minimum coverage amounts are maintained during the Work.

10. Disabled Veteran Business Enterprises ("DVBE") Participation Goal. Pursuant to Military & Veterans Code §999.2, the District has established a Good Faith Participation Goal for DVBEs of three percent (3%) of the value of the Work. The District's DVBE Participation Goal Policy ("DVBE Policy") is set forth in the Contract Documents. All Bidders shall submit to the District DVBE Worksheets establishing achievement of the DVBE Participation Goal or Good Faith Efforts to achieve the DVBE Participation Goal. Failure of any Bidders to comply with the DVBE Worksheet submission requirement will result in rejection the Bidder's Bid Proposal for non-responsiveness.
11. Contract Time. Substantial Completion of the Work shall be achieved as set forth in the Contract Documents; Liquidated Damages will be assessed for delayed Substantial Completion.
12. Bid Security. Each Bid Proposal shall be accompanied by Bid Security in an amount not less than ten percent (10%) of the maximum amount of the Bid Proposal, inclusive of any additive Alternate Bid Item(s). A Bid Proposal which is not accompanied by the required Bid Security is non-responsive and will be rejected by the District.
13. Alternate Bid Items. If the bidding include(s) Alternate Bid Items for which each Bidder must propose pricing for each Alternate Bid Item, the District's selection of Alternate Bid Items for determination of the lowest bid shall be as set forth in the Instructions to Bidders.
14. No Withdrawal of Bid Proposals. Bid Proposals shall not be withdrawn by any Bidder for sixty (60) days after the opening of Bid Proposals. During this time, all Bidders shall guarantee prices quoted in their respective Bid Proposals.
15. Job-Walk. The District will conduct a Mandatory Job Walk on Wednesday, September 04, 2024 beginning at 10:00 AM Bidders are to meet at the entrance to Instructional Building 1 at Compton College for the Job Walk. Parking permit is $3.00 and permits are available at parking kiosks in the parking lots. Please plan accordingly. If the Job Walk is mandatory, the Bid Proposal submitted by a Bidder whose representative(s) did not attend the entirety of the Mandatory Job Walk will be rejected by the District as being non-responsive.
16. Pre-Bid Inquiries. Bidders may submit pre-bid inquiries or clarification requests no later than 2:00 PM on Monday, September 16, 2024. Pre-bid inquiries or clarification requests shall be submitted only to David Lelie at: dlelie@gafcon.com. **Do not submit pre-bid inquiries directly to the District.**
17. Copies of Agreement and Bonds. The number of required executed copies of the Agreement are ONE (1) The number of required executed copies of the Performance Bond and the Labor & Materials Payment are ONE (1); include one thumb drive copy of the original.
18. Award of Contract; Waiver of Irregularities. The Contract, if awarded, will be by action of the District's Board of Trustees to the responsible Bidder submitting the lowest priced responsive Bid Proposal. If Alternate Bid Items are included in the bidding, the lowest priced Bid Proposal will be determined on the basis of the Base Bid Proposal or on the Base Bid Proposal and the combination of Alternate Bid Items selected in accordance with the above. 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.

[End of Section]

INSTRUCTIONS FOR BIDDERS

1. Bid Proposal. 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. Completion of Bid Proposal. Where required, numbers shall be stated by words and figures; words; conflicts between numbers stated in words and in figures are governed by the words. Bid Proposals are non-responsive and will be rejected if: (i) partially completed; (ii) submitted on forms other than those required by the District; (iii) erasures, interlineations or other corrections are not suitably authenticated by the initials of the person(s) signing the Bid Proposal adjacent to such erasure, interlineations or correction; (iv) a Bid Proposal, or portions thereof, is/are determined by the District to be illegible, ambiguous or inconsistent.

   1.2. Bidder Pre-Qualification; Verification of Pre-Qualification Information. Each Bidder submitting a Bid Proposal for the Work must be deemed a Pre-Qualified Bidder pursuant to criteria set forth in the District's Pre-Qualification Application for the Project. A Bid Proposal of a Bidder who has not been deemed a Pre-Qualified Bidder will be rejected for non-responsiveness. Bidders must complete and submit with its Bid Proposal the form of Verification of Pre-Qualification Application Information included within the Contract Documents. Failure of such a Bidder to complete, execute and submit the form of Verification of Pre-Qualification Application with its Bid Proposal may result in the District's rejection of such Bidder's Bid Proposal for non-responsiveness. Bid Proposals must be submitted with executed forms of Volumetric Modular Manufacturer and Deep Soil Mixing Subcontractor Verification of Pre-Qualification Application Information of the Bidder's listed Subcontractors for the Volumetric Modular Manufacturer and Deep Soil Mixing portions of the Project.

   1.3. Submittal. Bid Proposals shall be submitted in sealed envelopes bearing on the outside the Bidder's name and address along with an identification of the Work for which the Bid Proposal is submitted. A Bid Proposal is deemed submitted only if the outer envelope containing the Bid Proposal is stamped by the District's date/time stamp machine at the location where Bid Proposals are to be submitted.

   1.4. Withdrawal; Modification. No oral modification or withdrawal of a submitted Bid Proposal will be considered; a written request to modify or withdraw a submitted Bid Proposal will be considered only if the written request is received by the District before the public opening of Bid Proposals.

2. Bid Security. Each Bid Proposal shall be accompanied by Bid Security in the form of: (i) cash; (ii) certified or cashier's check payable to the District; or (iii) a Bid Bond, in the form and content incorporated into the Contract Documents (the "Bid Security") in an amount not less than ten percent (10%) of the maximum amount of the Bid Proposal. Bid Bonds must conform to the following: (i) the Bid Bond is in the form and content included herein; and (ii) the Surety is an Admitted Surety Insurer under Code of Civil Procedure §995.120; (iii) authorized employees or representatives of the Bidder and Surety execute the Bid Bond and their signatures are duly notarized; (iv) the Surety's representative's authority to bind the Surety is attached to the Bid Bond and duly attested to by the Surety; and (v) all other information required by the form of the Bid Bond is completely and accurately provided.

3. 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 initials of the person(s) signing the Bid Proposal. If a Bid Proposal, or portions thereof, are 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.

4. 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 prior to bid and conditions affecting the Work. The submission of a Bid Proposal is prima facie evidence of the Bidder's full compliance with the foregoing requirements.

5. Agreement and Bonds Upon Award of Contract. If the Bidder submitting this Bid Proposal is awarded the Contract, the undersigned will execute and deliver to the District the Contract in the form attached hereto within five (5) 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: (a) Certificates of Insurance evidencing all insurance coverage required under the Contract Documents; (b) the Performance Bond; (c) the Labor and Material Payment Bond; (d) the Certificate of Workers' Compensation Insurance; and (e) the Drug-Free Workplace Certificate. Failure of the Bidder awarded the Contract to strictly comply with the preceding may result in the District's rescission of the 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 Bid Proposal, or to reject all Bid Proposals. 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.

6. Pre-Bid Questions; Contract Document Interpretation and Modifications. Any Bidder in doubt as to the true meaning of any part of the Contract Documents; finds discrepancies, errors or omissions therein; or finds variances in any of the Contract Documents with the Laws ("Pre-Bid Questions"), shall submit a request for an clarification, interpretation or correction thereof using the form of Pre-Bid Inquiry included with the Contract Documents. Bidders are solely and exclusively responsible for submitting Pre-Bid Questions no later than the time/date designated in the Call for Bids. Responses to Pre-Bid Questions will be by written addendum issued by, or on behalf of, the District. The District will distribute addenda to the Pre-Qualified Bidders. Failure to 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.

7. Interpretation of Drawings, Specifications or Contract Documents. Interpretations, modifications or corrections of the Contract Documents will be by written addendum issued by or on behalf of the District. 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.

8. Bidder's Assumptions. The District is not responsible for any assumptions made or used by the Bidder in calculating its Bid Proposal Amount including, without limitation, assumptions regarding costs of labor, materials, equipment or substitutions/alternatives for any material, equipment, product, item or system incorporated into or forming a part of the Work which have not been previously expressly approved and accepted by the District. The successful Bidder, upon award of the Contract by the District, if any, will be required to complete the Work for the amount bid in the Bid Proposal within the Contract Time and in accordance with the Contract Documents.

9. 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 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. Failure of a Bidder to acknowledge addenda in its Bid Proposal will render the Bid Proposal non-responsive and rejected.

10. 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 thereby disqualified from submitting a sub-proposal, quoting prices to other Bidders or submitting a Bid Proposal for the proposed Work to the District. Failure of a Bidder to submit a completed and executed Non-Collusion Affidavit with its Bid Proposal will render the Bid Proposal non-responsive.

11. Award of Contract. The District reserves the right to reject any and all Bid Proposals or to waive any irregularities or informalities in any Bid Proposal or in the bidding. 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.

    11.1. Responsive Bid Proposal. A responsive Bid Proposal shall mean a Bid Proposal which conforms, in all material respects, to the Bid and Contract Documents.

    11.2. Responsible Bidder. A responsible Bidder is a Bidder who has the capability in all respects, to perform fully the requirements of the Contract Documents and the moral and business integrity and reliability which will assure good faith performance. In determining responsibility, the following criteria will be considered: (i) the ability, capacity and skill of the Bidder to perform the Work of the Contract Documents; (ii) whether the Bidder can perform the Work promptly and within the time specified, without delay or interference; (iii) the character, integrity, reputation, judgment, experience and efficiency of the Bidder; (iv) the quality of performance of the Bidder on previous contracts, by way of example only, the following information will be considered: (a) the administrative, consultant or other cost overruns incurred by the District on previous contracts with the Bidder; (b) the Bidder's compliance record with contract general conditions on other projects; (c) the submittal by the Bidder of excessive and/or unsubstantiated extra cost proposals and claims on other projects; (d) the Bidder's record for completion of work within the contract time and the Bidder's compliance with the scheduling and coordination requirements on other projects; (e) the Bidder's demonstrated cooperation with the District and other contractors on previous contracts; (f) whether the work performed and materials furnished on previous contracts was in accordance with the Contract Documents; (v) the previous and existing compliance by the Bidder with laws and ordinances relating to contracts; (vi) the sufficiency of the financial resources and ability of the Bidder to perform the work of the Contract Documents; (vii) the quality, availability and adaptability of the goods or services to the particular use required; (viii) the ability of the Bidder to provide future maintenance and service for the warranty period of the Contract; (ix) whether the Bidder is in arrears on debt or contract or is a defaulter on any surety bond; (x) such other information as may be secured by the District having a bearing on the decision to award the Contract, to include without limitation the ability, experience and commitment of the Bidder to properly and reasonably plan, schedule, coordinate and execute the Work of the Contract Documents and whether the Bidder has ever been debarred from bidding or found ineligible for bidding on any other projects. The ability of a Bidder to provide the required bonds will not of itself demonstrate responsibility of the Bidder.

    11.3. Alternate Bid Items. The following shall apply if Alternate Bid Item(s) are included in the bidding for the Work.

        11.3.1. Selection of Alternate Bid Items. The selection of Alternate Bid Items for inclusion in the scope of the Work of the Contract to be awarded and for determination of the lowest Bid Proposal based upon the Base Bid Proposal and the combination of Alternate Bid Items selected for inclusion in the Contract to be awarded 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 will not be engaged in the selection of 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 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 Proposals 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 letter or number assigned to each Bidder by the Clerical Staff. After the public reading of Bid Proposals, the Clerical Staff will provide the Architect, Construction Manager 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; Bid Proposals reviewed by the Architect and District Project Staff will identify Bidders only by numbers or letters assigned by the Clerical Staff. At such time as the Architect, Construction Manager and the District Project Staff have completed review of Bid Proposals and made a determination of which Bidder (by the alphabetical letter assigned by Clerical Staff) has submitted the lowest Bid Proposal on the basis of the Base Bid Proposal and any combination of Alternate Bid Items as determined by the Architect, Construction Manager and the District Project Staff, the Clerical Staff will make available to the Project Staff the Bidders List so that the identity of the Bidder to be awarded the Contract can be identified. Until such time as the District Project Staff have completed review of Bid Proposals and determination of which Bidder has submitted the lowest Bid Proposal, there will be no communication between the Clerical Staff and the Architect, Construction Manager or the District Project Staff regarding the identities of Bidders or disclosure of any portion of the Bidders List.

11.3.2. Alternate Bid Items Proposal. If the bidding includes Alternate Bid Items, the price(s) proposed by a Bidder for each Alternate Bid Item shall be set forth in the appropriate line item of the Alternate Bid Items Proposal form. If Alternate Bid Items are included in the bidding, each Bidder shall submit its completed and executed Alternate Bid Items Proposal Form with submission of the Bid Proposal. The Bid Proposal of a Bidder will be rejected for non-responsiveness if the Bidder fails to propose prices for each Alternate Bid Item included in the bidding.

11.3.3. 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, 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 Proposal.

12. Subcontractors. Each Bidder shall submit a list of its Subcontractors for the Work as required by California Public Contract Code §§4100 et seq. on the form furnished. If a Bidder requires bonds of its Subcontractor(s), such requirements shall be specified in the Bidder's written or published request for sub-bids.

12.1. Pre-Qualified Deep Soil Mixing Subcontractors, and Volumetric Pre-Fab manufacturers. Proposed Deep Soil Mixing Subcontractors, and Volumetric Pre-Fab manufacturers must be Pre-Qualified Subcontractors. The Bid Proposal of a Bidder who identifies a proposed Subcontractor in the Subcontractors List who is not a Pre-Qualified Subcontractor will be rejected for non-responsiveness.

13. 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 sign and deliver to the District the Certificate of Workers Compensation Insurance incorporated into the Contract Documents.

14. OCIP.

14.1. General. Pursuant to Government Code §4420.5, Labor Code §§6300, et seq. and Title 8 of

the California Code of Regulations, the District has implemented an OCIP for the Work as more particularly set forth herein and in the Contract Documents. Pursuant to the OCIP, the District shall purchase, provide and maintain for the benefit of the Contractor and its Subcontractors and Sub-Subcontractors, certain insurance for Workers' Compensation/Employer's Liability, General Liability, and Contractor's Pollution Liability as more particularly set forth in the Contract Documents, including but not limited to Article 6 of the General Conditions. Notwithstanding insurance coverages provided under the OCIP, the Contractor and its Subcontractors, Sub-Subcontractors and others shall purchase, provide and maintain certain other insurance coverage's not provided for under the OCIP as set forth in the Contract Documents, including but not limited to Article 6 of the General Conditions.

14.2. Bid Proposals Exclusion of Contractor/Subcontractor Insurance Costs. Bidders' pricing proposals in their Bid Proposals shall be exclusive of premium and other costs of the Bidder and its Subcontractors for the insurance coverages provided under the OCIP. The price proposal in each Bidder's Bid Proposal shall be inclusive of premium and other costs for obtaining and maintaining insurance coverages required by the Contract Documents, but not included in the scope of coverages afforded under the OCIP. Excluded insurance costs shall include self-funded insurance coverages, coverages requiring large deductibles and costs for any coverage above the self-funded or deductible portions.

14.3. Minimum Safety Requirements; Responsive Bid Proposal. In addition to other standards and requirements set forth herein relating to responsive Bid Proposals, a Bid Proposal will be deemed non-responsive and rejected by the District if the Minimum Safety Requirements under the OCIP are not met or exceeded. Pursuant to Government Code §4420.5, the District has established the Minimum Safety Requirements set forth below. The Bidder and each of the Bidder's Subcontractors who are identified on the Bidder's Subcontractors List must meet the Minimum Safety Requirements. The Bid Proposal will be rejected for non-responsiveness if the Bidder does not meet the Minimum Safety Requirements.

14.3.1. No Cal-OSHA Violations deemed Serious and Willful. No (zero) violations deemed serious and willful, or repeat under Labor Code §§6300 et seq. within the past five (5) years.

14.3.2. Injury and Illness Prevention Program ("IIPP"). The Bidder and all listed Subcontractors of the Bidder shall have a current IIPP conforming to Labor Code §3201.5 or Labor Code §6401.7.

14.3.3. Workers Compensation Insurance EMR. The Bidder and the Bidder's listed Subcontractors shall have a current Workers Compensation Insurance Experience Modification Rating ("EMR") of no more than 1.25.

14.4. District Verification of Compliance with Minimum OCIP Requirements. The District will verify compliance with Minimum OCIP Requirements, including the EMR of Bidders. Any information found to be incorrect or untrue shall render Bidder's Bid Proposal non-responsive.

15. DVBE Participation Goal. Bidders must meet the DVBE Participation Goal or demonstrate that Good Faith Efforts were made to meet the DVBE Participation Goal. The DVBE Participation Goal is not a quota or a set-aside, but Good Faith Efforts must be made to achieve the DVBE Participation Goal. The DVBE Participation Goal and related documents establishing a Bidder's achievement of the DVBE Participation Goal are set forth in the DVBE Participation Policy and DVBE Worksheets. All Bid Proposals be submitted with the completed DVBE Worksheets. The Bid Proposal of a Bidder who did not meet the DVBE Participation Goal and who does not demonstrate by the DVBE Worksheets that Good Faith Efforts were made to achieve the DVBE Participation Goal will be rejected for non-responsiveness.

16. Bid Security Return. The Bid Security of the Bidders submitting the three (3) lowest priced

responsive Bid Proposals will be held by the District for ten (10) days after the period for which Bid Proposals must be held open, as set forth 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.

17. 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 priced Bid Proposal or may call for new bids, in its sole and exclusive discretion.

18. Contractor's 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 will not be waived by the District or its Board of Trustees.

19. Bidder and Subcontractors Verification of Pre-Qualification Application Information. Bidders shall submit with their Bid Proposals completed forms of Bidder Verification of Pre-Qualification Application Information and Subcontractor Verification of Pre-Qualification Application Information for the Bidder's Volumetric Modular Manufacturer and Deep Soil Mixing Subcontractors. If any material and/or adverse changes are noted in the Bidder or Subcontractor Verifications of Pre-Qualification Application Information, the District reserves the right to conduct such further review, evaluation or investigation as deemed appropriate by the District.

20. Job-Walk. The District will conduct a Job-Walk at the time(s) and place(s) designated in the Call for Bids. Attendance by representatives of the Bidder's Subcontractors at a Mandatory Job Walk without attendance by a representative of the Bidder is not sufficient to meet the Bidder's obligations hereunder and will render the Bid Proposal of such Bidder to be non-responsive. Notwithstanding the non-compulsory attendance of Bidders at a Non-Mandatory Job Walk, all Bidders are encouraged to attend Non-Mandatory Job Walks.

21. 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 he 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). 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. When 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 pursuant to the California Access to Public Records Act, California Government Code §§7920, 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 there from. 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.

22. Drug Free Workplace Certificate. The successful Bidder will be required to execute a Drug Free Workplace Certificate pursuant to California Government Code §§8350 et seq., concurrently with execution of the Agreement.

23. 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.

24. Bid Protest. Any Bidder submitting a Bid Proposal to the District may file a protest of the District's intent to award the Contract provided that each and 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 of Administrative Services, not more than five (5) calendar days following the date of 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 credible evidence. Any bid protest not conforming to the foregoing shall be rejected by the District as invalid. Provided that a bid protest is filed in strict conformity with the foregoing, the District's Vice President of Administrative Services, or such individual(s) as may be designated by him/her, shall review and evaluate the basis of the bid protest. Either the Vice President of Administrative Services, or other individual designated by him/her shall provide the bidder submitting the bid protest with a written statement concurring with or denying the bid protest. The rendition of a written statement by the District's Vice President of Administrative Services, (or his/her designee) is an express conditions precedent to the institution of any judicial 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 judicial 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 there from.

[END OF SECTION]

BID PROPOSAL
PROJECT: STUDENT HOUSING RE-BID ("the Work")

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

1. Bid Proposal.

1.1. Base Bid Price. The undersigned Bidder, having become familiarized with the Contract Documents and the local conditions affecting the performance or cost of to perform the Work, the Bidder proposes and agrees to perform the Work of the Contract Documents 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 for the sum of: _____ Dollars ($_____).

1.2. Allowances. The District has established the following Allowance Amount for each Allowance Item set forth in the following.

Allowance Item No.	Allowance Item Description	Allowance Amount
A-1	Unforeseen Conditions; District Authorized Scope Modifications. To be used at the District's discretion.	$ 1,500,000.00
	Aggregate Allowance Amount	$1,500,000.00

1.3. Bid Proposal Price. The Bid Proposal Price is the sum of the Base Bid Price (Paragraph 1.1) plus Aggregate Allowance Amount (Paragraph 1.2) which is:

_____ Dollars ($_____).

1.4. Alternate Bid Items. If the bidding includes Alternate Bid Items, the Bidder's price proposal(s) for Alternate Bid Items is/are set forth in the form of Alternate Bid Item Proposal attached to this Bid Proposal. Price proposal(s) for Alternate Bid Item(s) will not form the basis for the District's award of the Contract unless an Alternate Bid Item is incorporated into the scope of Work of the Contract awarded.

2. Addenda. The Bidder confirms that: (i) it has received and reviewed all Addenda issued by the District, if any, as set forth below; and (ii) that this Bid Proposal incorporates and is inclusive of, all items or other matters contained in all Addenda, if any, issued by or on behalf of the District. ***Failure of the Bidder to acknowledge all Addenda may result in rejection of the Bid Proposal for non-responsiveness.***

ADDENDUM NO.	ADDENDUM ISSUE DATE

3. **Documents Accompanying Bid Proposal**. The Bidder has submitted with this Bid Proposal the following: (i) Bid Security; (ii) Subcontractors List; (iii) Bidder Verification of Prequalification Information; (iv) Deep Soil Mixing and Volumetric Prefab Modular Manufacturer Subcontractor Verification of Pre-Qualification Application Information; (v) Non- Collusion Affidavit; (vi) DVBE Worksheets, Attachments A-G; (vii) Copy of Bidder's Illness Injury Prevention Plan. 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 for non-responsiveness.

4. **Award of Contract**. Within five (5) days after notification of award of the Contract, the Bidder awarded the Contract shall execute and deliver to the District three original signature copies of the Contract in the form attached hereto along with: (i) Certificates of Insurance evidencing all insurance coverages required under the Contract Documents; (ii) the Performance Bond; (iii) the Labor and Material Payment Bond; (iv) the Certificate of Workers' Compensation Insurance; and (v) the Drug-Free Workplace Certificate. Failure of the Bidder awarded the Contract to strictly comply with the preceding may result in the District's recession of the 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.

5. **Contractors' License**. The Bidder certifies that: (i) it is duly licensed, in the necessary class(es), for performing the Work of the Contract Documents, as designated by the District; (ii) that such license shall be in full force and effect throughout the duration of the performance of the Work under the Contract Documents; and (iii) that all Subcontractors providing or performing any portion of the Work are and shall remain properly licensed to perform or provide such portion of the Work.

6. **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 hereinbelow, 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 attorney 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.

7. **Acknowledgment and Confirmation**. The undersigned Bidder acknowledges its receipt, review and understanding of the Drawings, the Specifications and other Contract Documents pertaining to the proposed Work. By submitting this Bid Proposal, the undersigned Bidder certifies that the Contract Documents are, in its opinion, adequate, feasible, accurate and complete for the Bidder to complete the Work in a workmanlike manner within the Contract Time and for the price proposed herein. The undersigned Bidder warrants and represents to the District that it has, or has available, all necessary equipment, personnel, materials, facilities and technical and financial ability to complete the Work for the amount bid herein, within the Contract Time and in accordance with the Contract Documents.

Dated: _____

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

_____
(Typed or Printed Name)

Title: _____

BIDDER VERIFICATION OF PRE-QUALIFICATION APPLICATION INFORMATION

PROJECT: STUDENT HOUSING

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

_____, declare and state as follows:
(Bidder Name)

1. I am authorized to execute this Bidder Verification of Pre-Qualification Application Information on behalf of the above-identified Bidder.
2. I have reviewed the Pre-Qualification Application submitted by the Bidder to the District, and I have conducted all necessary and appropriate inquiries to ascertain whether there have been any material and/or adverse changes in the information provided by the Bidder in its Pre-Qualification Application.

   ☐ There are no material and/or adverse changes to the information provided by the Bidder in its Pre-Qualification Application.

   ☐ Material and/or adverse changes to the information provided by the Bidder in its Pre-Qualification Application have occurred. A complete and accurate of all such material and/or adverse changes are set forth in the attached Statement of Pre-Qualification Application Changes attached hereto.

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)

Title: _____
(Signature)

DEEP SOIL MIXING AND VOLUMETRIC PREFAB MODULAR MANUFACTURER SUBCONTRACTOR VERIFICATION OF PRE-QUALIFICATION APPLICATION INFORMATION

PROJECT: STUDENT HOUSING

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

_____, declare and state as follows:
(Subcontractor Name)

3. I am authorized to execute this Subcontractor Verification of Pre-Qualification Application Information on behalf of the above-identified Subcontractor.

4. I have reviewed the Pre-Qualification Application submitted by the Subcontractor to the District, and I have conducted all necessary and appropriate inquiries to ascertain whether there have been any material and/or adverse changes in the information provided by the Subcontractor in its Pre-Qualification Application.

   ☐ There are no material and/or adverse changes to the information provided by the Subcontractor in its Pre-Qualification Application.

   ☐ Material and/or adverse changes to the information provided by the Subcontractor in its Pre-Qualification Application have occurred. A complete and accurate of all such material and/or adverse changes are set forth in the attached Statement of Pre-Qualification Application Changes attached hereto.

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)

Title: _____
(Signature)

ALTERNATE BID ITEMS PROPOSAL

Bidder Name: _____

Project: STUDENT HOUSING

Bidders must provide a proposal price for each Alternate Bid Item set forth herein; failure to do so will result in rejection of the Bid Proposal for non-responsiveness. The amount proposed for each Alternate Bid Item by the above-identified Bidder is set forth hereinbelow:

1. **Alternate Bid Item No. 1**. In lieu of the District provided Owner Controlled Insurance Program ("OCIP") and the insurance policies issued through the SEWUP OCIP insurance program, the Contractor and Subcontractors shall obtain and maintain the policies of insurance set forth below. The Contractor and Subcontractors' policies of insurance must be issued by insurer(s) who are: (i) A.M. Best rated A- or better; (ii) A.M. Best Financial Size Category VII or higher; and (iii) authorized under California law to transact business in the State of California and authorized to issue insurance policies in the State of California.

CONTRACTOR INSURANCE	
Policy of Insurance	**Minimum Coverage Limits**
Commercial General Liability Insurance	Per Occurrence: Two Million Dollars ($2,000,000)
	Aggregate: Four Million Dollars ($4,000,000)
Workers Compensation	In accordance with the Laws
Employers Liability	One Million Dollars ($1,000,000)
Builders Risk	Full insurable value of the Work; Seismic coverage: Not Required
Contractor's Pollution Liability	Per Claim: Two Million Dollars ($2,000,000)
	Aggregate: Four Million Dollars ($4,000,000)
Professional Liability	Per Claim: One Million Dollars ($1,000,000)
	Aggregate: Two Million Dollars ($2,000,000)
SUBCONTRACTORS INSURANCE	
Policy of Insurance	**Minimum Coverage Limits**
Commercial General Liability Insurance	Per Occurrence: One Million Dollars ($1,000,000)
	Aggregate: Two Million Dollars ($2,000,000)
Workers Compensation	In accordance with the Laws
Employers Liability	One Million Dollars ($1,000,000)

Add to Base Bid Proposal Amount:
_____ **Dollars ($_____)**.

Dated _____

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

_____
(Typed or Printed Name)

Title: _____

ALTERNATE BID ITEMS PROPOSAL

Bidder Name: _____

Project: STUDENT HOUSING

Bidders must provide a proposal price for each Alternate Bid Item set forth herein; failure to do so will result in rejection of the Bid Proposal for non-responsiveness. The amount proposed for each Alternate Bid Item by the above-identified Bidder is set forth hereinbelow:

2. Deductive Alternate Bid Item No. 2

Eliminate One (1) Elevator

Architectural:
Elevator #1, located at GL 17,D southern portion of Wing A, western most elevator, will be omitted and converted to be the new elevator control room on first floor, and storage rooms at floors 2 and 3. Elevator #2 is intended to remain per plans in its entirety. See attached sketch.

Infill vertical shaft openings as described below under “Structural” heading. Subgrade waterproofing remains since there is no change to the foundations. Relocate elevator pit ladder to now only serve Elev. 2.

A new 1 hour rated shaft wall will be erected in the north/south direction to enclose the elevator control and storage rooms. Overrun at roof will remain to maintain structural cross brace on southern wall.

New storage rooms and the relocated elevator equipment room will have a rated single hollow metal self-closing door, gypsum board ceiling, (1) pendant light, and one convenience outlet. Each room will be painted with Level 3 gypsum board finish. Elevator Equipment and storage rooms will have RF-5 resilient flooring.

Omit heat detector, omit camera (T2.11), omit smoke curtain and corresponding addressable relay module and auxiliary relay (Keynote 4, FA2.11, FA2.20, FA2.30). Fire sprinklers are not located at the elevators therefore no adjustment is needed for the fire sprinkler system (Keynote 1, FP2.11)

Elevator infrastructure including electrical that was supporting elevator functions will be revised to feed the new storage room.
Each new storage room will have a rated single hollow metal self-closing door, painted gypsum board ceiling, (1) pendant light, and one convenience outlet. It will be painted with level 3 gypsum board finish. Flooring will be sealed concrete. Roof exhaust will be omitted for this elevator as well.

Laundry A102
With the new location of the elevator control room now adjacent to Elev. 2, Laundry A102 now absorbs the space of old Elev Ctrl A104A. Counter and sink now shift to north wall, see exhibit. Extend finish materials accordingly.

Structural:
There will be no changes to the foundation. The foundation underneath this elevator is required for the braced frame along GL 17.4. In order to access this space at floor levels, floor framing will have to be designed at each level. The floor framing can be nominal wood platform framing. At the first story the floor can be constructed with a concrete slab supported by concrete walls. Omit elevator guide rails and hoist beam for Elev. 1 only.

Mechanical – The elevator machine room is moving to a new location. Ventilation is still required as one elevator remains to be served by that room. The exhaust fan and wall louver can stay at the current location, and the duct is extended to the new room location. This adds additional ductwork through the hallway and one additional Fire Smoke Damper (FSD).

Lighting – remove elevator pit lights, and update the layout of light fixtures in the new spaces.
Drawing E3.11: Add one fixture type "P1A" in the new elevator control room. Update the circuiting and add a switch.
Drawing E3.21: Add one fixture type "P1A" in the new storage room. Update the circuiting and add a switch.
Drawing E3.31: Removing two fixture type "S5" at the elevator shaft. Add one fixture type "P1A" in the new storage room. Update the circuiting and add a switch.
Drawing 1/E5.04: Removing two fixture type "S5" at elevator pit.

Electrical – Remove Elevator power feed and related parts. Adjust and add power oulets in englared laundry space. Add power to new elevator control room space and storage rooms.

Technology – One surveillance camera within the omitted elevator cab will be removed.

Fire Protection – Elevator control room is moving to a new location. Sprinkler head coverage in Laundry Room A102 will need to be reviewed and possibly revised. Sprinkler head coverage for the Elevator control room will need to be provided.
Sprinkler head coverage will also be needed for the new storage rooms where the Elevator 1 was in Levels 2 & 3

Fire Alarm – Elevator control room is moving to a new location. The fire smoke detector, heat detector, monitor modules, relays and all the fire alarm devices and conduit will need to be relocated next to Elevator 2. New smoke detectors will be needed in the 2 new storage rooms where the Elevator 1 was in Levels 2 & 3.
Remove Elevator 1 addressable relay modules and auxiliary relays.

Plumbing – With the elevator control room moving to a new location, the laundry sink will shift north. The new location of the laundry sink (LS-1) will require the vent piping serving the sink to extend to the new location and condensate piping discharging to the sink tailpiece to extend to the new location. The location of the water and sewer piping serving the sink will also shift along with the sink.

Deduct from the Base Bid Proposal Amount:
_____ **Dollars ($_____)**.

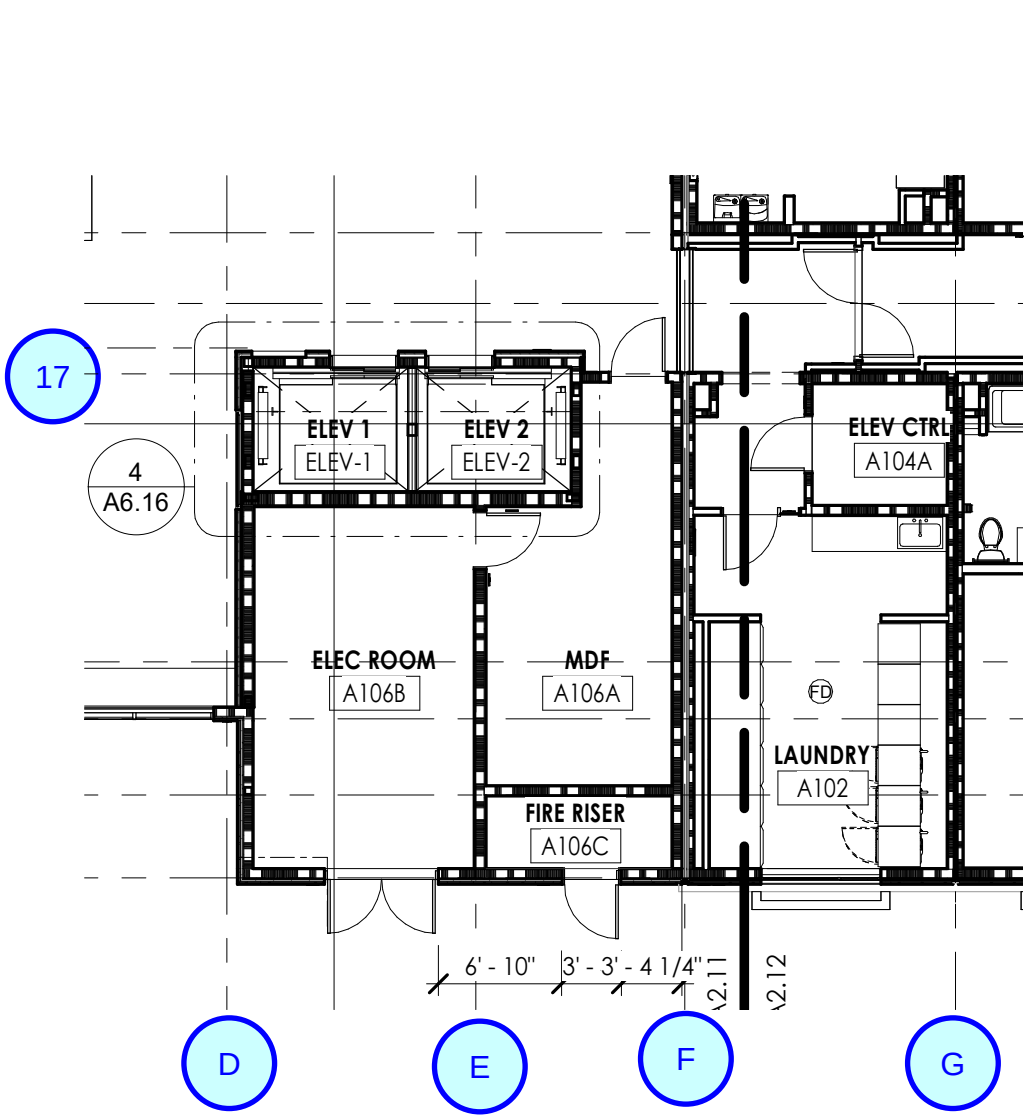
Dated _____

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

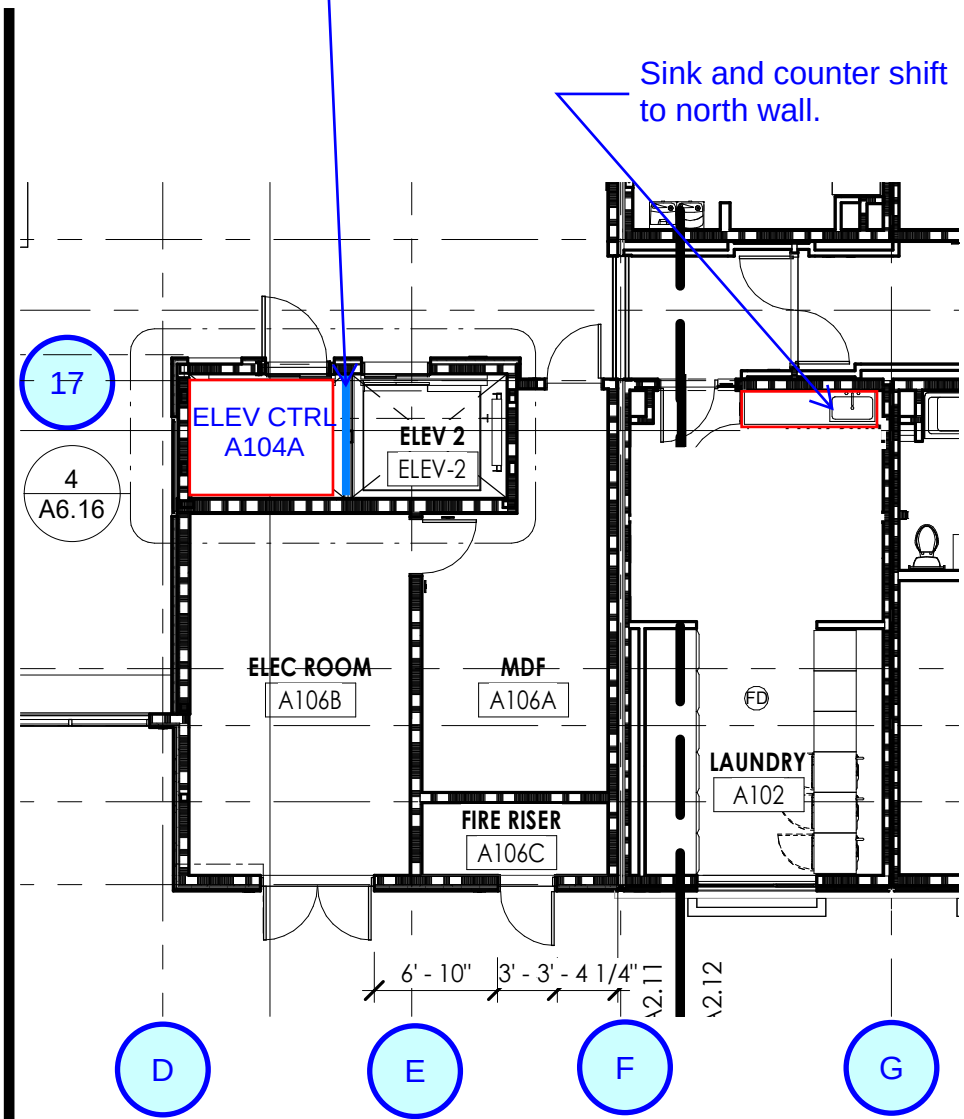
_____
(Typed or Printed Name)

Title: _____

LEVEL 1



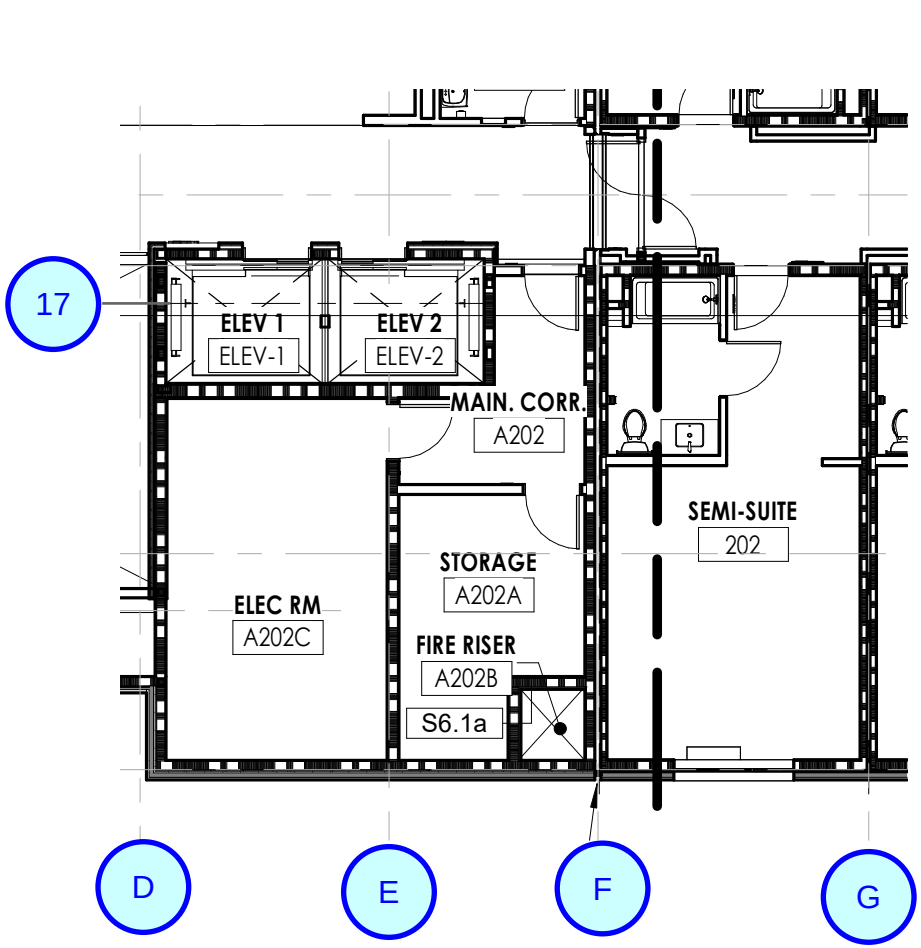
Original Plan



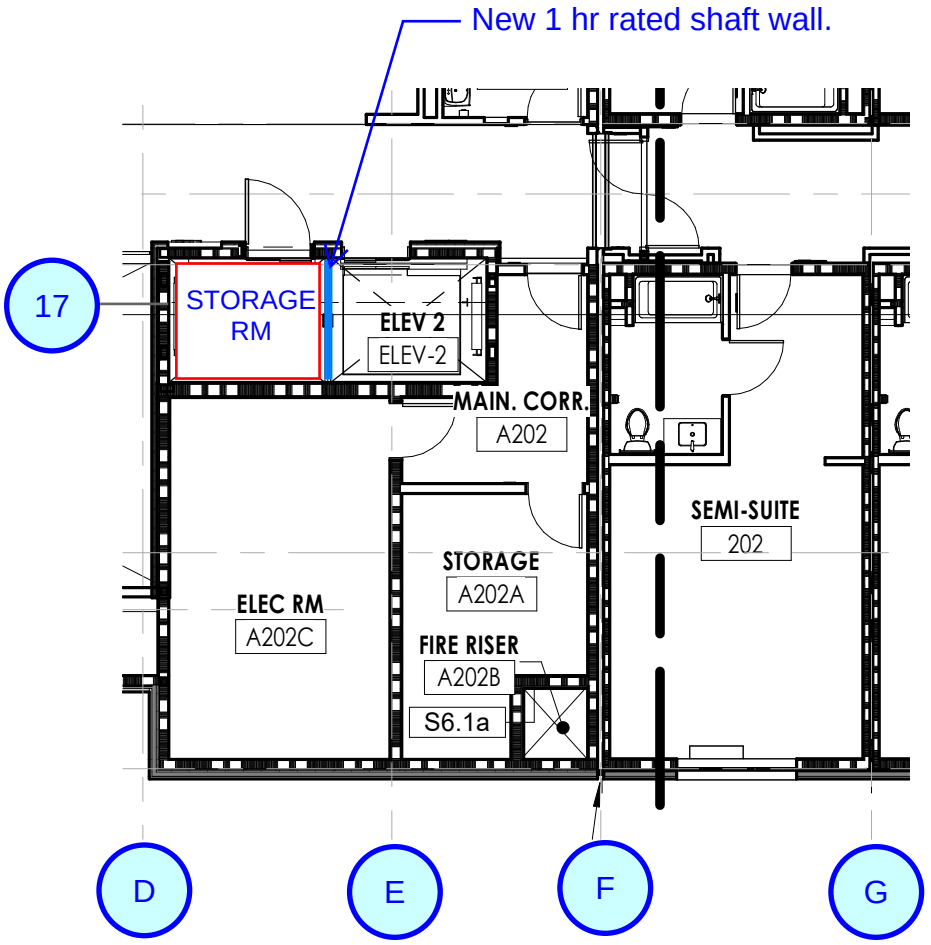
New Plan

REV B 08/15/2024

LEVELS 2 AND 3



Original Plan



New Plan

REV B 08/15/2024

ALTERNATE BID ITEMS PROPOSAL

Bidder Name: _____

Project: STUDENT HOUSING

Bidders must provide a proposal price for each Alternate Bid Item set forth herein; failure to do so will result in rejection of the Bid Proposal for non-responsiveness. The amount proposed for each Alternate Bid Item by the above-identified Bidder is set forth hereinbelow:

3. Deductive Alternate Bid Item No. 3

Eliminate Vertical & Horizontal Sunshades

Eliminate PREFINISHED METAL SUNSHADES referenced in the following drawings:

Drawing CW4.04, Exterior Vertical Sunshades.
VS-1 Qty. 6.
VS-2 Qty. 6.
VS-3 Qty. 6.
Drawing Details 1/CW9.01, 1,2/CW9.02, & 1/CW9.03.

Drawing CW4.05, Exterior Horizontal Sunshades HS-1, & HS-2.
HS-1 Qty. 24.
HS-2 Qty. 33.
Drawing Details 1/CW9.04, & 1,2/CW9.05.

Deduct from the Base Bid Proposal Amount:
_____ **Dollars ($_____)**.

Dated _____

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

_____
(Typed or Printed Name)

Title: _____

ALTERNATE BID ITEMS PROPOSAL

Bidder Name: _____

Project: STUDENT HOUSING

Bidders must provide a proposal price for each Alternate Bid Item set forth herein; failure to do so will result in rejection of the Bid Proposal for non-responsiveness. The amount proposed for each Alternate Bid Item by the above-identified Bidder is set forth hereinbelow:

4. Deductive Alternate Bid Item No. 4

Eliminate Horizontal Brise Soliel at Wing B

Eliminate the PREFINISHED METAL HORIZONTAL BLADE BRISE SOLIEL and all associated structural wood blocking at Wing B. Reference the following drawings for locations:

Drawing A4.03, Exterior Elevations 1 & 4, Keynote 8
Drawing A5.15, Wall Section 1
Drawing CW4.03, HBS-3 and HBS-4

Deduct from the Base Bid Proposal Amount:
_____ **Dollars ($_____)**.

Dated _____

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

_____
(Typed or Printed Name)

Title: _____

ALTERNATE BID ITEMS PROPOSAL

Bidder Name: _____

Project: STUDENT HOUSING

Bidders must provide a proposal price for each Alternate Bid Item set forth herein; failure to do so will result in rejection of the Bid Proposal for non-responsiveness. The amount proposed for each Alternate Bid Item by the above-identified Bidder is set forth hereinbelow:

5. Deductive Alternate Bid Item No. 5

Eliminate interior Woodworks Veneered Wall Panels at (except at two story lobby wall)

The gypsum board that is currently behind the wood panels would be swapped for painted high impact resistance gypsum board and the wood panels would be eliminated. Any associated structural backing for the woodwork panels is to be omitted except at the two story lobby wall. Locations of panels to be eliminated are shown on the following drawings:

Drawing A6.18 - Elevator Lobby Elevations 1 & 2
Drawing A7.34 - Interior Elevations 1 & 2
Drawing A7.40 - Interior Elevations 1 & 2
Drawing A7.42 - Interior Elevations 1 & 2

Deduct from the Base Bid Proposal Amount:
_____ **Dollars ($_____)**.

Dated _____

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

_____
(Typed or Printed Name)

Title: _____

ALTERNATE BID ITEMS PROPOSAL

Bidder Name: _____

Project: STUDENT HOUSING

Bidders must provide a proposal price for each Alternate Bid Item set forth herein; failure to do so will result in rejection of the Bid Proposal for non-responsiveness. The amount proposed for each Alternate Bid Item by the above-identified Bidder is set forth hereinbelow:

6. Deductive Alternate Bid Item No. 6

Eliminate Shade Structures in Courtyard

Landscape:
The large and small shade structures including their footings shown on sheet L2.10 (Amenity Schedule: A1 and A2) are to be removed from the scope of work.

Detail 'B' on sheet L5.40 shall be removed from the scope of work.
Detail 'G' on sheet L5.50 shall be removed from the scope of work.

Lighting – remove the column mounted fixtures at Pergolas, update the existing pole lighting layout as needed.

Drawing E3.01: Removing the column-mounted fixture type " ZW2" at Pergolas.
Rearranging the adjacent poles layout and updating the circuiting.

Deduct from the Base Bid Proposal Amount:
_____ **Dollars ($_____)**.

Dated _____

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

_____
(Typed or Printed Name)

Title: _____

ALTERNATE BID ITEMS PROPOSAL

Bidder Name: _____

Project: STUDENT HOUSING

Bidders must provide a proposal price for each Alternate Bid Item set forth herein; failure to do so will result in rejection of the Bid Proposal for non-responsiveness. The amount proposed for each Alternate Bid Item by the above-identified Bidder is set forth hereinbelow:

7. Deductive Alternate Bid Item No. 7

Eliminate Motorized Retractable Screen

Architectural:
Eliminate the motorized retractable screen with associated power at Social Balcony A351 located on the 3rd level in Wing A. Reference the following drawings for locations:

Drawing A5.10, Wall Sections 1 & 2
Drawing A7.43, Social Balcony Plan 1

Electrical:
Remove (4) 20A power feed from electrical panel for motorized screen.

Ceiling:
Install ceiling material to match adjacent where the housing for the retractable screen was shown.

Deduct from the Base Bid Proposal Amount:
_____ **Dollars ($_____)**.

Dated _____

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

_____
(Typed or Printed Name)

Title: _____

ALTERNATE BID ITEMS PROPOSAL

Bidder Name: _____

Project: STUDENT HOUSING

Bidders must provide a proposal price for each Alternate Bid Item set forth herein; failure to do so will result in rejection of the Bid Proposal for non-responsiveness. The amount proposed for each Alternate Bid Item by the above-identified Bidder is set forth hereinbelow:

8. Deductive Alternate Bid Item No. 8

Photovoltaic Panel Reduction to Code Minimum

Electrical:
Reduction of PV to 10% of current plans. Eliminate 90% of panels of the contractors choosing. Removal of one T-PV transformer and reduce 2nd one to 30kVA. Associated disconnect switch and circuit breakers to be reduced with updated PV sizing.

Mechanical:
Title 24 forms will be updated to include model results with the reduced PV.

Structural:
Reduction of PV panel support framing to 10% of current plans. Eliminate 90% of PV panel supports. PV panel framing includes 2" diameter pipe and associated blocking and fasteners. Roof framing size to remain unchanged. All foundations to remain unchanged.

Deduct from the Base Bid Proposal Amount:
_____ **Dollars ($_____)**.

Dated _____

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

_____
(Typed or Printed Name)

Title: _____

ALTERNATE BID ITEMS PROPOSAL

Bidder Name: _____

Project: STUDENT HOUSING

Bidders must provide a proposal price for each Alternate Bid Item set forth herein; failure to do so will result in rejection of the Bid Proposal for non-responsiveness. The amount proposed for each Alternate Bid Item by the above-identified Bidder is set forth hereinbelow:

9. Deductive Alternate Bid Item No. 9

Eliminate six (6) modular sections which equates to twelve (12) Studio Units.

Soil Mitigation:
Eliminate 93 deep soil mixing columns that directly support the modules being removed. Each column to be deleted has a 3' diameter and a depth of 20'.

Civil:
Reduce over excavation activity by 1,950 square feet to accommodate reduced building footprint.

Landscape:
Add 1,950 S.F. of landscaping shrubs, drip irrigation, and 3" deep mulch. Detail for drip irrigation including size and spacing per drawing details shown on L8.10. Shrubs to be 5 Gal. Bulbine Frutescens, quantity 192.

Architectural:
See Drawing A7.07, eliminate six (6) Type C1 Modular Sections including, 1,968 square feet of exterior finishes associated with the modules and 12 type W2 windows, and 2,130 square feet of roof. Two (2) on each floor between Grid L.1 and N.1 at Wing B reducing the width of Wing B modular section from (9) modules to (7) modules. See diagrams below for locations. This will result in a shorter wing and a reduction of 12 Studio Units.

Structural:
Add 531 L.F. of shear wall per detail 1/S1.07 and shear panel mark 2N, and 71 additional hold downs per detail 6/S1.07 callout HD1, needed to strengthen the structure. Eliminate 1,950 square feet of module floor sleeper framing shown in detail B/S2.31.3, S2.32.3 and foundations shown in detail B/S2.31 that directly support the modules being removed only.

Mechanical:
Remove 12 HVAC systems within the studio units. For each of the 12 units this includes the wall mounted packaged heat pump (PTHP), the exhaust fan (EF), the wall exhaust louver, and all exhaust ducting serving the EF and the range hood. The hallway ventilation systems remain unchanged.

Technology (AVITS):
Remove all technology infrastructure within each removed studio unit. Remove 12 Card Readers, remove 6 speakers, and remove 6 wireless access points.

Plumbing:
Remove all plumbing fixtures and supporting infrastructure within each removed unit.

Fire Protection:
Remove fire sprinkler heads, fire protection piping, and infrastructure support within each removed studio unit.

Fire Alarm:
Remove the fire alarm ceiling smoke detectors with sounder base, multi candela-strobe walls and conduit piping within each removed studio unit.

Electrical:
Remove electrical infrastructure within each removed unit. Electrical single line diagram for building B to remove 12 panel subfeeds.

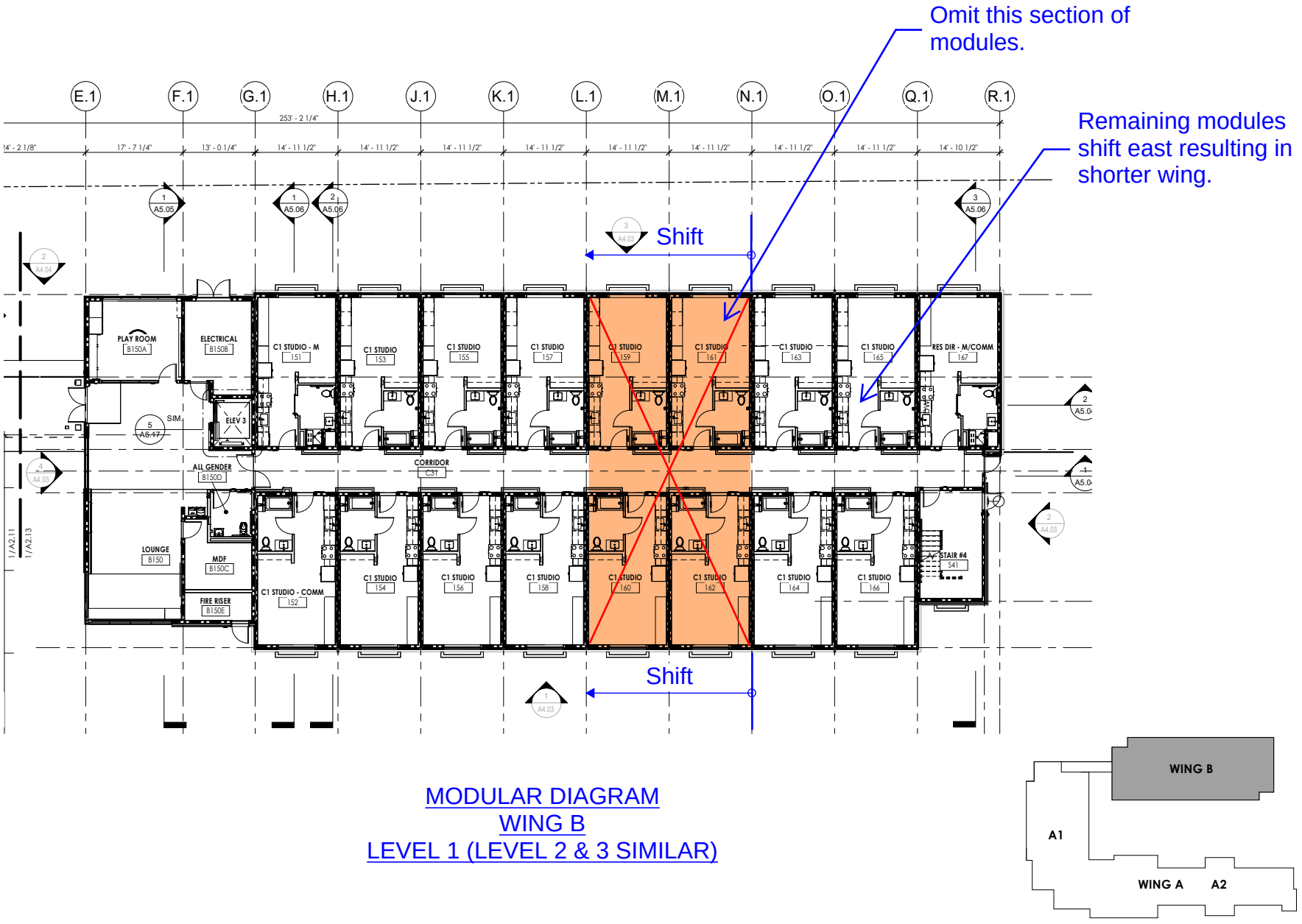
Deduct from the Base Bid Proposal Amount:
_____ **Dollars ($_____)**.

Dated _____

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

_____
(Typed or Printed Name)

Title: _____



MODULAR DIAGRAM
WING B
LEVEL 1 (LEVEL 2 & 3 SIMILAR)

REV B 08/15/2024

PRE-BID INQUIRY FORM

Project: STUDENT HOUSING

Submittal Date _____

Bidder inquiries will be responded to only if: (i) submitted on this Pre-Bid Inquiry Form; (ii) this completed Pre-Bid Inquiry Form is submitted prior to the latest date/time for submittal of pre-bid inquiries as set forth in the Call for Bids; and (ii) this completed Pre-Bid Inquiry Form is submitted to the person or entity noted in the Call for Bids.

Item No.	Item Description	Drawing Sheet No. &Detail No. Reference	Specifications Section and Paragraph No. Reference

Submitted By:

_____
(Bidder Name)

_____
(Signature of Bidder's Authorized Employee, Officer or Representative)

Bidder Contact Information:

_____
(Bidder Contact Name)

_____
(Phone and Fax)

_____
(Email Address)

SUBCONTRACTORS LIST

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

Licensed Name of Subcontractor	Address of Office, Mill or Shop	Contractor's License Number	Trade or Portion of Work	DIR Registration Number

[DUPLICATE THIS FORM FOR ADDITIONAL SUBCONTRACTORS]

NON-COLLUSION AFFIDAVIT

STATE OF CALIFORNIA)
COUNTY OF _____)

PROJECT: **STUDENT HOUSING**

I, _____, being first duly sworn, deposes and says that I am the
(Typed or Printed Name)
_____ 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.

Dated _____

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

_____
(Typed or Printed Name)

Title: _____

CERTIFICATE OF WORKERS' COMPENSATION INSURANCE

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

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."

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.

I am authorized to execute this Certificate of Workers Compensation Insurance on behalf of the above-identified Contractor.

Dated: _____

By: _____

_____
(Name Printed or Typed)

Title: _____

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:
   2.1. 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.
   2.2. 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; (ii) the availability of drug counseling, rehabilitation and employee-assistance programs; and (iii) the penalties that may be imposed upon employees for drug abuse violations.
   2.3. Requiring that each employee engaged in the performance of the Contract be given a copy of the statement required by Paragraph 2.1 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.
3. 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.
4. 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.
5. 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 this ___ day of _____ 20__ at _____.
(City and State)

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

_____
(Typed or Printed Name)

Title: _____

DISABLED VETERAN BUSINESS ENTERPRISE ("DVBE") PARTICIPATION GOAL PROGRAM POLICY

1. DVBE Participation Goal Program Policy. COMPTON COMMUNITY COLLEGE DISTRICT ("the District") is committed to achieving the legislatively and administratively established Participation Goal for Disabled Business Enterprises ("DVBEs"). Through the DVBE Participation Goal Program, the District encourages contractors to ensure maximum opportunities for the participation of DVBEs in the Work of the Contract. The District's commitment to the achievement of DVBE Participation Goal for the Work of the Contract shall not, however, result in the District's discrimination in the award of the Contract on the basis of ethnic group identification, ancestry, religion, age, sex, race, color, or physical or mental disability.

2. Definitions.

   2.1. Disabled Veteran. A "Disabled Veteran" means a veteran of the military, naval, or air service of the United States with at least ten percent (10%) service-connected disability who is a resident of the State of California.

   2.2. Disabled Veteran Business Enterprise. A "Disabled Veteran Business Enterprise" ("DVBE") means a business enterprise certified by the Office of Small and Minority Business, State of California, Department of General Services, as a "Disabled Veteran Business Enterprise."

   2.3. Good Faith Efforts. As use herein, the term "Good Faith Efforts" shall be deemed to mean demonstrable and effective efforts of the Bidder to seek out, consider and secure DVBEs as potential Subcontractors or Material Suppliers, or both, in order to meet the Participation Goal; the Good Faith Efforts must be an active and aggressive effort to meet the Participation Goal, as more particularly set forth herein.

3. Participation Goal.

   3.1. Participation Goal Defined. The term "Participation Goal" is a numerically expressed objective for DVBE participation in performing the Work of the Contract. The DVBE Participation Goal is not a quota, set-aside, or rigid proportion.

   3.2. DVBE Participation Goal. The DVBE Participation Goal is Three Percent (3%) of total amount of Bidder's Bid Proposal, inclusive of the value of additive Alternate Bid Items, if any.

4. Good Faith Efforts to Meet Participation Goal.

   4.1. Good Faith Efforts. The Bid Proposal submitted by any Bidder who has not met the DVBE Participation Goal shall be considered responsive only if the Bidder represents that it made Good Faith Efforts to meet the DVBE Participation Goal.

   4.2. Good Faith Efforts to Meet DVBE Participation Goal. A Bidder must secure the participation of DVBEs in a timely manner to ensure that potential DVBE Subcontractors or Material Suppliers have an adequate opportunity to respond to the Bidder's solicitation of sub-bids and be given serious consideration by the Bidder prior to the closing time for the receipt of Bid Proposals. Such Good Faith Efforts shall include, without limitation:

      4.2.1. DVBE Work and Active Solicitation of DVBEs. The Bidder's identification of portions of the Work which may be provided or performed by DVBE Subcontractors and/or Material Suppliers and the Bidder's active and sincere solicitation of DVBEs for those identified portions of the Work.

      4.2.2. Contact Agencies for DVBEs. Contact local, state and/or federal agencies, and local DVBE organizations to identify potential DVBEs for performing portions of the Work.

      4.2.3. Advertisements. Advertise (with sufficient time for submission of sub-bids and the Bidder's good faith consideration of the same) prior to the last date for submittal of Bid

Proposals in: (i) one or more daily or weekly newspapers of general circulation published in the locality of the Work, and (ii) one or more construction trade publications, and (iii) one or more construction trade publications, journals or papers focusing on DVBEs. Each of the advertisements pursuant to the preceding, must state the following: (i) identification of the general description of the Work and an identification of the District; (ii) state the closing date and time for the District's receipt of Bid Proposals; (iii) state the last date and time for submission of sub-bids from DVBEs to the Bidder; (iv) request sub-bids from DVBE Subcontractors or Material Suppliers; (v) identify the type of Work of the Contract available for sub-bids by DVBEs; and (vi) unequivocally state the requirement of bonds, if any, of a DVBE sub-Bidder and who is to bear the expense of obtaining any required bonds.

4.2.4. Direct Solicitation of DVBEs. Solicit by direct mail, telephone or personal contact a sufficient number of DVBEs who offer work or services appropriate for the Work identified by the Bidder under Paragraph 4.2.1 above. Solicitations shall be made in a timely manner and contain sufficient information for a sub-Bidder to make a reasonable sub-bid and the Bidder's good faith consideration of the same, including, without limitation, the following: (i) identification of the general description of the Work and an identification of the District; (ii) state the closing date and time for the District's receipt of Bid Proposals; (iii) state the last date and time for submission of bids from DVBEs to the Bidder; (iv) request sub-bids from Subcontractors or Material Suppliers; (v) identify the type of Work of the Contract available for sub-bids by DVBEs; and (vi) unequivocally state the requirement of bonds of a DVBE sub-Bidder and who is to bear the expense of obtaining any required bonds.

4.2.5. Bidder Follow-Up To DVBE Interest. The Bidder shall follow-up initial expressions of interest of DVBEs in performing a portion of the Work by contacting such DVBEs to determine with certainty whether such DVBEs are interested in performing specific items of the Work of the Contract and submitting a sub-bid for a portion of the Work.

4.2.6. Good Faith Negotiations With Potential DVBE Subcontractors. The Bidder shall negotiate in good faith with potential DVBEs Subcontractors or Material Suppliers and shall not unjustifiably reject, as unsatisfactory, bids prepared by any DVBE for a portion of the Work of the Project. In the event that the District shall reasonably determine that the Bidder has failed to engage in good faith negotiations with a potential DVBE participant or rejects the sub-bid of a DVBE without justification, the District may deem the Bid Proposal of such Bidder to be non-responsive.

5. Documentation of Achievement of Participation Goal or Good Faith Efforts. Each Bidder shall note, where indicated, in the form of Bid Proposal whether the DVBE Participation Goal was achieved and if not, that Good Faith Efforts were made to achieve the DVBE Participation Goal. **All Bidders shall submit with their Bid Proposals documentation and supporting evidence of achievement of the DVBE Participation Goal or Good Faith efforts to achieve the DVBE Participation Goal.** Such documentation and supporting evidence shall be in the form of duly completed forms of the DVBE Participation Worksheets.

6. Counting of DVBE Participation.

6.1. Certification. DVBEs must be certified in the category identified prior to the closing time for the District's receipt of Bid Proposals; any DVBE who is not so certified will result in such DVBE not counting towards the DVBE Participation Goal.

6.2. Bidder Acceptance of Sub-Bid. Sub-bids of DVBEs shall be accepted by the Bidder prior to the closing time for the District's receipt of Bid Proposals, with such acceptance subject only to the District's award of the Contract to the Bidder.

6.3. Value of Participation Goal. The total dollar value of a contract between the Bidder and a certified DVBE will count towards the DVBE Participation Goal.

6.4. Joint Ventures. If a DVBE is a member of a joint venture, only the dollar value of the Work actually performed by the DVBE member of the joint venture will count towards the DVBE Participation Goal, unless the joint venture entity itself is certified as a DVBE.

6.5. Bidder as DVBE. A Bidder certified as a DVBE may count towards the Participation Goal the dollar value of the Work actually performed by the Bidder's own forces. A Bidder certified as a DVBE is not relieved from meeting the DVBE Participation Goal or making Good Faith Efforts to achieve the Participation Goal if the value of its Work is less than the DVBE Participation Goal.

6.6. Lower Tier Subcontractors; Material Suppliers. The Bidder may count towards the DVBE Participation Goal the total dollar value of contracts let by its Subcontractors or Material Suppliers to lower tier Subcontractors or Material Suppliers certified as DVBEs provided that such lower tier Subcontractors or Material Suppliers actually assume the contractual responsibility and obligation for the total dollar value of the Work or materials to be supplied by such lower tier Subcontractors or Material Suppliers.

6.7. Commercially Useful Functions. DVBEs used by the Bidder to establish achievement of the Participation Goal shall be considered as meeting the Participation Goal only if the DVBE is responsible for execution of a distinct element of the Work of the Contract, carry out its obligations by actually performing, managing, or supervising the Work for which the DVBE is responsible for executing. Such DVBEs must be responsible for the portion of the Work which is normal for its business services and functions. A DVBE Subcontractor who subcontracts a significantly greater portion of the Work assumed by the DVBE Subcontractor than would be considered normal and usual under industry standards and practices will not be presumed to be performing a commercially useful function, and such DVBE Subcontractor will not count or be considered for purposes of achieving the Participation Goal.

7. Substitution of DVBEs. In the event that Bidder awarded the Contract deems it necessary to substitute a DVBE Subcontractor or Material Supplier identified in the Subcontractor's List submitted with the Bidder's Bid Proposal, all provisions of the Contract Documents relating to the substitution of Subcontractors shall be applicable and complied with by the successful Bidder. In addition to the provisions of the Contract Documents relating to the substitution of listed Subcontractors, if a DVBE under a direct contract with the Bidder is to be substituted, the successful Bidder is strongly encouraged to substitute the listed DVBE with an equivalent and certified DVBE.

8. Monitoring of DVBE Participation.

8.1. DVBE Participation Worksheets. If the Bidder awarded the Contract is required by the District to complete and submit DVBE Participation Worksheets, the completed forms of DVBE Participation Worksheets submitted by the Bidder shall be deemed a part of the Contract Documents.

8.2. Continuing Responsibilities. Efforts of the successful Bidder to include the participation of DVBEs in the performance of the Work of the Contract shall not terminate with the award of the Contract to such Bidder. The successful Bidder's efforts to secure the participation of DVBEs shall continue for the duration of the Work of the Contract, including when the successful Bidder is purchasing materials, equipment, supplies, and/or needs additional Subcontractors (including substitution of listed Subcontractors).

8.3. DVBE Participation Reports and Data. During performance of the Work of the Contract, the successful Bidder shall maintain complete and accurate records of DVBE Participation in executing the Work. From time-to-time, upon the request of the District the Bidder awarded

the Contract shall submit reports, in form and content satisfactory to the District, regarding DVBE Participation in the Work of the Contract, including the participation of DVBEs in the performance of approved Changes to the Work. The failure or refusal of the successful Bidder to submit reports of DVBE Participation during performance of the Work within ten (10) days of the District's request for such reports may be deemed by the District to be the successful Bidder's default of a material obligation of the Contract and thereupon, the District may exercise any right or remedy provided for under the Contract Documents or at law, including without limitation termination of the Contract for default or the withholding of payments otherwise due under the Contract Documents until such report(s) is/are received. If requested by the District, upon completion of the Work of the Contract, the successful Bidder shall submit a final report identifying all DVBEs utilized in the performance of the Work, the type or classification of the Work performed by each such DVBE and the dollar value of the Work performed by each such DVBE. In the event that the District shall request a report of DVBE utilization upon completion of the Work of the Contract, the submission of such report in form and content satisfactory to the District shall be deemed a condition precedent to the District's obligation to make payment of the Final Payment under the Contract Documents. In such event, the submission of such final report shall be in addition to, and not in lieu of any other conditions precedent set forth in the Contract Documents for the District's obligation to make payment of the Final Payment. The Bidder awarded the Contract shall maintain books and records of DVBE Participation in the Work for at least three (3) years following completion of the Project; during such time, the District shall have access, upon reasonable advance notice, to such books and records for inspection or reproduction.

8.4. Contract Audit. The successful Bidder awarded the Contract agrees that the District, or its designee, shall have the right to review, obtain and/or copy any and all writings, materials, documents and other records pertaining to utilization of DVBEs in performance of the Contract. The successful Bidder awarded the Contract agrees that the District, or its designee, shall have access to any of the successful Bidder's premises upon reasonable notice, during usual business hours for the purpose of interviewing employees and inspecting and/or copying such writings, materials, documents and other documents which may be relevant to a matter under investigation for the purpose of determining compliance with the DVBE Participation Goal Program Policy.

9. Capitalized Terms. Capitalized terms used herein shall be as defined herein or elsewhere in the Contract Documents.

[END OF SECTION]

DVBE PARTICIPATION WORKSHEETS
ATTACHMENT A
BIDDER'S DVBE STATEMENT

Bidder: _____

1. Bidder's Compliance With DVBE Participation Program. (Check the appropriate statement).
   - ☐ The Bidder has achieved or exceeded the DVBE Participation Goal and all DVBEs counting towards the DVBE Participation Goal are set forth and identified in Attachments C-1, C-2 and C-3.
   - ☐ The Bidder did not achieve the Participation Goal for DVBEs, but has made the required Good Faith Efforts to secure the participation of DVBEs in accordance with guidelines established in the District's DVBE Participation Goal Program.
2. DVBE Participation Achieved. The Bidder achieved a DVBE Participation Goal of ___% of the amount of the Bidder's Bid Proposal.
3. Submittal of Documentation. Concurrently with the submittal of this Bidder's DVBE Statement, the Bidder has also submitted duly completed, and executed if required, forms of Attachments B, C, D, E, F, G and H of these DVBE Participation Worksheets. All of the information provided by the Bidder in its responses to Attachments B, C, E, F, G and H are true, correct and accurate; there are no omissions in the responses of the Bidder to the foregoing Attachments which render any of the Bidder's statements or information provided therein to be false or misleading. Incomplete, inaccurate, false, misleading responses or omissions rendering responses to be false or misleading will render the Bid Proposal non-responsive and rejected.
4. Certification of DVBE Status. The Bidder certifies, warrants and represents to the District that the Bidder has exercised due diligence in ascertaining the status of each proposed DVBE identified in Attachment C as a DVBE in compliance with the applicable provisions of the District's DVBE Participation Program Policy and applicable law. By executing and submitting this Bidder's DVBE Statement, the Bidder represents to the District that each DVBE identified in Attachment C is duly and properly certified as a DVBE in conformity with the District's DVBE Program Goal Policy and applicable law. The Bidder acknowledges that in the event that the District shall reasonably determine that any DVBE identified in the Bidder's responses to Attachment C is not a duly and properly certified DVBE, the Bid Proposal may be rejected by the District as being non-responsive. For each DVBE identified in Attachment C, the Bidder has submitted forms of DVBE Certification (Attachment D) duly completed and executed by each such DVBE.

[CONTINUED NEXT PAGE]

5. Authority to Execute. The individual executing this Bidder's DVBE Statement on behalf of the Bidder warrants and represents to the District that she/he is duly authorized to execute this Bidder's DVBE Statement on behalf of the Bidder.

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

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

_____
(Signature)

_____
(Name of Individual Executing Statement)
[Printed or Typed]

DVBE PARTICIPATION WORKSHEETS
ATTACHMENT B
SUBCONTRACTIBLE ITEMS OF WORK

Bidder Name: _____
Project Name: **STUDENT HOUSING**

List each item of Work, including supplies, equipment, services, and trucking made available to DVBEs. Also list the approximate dollar value and approximate percentage of the Bidder's total Bid Proposal amount that each item of Work identified below represents. (Photocopy if additional sheets are needed.)

Item or Description of Work	Approximate Dollar Value	Approximate Percentage of Total Amount of Bid Proposal

INSTRUCTIONS FOR COMPLETION OF ATTACHMENT C DVBE PARTICIPATION SUMMARY

1. Submittal of Attachment C. The Bidder shall complete and submit Attachment C regardless of whether or not such Bidder achieved the Participation Goal. Failure of the Bidder to submit completed form of Attachment C will result in the District rejecting the Bid Proposal of such Bidder as being non-responsive.
2. Firm Name. State name of the enterprise proposed by the Bidder for meeting DVBE Participation Goal; the full name of each enterprise identified must be listed and if the enterprise conducts business under a fictitious business name, the same shall be stated. If the Bidder is a certified DVBE and wishes to be counted in the category certified for purposes of meeting the Participation Goal, the Bidder must be identified in Attachment C.
3. Item or Description of Work. Identify, with specificity, the item or portion of the Work of the Contract to be provided or performed by the proposed DVBEs identified.
4. Contracting With. Identify the name of the company or firm with whom the proposed DVBE will be contracting with in connection with the Work of the Contract.
5. Tier. Identify the tier of contracting for each proposed DVBE with the following designations:

   0 = Bidder.

   1 = First Tier Subcontractor or Material Supplier under a direct contract with the Bidder.

   2 = Second Tier Subcontractor or Material Supplier under a direct contract with a First Tier Subcontractor or Material Supplier, regardless of whether or not the First Tier Subcontractor or Material Supplier is a DVBE.

   3 = Third Tier Subcontractor or Material Supplier under a direct contract with a Second Tier Subcontractor or Material Supplier, regardless of whether or not the Second Tier Subcontractor or Material Supplier is a DVBE.
6. Claimed Value. Set forth the total dollar value of the Work to be provided or performed by the proposed DVBE. The dollar value set forth in the responses to Attachments C must conform to the applicable provisions of the District's DVBE Participation Program Goal Policy.
7. Certification. For each DVBE identified in Attachment C, the Bidder shall indicate in this column whether such DVBE is self-certified or certified by a public agency as a DVBE. The Bidder's completion of this portion of Attachment C with respect to each DVBE identified therein is in addition to and not in lieu of the Bidder's submittal of duly completed and executed forms of DVBE Certification (Attachment D) from each proposed DVBE identified in Attachment C.

[CONTINUED NEXT PAGE]

DVBE PARTICIPATION WORKSHEETS
ATTACHMENT C
DVBE PARTICIPATION SUMMARY

Bidder Name:_____

Project Name: STUDENT HOUSING

Firm Name	Item or Description of Work	Contracting with	Tier	Claimed Value	Certification

DVBE PARTICIPATION WORKSHEETS
INSTRUCTIONS FOR COMPLETION OF ATTACHMENT D
DVBE CERTIFICATION

1. DVBEs Completion of Attachment D. Bidders shall make available to each DVBE identified by the Bidder in its responses to Attachment C a copy of the DVBE Certification (Attachment D) for completion and execution by each such DVBE.
2. Bidder Submittal of Completed Attachment D. Bidders shall submit duly completed and executed forms of the DVBE Certification for each DVBE identified in the Bidder's responses to Attachment C. The failure or refusal, for any reason, of the Bidder to submit such completed and executed DVBE Certification(s) of each DVBE identified in the Bidder's responses to Attachment C may result in the District rejecting the Bid Proposal of such Bidder as being non-responsive.
3. Complete and Accurate Attachment D. Each DVBE identified in the Bidder's responses to Attachment C shall complete and execute, under penalty of perjury, a DVBE Certification. Each such DVBE and the Bidder acknowledge that if the District reasonably determines that any response in the DVBE Certification(s) submitted to the District which are incomplete, false or misleading or which omit facts rendering responses therein to be false or misleading, the District may reject the Bid Proposal of such Bidder as being non-responsive.

DVBE PARTICIPATION WORKSHEETS
ATTACHMENT D
DVBE CERTIFICATION

1. DVBE Information.

DVBE Firm Name	
DVBE Address	
DVBE Firm Contact Name	
DVBE Firm Contact Phone, Fax and Email	
Services or Goods Generally Provided by DVBE	
Services or Goods to be Provided by DVBE to Bidder	

2. Certification of DVBE Status. The above-identified DVBE is certified as such by California Department of General Services Office of Small Business and Disabled Veteran Business Enterprise Services and a true and correct copy of such certification is attached hereto. The Bidder and the above-identified DVBE acknowledge that if the certification of the above-identified DVBE's status is not attached, the above-identified DVBE will not be counted or considered for purposes of the Bidder's achievement of the Participation Goal.

3. Authority to Execute. The undersigned individual executing this DVBE Certification warrants and represents to the District that she/he has made diligent inquiry to ascertain that all of the information provided herein is true, correct and complete, that there are no omissions of fact in any of the responses herein which would render such responses false or misleading and that she/he is duly authorized to execute this DVBE Certification on behalf of the above-identified DVBE.

Executed this ____day of _____, 20____at_____
(City and State)

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

_____
(Signature)

_____
(Name of Individual Executing DVBE Certification)
[Printed or Typed]

DVBE PARTICIPATION WORKSHEETS
ATTACHMENT E
DVBES CONTACTED

For each Subcontractible Item of the Work identified in the Bidder's response to Attachment B (Subcontractible Items of the Work), provide the following:

1. List all the DVBEs you solicited sub-bids from and how you obtained each firm's name.
2. Indicate method and date of solicitation (all written solicitations must conform to Public Contract Code § 4108 with respect to bonding requirements, if any).
3. List the method and date of follow-up and the person you contacted.
4. USE ONE SHEET FOR EACH SUBCONTRACTIBLE ITEM OF WORK IDENTIFIED IN ATTACHMENT B. (Photocopy as many sheets of this Attachment E as necessary.)

Bidder Name: _____
Project Name: STUDENT HOUSING

DVBE Solicited & Source of the Firm's Name	Method & Date of Solicitation	Follow-up Method, Date & Person Contacted

DVBE PARTICIPATION WORKSHEETS
ATTACHMENT F
DVBE SUB-BIDS NOT ACCEPTED BY BIDDER

List all DVBEs who submitted bids or quotations to the Bidder which were not accepted. Indicate if the sub-Bidder is a DVBE, identify the item of Work or materials, list the Subcontractor/Material Supplier the Bidder intends to use in lieu of the DVBE submitting a sub-bid for the identified portion of the Work, and the amount of such other sub-Bidder's bid. Give the reason the Bidder did not use the DVBE firm. **(Photocopy if additional sheets are needed.)**

Bidder Name: _____

Project Name: **STUDENT HOUSING**

DVBEs Who Submitted Bids	Item of Work or Materials	Subcontractor/ Material Supplier to be Used	Reason DVBE Bid Not Accepted

DVBE PARTICIPATION WORKSHEETS
ATTACHMENT G
VERIFICATION OF DVBE SOLICITATIONS

Bidder Name: _____

Project Name: STUDENT HOUSING

Identify ALL DVBE firms contacted by the Bidder for purposes of meeting the DVBE Participation Goal. If a DVBE was solicited in writing, the Bidder shall attach hereto a true and correct copy of such written solicitation; failure of the Bidder to do so may result in the District's rejection of the Bidder's Bid Proposal as being non-responsive.

Name of DVBE Firm Solicited	Manner of Solicitation, i.e., written, personal, telephonic, etc.	Date of Solicitation	General Description of DVBE Response to Solicitation

DVBE PARTICIPATION WORKSHEETS
ATTACHMENT H
AGENCY CONTACTS

Bidder Name: _____

Project Name: STUDENT HOUSING

Identify all local, state or federal public agencies and DVBE organizations contacted by the Bidder for the purpose of identifying potential DVBEs to meet the Participation Goal. If the Bidder received any list or other writing identifying potential DVBEs from any agency or organization set forth in this Attachment H, the Bidder shall attach hereto a true and correct copy of each such list or other writing; failure of the Bidder to so attach such list(s) or other writing(s) may result in the District rejecting the Bid Proposal of such Bidder as being non-responsive. (Photocopy if additional sheets are necessary.)

LOCAL, STATE OR FEDERAL AGENCIES.

Agency Name & Address	Date of Bidder's Contact with Agency	Name & Telephone Number of Individual Contacted	DVBE List Received by Bidder (Indicate Yes or No & if Yes, the date of Bidder's receipt of list)

DVBE ORGANIZATIONS CONTACTED.

Organization Name & Address	Date of Bidder's Contact with Organization	Name & Telephone Number of Individual Contacted	DVBE List Received by Bidder (Indicate Yes or No & if Yes, the date of Bidder's receipt of list)

AGREEMENT

THIS AGREEMENT is entered into as of Click here to enter a date. in the City of Compton, County of Los Angeles, State of California, by and between COMPTON COMMUNITY COLLEGE DISTRICT, a California Community College District hereinafter "District" and _____ ("Contractor").

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

1. **The Work**. Within the Contract Time and for the Contract Price, subject to adjustments thereto pursuant to the Contract Documents, the 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 Sitework and Pre-fabricated Modulars. The Contractor shall complete all Work covered by the Contract Documents, including without limitation, the Drawings and Specifications prepared by the Architect, reports, cutsheets, material sample board, project procedures, revisions, and other Contract Documents enumerated in Paragraph 6 of this Agreement, along with all modifications and addenda thereto issued in accordance with the Contract Documents. The Architect for the Work is HPI Architects.

2. **Contract Time**. The Work shall be commenced on the date stated in the District's Notice to Proceed. The Contractor shall achieve Substantial Completion of the Work within the Contract Time set forth in the Special Conditions.

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.

   3.1. Alternate Bid Items.

   ☐ The Contract Price is inclusive of the following Alternate Bid Items and the additive or deductive value of each Alternate Bid Item included in the scope of the Contract.

Alternate Bid Item No.	Alternate Bid Item Description	Alternate Bid Item Amount
Alternate Bid Item #1		*Additive Alterternate Bid Item* $_____
Alternate Bid Item #2		*Deductive Alternate Bid Item* $_____
Alternate Bid Item #3		*Deductive Alternate Bid Item* $_____
Alternate Bid Item #4		*Deductive Alternate Bid Item* $_____
Alternate Bid Item #5		*Deductive Alternate Bid Item* $_____
Alternate Bid Item #6		*Deductive Alternate Bid Item* $_____
Alternate Bid Item #7		*Deductive Alternate Bid Item* $_____
Alternate Bid Item #8		*Deductive Alternate Bid Item* $_____
Alternate Bid Item #9		*Deductive Alternate Bid Item* $_____

   ☐ Not applicable, no Alternate Bid Items are included in the scope of the Contract.

3.2. Allowance Items. The Contract Price is inclusive of the Allowance(s) set forth below for each Allowance Item identified below. Allowances belong solely to the District and shall be expended only upon written direction by the District in the sole discretion of the District. Any Allowance amount not fully consumed shall belong solely to the District and shall be deducted from the Contract Price a deductive change order. Should the District approved actual costs to complete an Allowance Item exceed the Allowance Amount for such Allowance Item, the Contract Price will be adjusted by Change Order by the approved actual costs exceeding the Allowance Amount for such Allowance Item.

Allowance Item No.	Allowance Item Description	Allowance Amount
A-1	Unforeseen Conditions; District Authorized Scope Modifications	$1,500,000

4. **Liquidated Damages**. The Contractor shall be subject to assessment of Liquidated Damages if the Contractor: (i) fails to achieve Substantial Completion of the Work within the Contract Time, including adjustments thereto authorized by the Contract Documents; (ii) fails to submit Submittals in accordance with the Submittal Schedule; or (iii) fails to complete Punchlist items noted upon Substantial Completion within the time established to complete the Punchlist items. The per diem rate of Liquidated Damages assessed for each of the foregoing events is set forth in the Special Conditions.

5. **Limitation on Damages**. If the District breaches or defaults in its performance of its obligations under the Contract Documents, the damages, if any, recoverable by the Contractor shall be limited to general damages which are directly and proximately caused by said breach or default of the District and shall exclude any and all special or consequential damages. By executing this Agreement, the Contractor expressly acknowledges the foregoing limitation to the recovery only of general damages from the District if the District is in breach or default of its obligations under the Contract Documents. The Contractor expressly waives any right to and foregoes the recovery of any special or consequential damages from the District including, without limitation, damages for: (i) lost or impaired bonding capacity; and/or, (ii) lost profits arising out of or in connection with any past, present, or future work of improvement, except for the Project which is the subject of the Contract Documents.

6. **The Contract Documents.** The documents forming a part of the Contract Documents consist of the following, all of which are component parts of the Contract Documents:

00 01 00 Table of Contents
00 11 13 Notice Calling for Bids, including Bid Addenda Nos. _____
00 21 13 Instructions for Bidders
00 41 00 Bid Proposal
00 43 15 Bidder Verification of Prequalification Information
00 43 16 Deep Soil Mixing and Volumetric Prefab Modular Manufacturer Subcontractor Verification of Pre-Qualification Application Information
00 43 23 Alternate Bid
00 43 24 Pre-Bid Inquiry Form
00 43 36 Subcontractors List
00 45 19 Non-Collusion Affidavit
00 45 26 Certificate of Workers Compensation Insurance
00 45 27 Drug-Free Workplace Certification
00 45 28 DVBE
00 52 00 Agreement
00 61 10 Bid Bond
00 61 13 Performance Bond
00 61 14 Labor and Material Payment Bond
00 62 17 OCIP Forms & Manual
00 62 90 Verification of Certified Payroll Records Submittal to Labor Commission
00 65 36 Guarantee Form
00 65 37 Contractor Certification of Subcontractor Claim
00 72 00 General Conditions
00 73 00 Special Conditions

7. **Notices**. Notices of the District and Contractor to the other shall be transmitted in accordance with the Contract Documents. The effective date of notices transmitted in accordance with the Contract Documents shall be as set forth in the Contract Documents. Notices under the Contract

Documents shall be addressed as follows:

If to the District:
Abdul Nasser
Vice President, Administrative Services
Compton Community College District
1111 East Artesia Boulevard
Compton, CA 90221

If to the Contractor:
_____
_____
_____

8. **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"
Compton Community College District

By: _____

_____
(Name Printed or Typed)

Title: _____

"CONTRACTOR"
_____

By: _____

_____
(Name Printed or Typed)

Title: _____

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 COMPTON COMMUNITY COLLEGE 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 **STUDENT HOUSING.**

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 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

[CONTINUED NEXT PAGE]

fees incurred by the Obligee in connection 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 agents or representatives.

_____
(Bidder-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)

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 COMPTON COMMUNITY COLLEGE 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 **STUDENT HOUSING.**

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 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.

[CONTINUED NEXT PAGE]

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 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

_____
(Bidder-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)

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 COMPTON COMMUNITY COLLEGE 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 **STUDENT HOUSING.**

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 to any Claimant for all labor, materials or services used or reasonably required for use in the performance of the Work 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 §9100, 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 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, 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.

[CONTINUED NEXT PAGE]

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

_____
(Bidder-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)

OWNER CONTROLLED INSURANCE PROGRAM (OCIP)

1.1 INTRODUCTION

Compton Community College District, hereinafter referenced as "District" or "Owner", has elected, at its sole discretion, to implement an Owner Controlled Insurance Program ("OCIP"). All terms and conditions of the Contractual Provisions will apply during the term of the contract.

The OCIP will provide Workers' Compensation, Employer's Liability, General & Excess Liability, and Contractor's Pollution Liability for all Enrolled Contractors (and their Enrolled Subcontractors of every tier) and other designated parties for work performed at the Project Site (hereinafter called "Project") as well as builder's risk insurance. The Owner agrees to pay all premiums associated with the OCIP, unless otherwise stated in this section and in other contract documents. The OCIP coverages will be primary to other valid and collectable insurance for the owner and enrolled parties in the program.

Insurance coverage provided under the OCIP is limited in scope and specific to work performed after the inception date of enrollment into the OCIP. Labor and ongoing operations related to offsite locations are not covered by the OCIP. In addition to any insurance provided by the Owner, all Contractors/Subcontractors will be responsible for providing certain insurance as specified in section 1.7. The Owner recommends that Contractors discuss the OCIP with their insurance agents, brokers or consultants to ensure that other proper coverages are maintained, prior to contract acceptance.

Keenan & Associates, hereinafter called "Program Administrator", shall administer the OCIP on behalf of the Owner. At all times, all Contractors/Subcontractors shall: (a) cooperate with Owner, Program Administrator, and all OCIP insurers, as applicable, and their respective consultants, agents and representatives, in its or their administration of the OCIP and all other terms and conditions described herein, and (b) comply with the terms, conditions, warranties, and subjectivities of the insurance policies provided pursuant to the OCIP, including, without limitation, any and all directives and requirements of Owner's and the OCIP insurers' respective consultants, agents and representatives, including, without limitation, any directive or requirement relating to loss control, and quality control, and the closure to Owner's satisfaction of open items on any and all quality control checklists and inventories.

A. Participation in the OCIP

Participation in the OCIP is mandatory but not automatic. Each Eligible Contractor/Subcontractor must follow the guidelines, as specified in section 1.5.

Definitions:

Enrollment: An Eligible Contractor/Subcontractor is considered Enrolled once required documents are received, reviewed, and processed by the OCIP Program Administrator to the insurer. (See Sections 1.7 and 1.8)

Contractor: Includes all vendors, suppliers, businesses, persons, or entities and entities which the Owner has engaged directly by contract to perform services relating to the Project.

Subcontractor: Includes, but is not limited to, all businesses, vendors, suppliers, and other persons or entities that have been engaged by a Contractor to perform or assist with the performance of services relating to the Project, including all sub-tier contractors.

Eligible: Includes all Contractors/Subcontractors providing direct labor on the Project, and excludes Ineligible Contractors, as defined below. Temporary labor services and leasing companies are to be treated as Eligible Contractors.

Ineligible: It is not the intent to insure certain entities and scopes of work, including, but not necessarily limited to the following: consultants; suppliers; abatement and/or removal of hazardous materials; vendors; off-site fabricators; materials dealers; surveyors; guard services; non-construction janitorial services; and truckers, including trucking to the Project where delivery is the only scope of work performed; contractors subbing out installation who are not performing

OWNER CONTROLLED INSURANCE PROGRAM (OCIP)

1.1 INTRODUCTION

Compton Community College District, hereinafter referenced as "District" or "Owner", has elected, at its sole discretion, to implement an Owner Controlled Insurance Program ("OCIP"). All terms and conditions of the Contractual Provisions will apply during the term of the contract.

The OCIP will provide Workers' Compensation, Employer's Liability, General & Excess Liability, and Contractor's Pollution Liability for all Enrolled Contractors (and their Enrolled Subcontractors of every tier) and other designated parties for work performed at the Project Site (hereinafter called "Project") as well as builder's risk insurance. The Owner agrees to pay all premiums associated with the OCIP, unless otherwise stated in this section and in other contract documents. The OCIP coverages will be primary to other valid and collectable insurance for the owner and enrolled parties in the program.

Insurance coverage provided under the OCIP is limited in scope and specific to work performed after the inception date of enrollment into the OCIP. Labor and ongoing operations related to offsite locations are not covered by the OCIP. In addition to any insurance provided by the Owner, all Contractors/Subcontractors will be responsible for providing certain insurance as specified in section 1.7. The Owner recommends that Contractors discuss the OCIP with their insurance agents, brokers or consultants to ensure that other proper coverages are maintained, prior to contract acceptance.

Keenan & Associates, hereinafter called "Program Administrator", shall administer the OCIP on behalf of the Owner. At all times, all Contractors/Subcontractors shall: (a) cooperate with Owner, Program Administrator, and all OCIP insurers, as applicable, and their respective consultants, agents and representatives, in its or their administration of the OCIP and all other terms and conditions described herein, and (b) comply with the terms, conditions, warranties, and subjectivities of the insurance policies provided pursuant to the OCIP, including, without limitation, any and all directives and requirements of Owner's and the OCIP insurers' respective consultants, agents and representatives, including, without limitation, any directive or requirement relating to loss control, and quality control, and the closure to Owner's satisfaction of open items on any and all quality control checklists and inventories.

A. Participation in the OCIP

Participation in the OCIP is mandatory but not automatic. Each Eligible Contractor/Subcontractor must follow the guidelines, as specified in section 1.5.

Definitions:

Enrollment: An Eligible Contractor/Subcontractor is considered Enrolled once required documents are received, reviewed, and processed by the OCIP Program Administrator to the insurer. (See Sections 1.7 and 1.8)

Contractor: Includes all vendors, suppliers, businesses, persons, or entities and entities which the Owner has engaged directly by contract to perform services relating to the Project.

Subcontractor: Includes, but is not limited to, all businesses, vendors, suppliers, and other persons or entities that have been engaged by a Contractor to perform or assist with the performance of services relating to the Project, including all sub-tier contractors.

Eligible: Includes all Contractors/Subcontractors providing direct labor on the Project, and excludes Ineligible Contractors, as defined below. Temporary labor services and leasing companies are to be treated as Eligible Contractors.

Ineligible: It is not the intent to insure certain entities and scopes of work, including, but not necessarily limited to the following: consultants; suppliers; abatement and/or removal of hazardous materials; vendors; off-site fabricators; materials dealers; surveyors; guard services; non-construction janitorial services; and truckers, including trucking to the Project where delivery is the only scope of work performed; contractors subbing out installation who are not performing

labor on the project site; and contractors performing landscape maintenance (though landscape work itself is covered). Ineligible parties are required to ensure that any eligible subcontractors who provide on-site labor comply with the OCIP Enrollment. Program Administrator reserves the right to reconsider an ineligible entity's participation in the OCIP should its scope of work or contract change at any time. **Any questions regarding a contractor's status as "Eligible" or "Ineligible" should be referred by written request to Owner and approved by the Program Administrator.**

EACH CONTRACTOR/SUBCONTRACTOR MUST INCLUDE THIS DOCUMENT WITH THEIR BID SPECIFICATIONS TO ANY AND ALL SUBCONTRACTORS, INCLUDING ALL SUB-TIER SUBCONTRACTORS. Any contractor/subcontractor's failure to comply with the OCIP Administrator and all OCIP requirements shall be considered non-compliant under the contract.

Enrollment of each Contractor's eligible Subcontractors is mandatory. Contractor shall notify Owner and the Program Administrator in writing of the identity of each Subcontractor regardless of enrollment eligibility and shall cause each Subcontractor to notify the Program Administrator in writing of the identity of each of its Sub-subcontractors, prior to such party's commencement of their work and entry onto the Project. Contractors and Subcontractors of all tiers shall not be deemed enrolled until the Program Administrator and OCIP insurers receive and approve a completed Contract Enrollment Form for each awarded contract. Enrollment is required prior to commencement of on-site activities but no contractor shall be enrolled sooner than 30 days prior to their start date. Each Contractor/Subcontractor shall be solely responsible for any and all losses, damages, claims, liabilities, and suits arising out of such Subcontractor's failure to enroll, or delay in enrolling, any of its Subcontractors.

Unless otherwise directed by the Owner, Ineligible Contractors and Subcontractors will be required to maintain their own insurance for both on-site and off-site activities and will be required to participate in the Project Safety Program (See Section 1.16). Minimum Insurance and endorsement requirements are located in Section 1.7 **&** 1.8**. Each ineligible contractor must register with the OCIP's online portal ("WrapPortal"). All required certificates and endorsements must be supplied via WrapPortal.**

B. Project Site and Offsite Premises

Coverages provided by the OCIP are **Project Site** specific. The Project Site shall be designated by the Owner. The Project Site consists of any and all projects that are endorsed to this policy, which includes the following:

1. Ways and means adjoining the endorsed project site.
2. Adjacent locations to the endorsed project sites where incidental operations are being performed, excluding permanent locations.

With the exception of 1 and 2 mentioned above, off-site locations, labor and ongoing operations are not covered by the OCIP. It will be the responsibility of each Contractor/Subcontractor to maintain off-site insurance, as identified in Section 1.7, which specifies coverage types and minimum limits. Contractor/Subcontractor will promptly furnish to the Owner, or its designated representative, Certificates of Insurance evidencing that all required insurance is in force.

1.2 PREQUALIFICATION & COST IDENTIFICATION

A. Contractor Pre-Qualification

Pursuant to Government Code Section 4420.5, Bidders must meet certain minimum standards to bid on the Owners' Project. The following qualification standards apply to ALL Bidding Contractors at time of bid opening:

1. **Average Workers' Compensation Experience Modification Rate (EMR) of 1.25 or less over the last five (5) years OR the current published year.**
    a. ***We encourage the bidder to choose subcontractors who meet these requirements however this will not exclude eligible subcontractors from enrolling in the OCIP.***
2. **Zero (0) Serious and Willful violations (Labor Code Section 6300) against them in the past five (5) years**
3. **Evidence of an Injury and Illness Prevention Program (IIPP). Evidence is required to be submitted post bid opening and prior to bid award.**

FAILURE TO MEET THESE MINIMUM STANDARDS SHALL DISQUALIFY THE BIDDER.

B. Contractor Insurance Cost Identification
Contractor's base bid shall exclude all costs for insurance coverages provided under the OCIP. If insurance cost is not removed, the bidder may not qualify as the lowest responsive bidder. The Bidder declares under penalty of perjury under California law, that the base bid excludes any costs relating to any insurance coverages afforded under the OCIP and that each subcontractor to the Bidder has similarly excluded costs for any insurance coverage afforded under the OCIP.

C. Change Order Pricing
All Contractors/Subcontractors declare, under penalty of perjury under California law, that any change order issued to the contract is priced to exclude any costs relating to any insurance coverage afforded under the OCIP.

1.3 OWNER-PROVIDED INSURANCE COVERAGES

CONTRACTOR/SUBCONTRACTOR SHOULD REFER TO THE ACTUAL POLICIES FOR DETAILS CONCERNING COVERAGE, EXCLUSIONS, AND LIMITATIONS. THE ORIGINAL POLICIES WILL PREVAIL AS THE SOLE BINDING AGREEMENT IN CONNECTION WITH ANY CLAIM OR QUESTION REGARDING COVERAGE PROVIDED BY THE OCIP. OCIP POLICIES AND PROJECT INSURANCE MANUAL ARE AVAILABLE UPON WRITTEN REQUEST TO THE PROGRAM ADMINISTRATOR.

THE OCIP IS INTENDED TO PROVIDE BROAD COVERAGES AND HIGH LIMITS TO ALL ENROLLED CONTRACTORS/SUBCONTRACTORS. THE OWNER DOES NOT WARRANT OR REPRESENT THAT THE OCIP COVERAGES CONSTITUTE AN INSURANCE PROGRAM THAT COMPLETELY ADDRESSES THE RISKS OF THE CONTRACTORS/SUBCONTRACTORS. PRIOR TO CONTRACT AWARD, IT IS THE RESPONSIBILITY OF ALL CONTRACTORS/SUBCONTRACTORS TO ENSURE THAT THE OCIP COVERAGES PROVIDED SUFFICIENTLY ADDRESS THEIR INSURANCE NEEDS. UPON REQUEST, OCIP POLICIES ARE AVAILABLE FOR REVIEW.

OCIP coverage applies only to Work performed under the contract at the Project (see Section 1.1, B for definition). All Contractors must provide their own insurance for Automobile Liability and off-site locations, labor, and operations.

Such policies or programs may be amended from time to time, and the terms of such policies or programs, as amended, are incorporated herein by reference.

The Contractors/Subcontractors enrolled in the OCIP agree that the OCIP policies' limits of liability, coverage terms and conditions shall determine the scope of coverage provided by the OCIP.

A. Workers' Compensation and Employer's Liability Insurance will be provided in accordance with applicable state laws to all Enrolled Contractors/Subcontractors (each as a named insured, and issued an individual policy) reflecting the following Limits of Liability:

Workers' Compensation: California Statutory Benefits

Employer's Liability:

- $1,000,000 Bodily Injury each Accident
- $1,000,000 Bodily Injury by Disease – Policy Limit
- $1,000,000 Bodily Injury by Disease – Each Employee

1. Deductible: None
2. Exclusions: The known exclusions for this coverage are set forth below:

Bodily Injury Outside US or Canada	Intentional or Aggravated Bodily Injury
Bodily Injury To Any Member of Flying Crew	Obligations Imposed By Disability Benefits or Any Similar Law
Bodily Injury To Person Subject To Federal Workers' Compensation	Obligations Imposed By Occupational Disease Laws
Bodily Injury To Person Subject To Occupational Disease Laws	Obligations Imposed By Unemployment Compensation Laws
Contractual Liability	Obligations Imposed By Workers' Compensation Laws
Employees Knowingly Employed Illegally	State or Federal Law Violation Fines, Penalties
Employment Related Practices	

This is a summary and may not be exhaustive. The policy language may contain additional exclusionary language, limitations or carve-backs that are not identified on the table. It is the responsibility of the Contractor/Subcontractor to review the policy for the complete details of all exclusions.

3. **Policy Term**: The master policy effective date is October 1, 2023. The policy term is three years, with one automatic two-year renewal. The policy is intended to remain in effect for duration of the contractor's contracted work. Warranty work and post contract repair work is excluded. Each Contractor/Subcontractor is insured under the policy for the length of its work at the Project.

B. General and Excess Liability Insurance is written on an "Occurrence" form. Certificates of Insurance will be provided to all enrolled Contractors/Subcontractors as named insureds, with the total limits of liability reflecting the following:

- $27,000,000 Bodily Injury and Property Damage Liability
- $29,000,000 General Aggregate
- $29,000,000 Products and Completed Operations
- 10 Years Completed Operations

1. Deductible: $25,000 per occurrence
2. Exclusions: The known exclusions for this coverage are set forth below:

Aircraft, Auto or Watercraft	Nuclear
Asbestos	Personal and Advertising Bodily Injury
Medical Payments Coverage	Pollution and Hazardous Materials
Certain Exclusions to Personal and Advertising Injury Liability	Prior Continuous, or Progressively Deteriorating Injury or Damage
Certified Acts of Terrorism	Professional Liability
Communicable Disease	Property Damage to the Project During the Course of Construction
Contractual Liability (Limited Coverage Provided)	Property Damage to Your Product
Cross Suits – Limited	Punitive Damages
Cyber and Data	Recall of Products, Work Or Impaired Property
Employers Liability	Silica or Silica Mixed Dust
Employment Related Practices	Subsidence
Expected or Intended Injury	Violation of Statutes Governing Collecting, Transmitting Information

EIFS Installation	Violation of Statutes Governing Email, Fax, Phone Calls
Fungi Or Bacteria	War
Lead	Workers Compensation and Similar Laws
Certain exclusions for transportation or use of Mobile Equipment	Damage to Property
Damage to Your Work	

This is a summary and may not be exhaustive. The policy language may contain additional exclusionary language, limitations or carve-backs that are not identified on the table. It is the responsibility of the Contractor/Subcontractor to review the policy for the complete details of all exclusions and policy terms.

3. **Policy Term**:
   a. The policy effective date is to be determined. The policy is intended to remain in effect for the length of the construction of the Project.
   b. Ten years Products and Completed Operations coverage

C. Contractor's Pollution Liability is written on an "Occurrence" form under a master liability policy. Certificates of Insurance will be provided to all enrolled Contractors/Subcontractors, as named insured, reflecting the following Limits of Liability:

- $15,000,000 Per Occurrence / $25,000,000 Policy Aggregate
- Defense costs are outside of limits up to $1,000,000.

1. $10,000 Deductible per Occurrence
2. Contractor/Subcontractor shall be liable for payment of the deductible, at its expense; to the extent claims payable are attributable to their acts or omissions and/or the acts or omissions of its Subcontractors of any tier or any other entity or person for whom it may be responsible. The deductible will apply to each occurrence and must be satisfied prior to payment of the loss. The deductible amount shall not be reimbursed by the OCIP Insurance Program or the District.
3. Exclusions: The known exclusions for this coverage are set forth below:

Auto, Aircraft, Vessel Or Rolling Stock	Nuclear
Claims Between Certain Insureds	Other Entities
Contractual Liability	Pre-Existing Conditions
Damage To Property	Products
Fines, Penalties, and Treble Damages	Terrorism
Employment Related Practices	War
Owned Hazardous Materials Facility	Workers Compensation and Similar Laws

This is a summary and may not be exhaustive. The policy language may contain additional exclusionary language, limitations or carve-backs that are not identified on the table. It is the responsibility of the Contractor/Subcontractor to review the policy for the complete details of all exclusions.

4. Policy Term:
   a. The master policy effective date is October 1, 2023. The policy is intended to remain in effect for the length of the Project or through October 1, 2028 at 12:01am, whichever comes first.

D. Builder's Risk coverage will be in place during the course of construction at the Project. Such insurance shall be written on a repair or replacement cost basis, subject to exclusions, sub limits, property limitations and conditions. Such insurance shall include the interests of the Owner as named

insured and enrolled Contractors/Subcontractors as additional insureds. The deductible schedule is as follows:

Deductibles

- $5,000 - $100,000 deductible (depending on type of structure) for Wood Frame, Modular, Tilt-Up Construction, Joisted Masonry, and Fire Resistive / Non-Combustible / Masonry Non-Combustible.
- Up to $250,000 deductible for Water Damage to All Construction Types
- Deductibles are subject to increase if a Project's Builder's Risk term is extended 60 days or more.

1. Contractor/Subcontractors shall be responsible for the applicable deductible. The deductible shall apply to each occurrence and must be satisfied prior to payment of the loss. The deductible shall not be reimbursed by the OCIP Insurance Program or the District.
2. Exclusions: The known exclusions for this coverage are set forth below:

Asbestos
Certain Offsite Property
Certain Release, Discharge, Escape, or Dispersal of Contaminants or Pollutants
Certified Acts of Terrorism (Optional Coverage)
Cessation of Work
Consequential Loss (except as provided in Delay in Opening Coverage)
Communicable Disease
Contractor's Tools, Machinery, Plans, Equipment
Cost of Making Good (Optional Coverage)
Damage to Existing Property (Optional Coverage)
Damage While Testing Prototype or Used Machinery/Equipment
Damages, Fines, Penalties at Government Agency or Court Order
Disappearance or When Revealed by Inventory Shortage Alone
Earth Movement (Optional Coverage)
Electrical, Magnetic, or Errors Related to Electronic Records
Financial Accounts, Instruments, Stamps, Deeds, Precious Material
Flood (Optional Coverage) (rain and the accumulation of rainwater included in Flood definition)
Foreign Terrorism
Infidelity, Dishonesty, Fraudulent Activity of Insured
Land, Values of Land, Cut, & Fill etc. Prior to Project Commencement
Loss Under Any Manufacturer or Supplier Guarantee/Warranty
Normal Subsidence
Nuclear
Offshore or Barrier Island Property
Property That Stores, Processes, or Handles Radioactive Materials
Rolling Stock, Aircraft, Watercraft
Software Loss, unless results from an Open Peril
Standing Timber, Growing Crops, Animals
Vehicles or Equipment Licensed For Highway Use
War and Military Action

This builder's risk coverage and exclusion summary may not be all inclusive. The policy language may contain additional exclusionary language, limitations or carve-backs that are not identified on the table. It is the responsibility of the Contractor/Subcontractor to review the policy for the complete details of all exclusions, sublimit and deductibles.

Special Conditions: All Wood Frame and Modular projects are subject to Protective Safeguards as shown in A

3. EXHIBIT A.
4. **Policy Term**: The policy term is the term of the project.
5. *All Contractors/Subcontractors shall be responsible for any loss or damage to their personal property. This would include, but is not limited to, tools, equipment, mobile construction equipment, or materials NOT intended to be a permanent part of the building, whether owned, borrowed, used, leased, or rented by any Contractor/Subcontractor. Any insurance purchased*

by the Contractors/Subcontractors, or self-insurance, shall be the Contractors'/Subcontractors' sole source of recovery in the event of a loss.

E. OCIP Policies Establish OCIP Coverage. The insurance coverages, limits of liability, definitions, terms, conditions, exclusions and limitations referenced in these contractual provisions and the other contract documents are set forth in full in the OCIP insurance policies. The summary descriptions of such policies in these contractual provisions, in the Project Insurance Manual, or in any other contract document or elsewhere are not intended to be complete or to alter or amend any provisions of the actual OCIP policies. To the extent, if any, such descriptions herein or therein conflict with any such insurance policies, the provisions of the actual insurance policies shall govern. To the extent there are any other conflicts between or among the provisions of such insurance policies, these contractual provisions, the contract documents, or the Project Insurance Manual, then in descending order, the insurance policies shall govern, followed by these contractual provisions, the contract, the other contract documents, then the Project Insurance Manual. Contractor/Subcontractor acknowledges that it has had the opportunity to review the insurance policies as provided in Section 1.3, and that it is relying solely on the provisions set forth in the insurance policies, and not upon any oral or written statement or reference in these contractual provisions, any other contract document, the Project Insurance Manual, or otherwise.

1.4 OCIP CERTIFICATES AND POLICIES

All Enrolled Contractors/Subcontractors will receive Certificates of Insurance for Workers' Compensation, General Liability, Excess Liability and Contractor's Pollution Liability coverages. Each enrolled Contractor/Subcontractor will receive their own Workers' Compensation policy. Program Administrator will provide a copy of the OCIP policies upon written request. Such policies or programs may be amended from time to time and the terms of such policies or programs, as they may be amended, are incorporated herein by reference. Contractors/Subcontractors hereby agree to be bound by the terms of coverage, as contained in such insurance policies and/or self-insurance programs.

1.5 CONTRACTOR/SUBCONTRACTOR RESPONSIBILITIES

Participation in the OCIP is mandatory but not automatic. Contractor /Subcontractor must comply with the following:

A. Contractor Eligibility, see Section**1.1**, **A** for definition.

B. Contractor Registration & Enrollment

The Program Administrator will provide online registration via WrapPortal(see Section 1.1 A); a User Name, Password and URL for website enrollment will be provided to each Subcontractor upon entry of Subcontractor identifying information into WrapPortal by Contractor or Parent Subcontractor regardless of enrollment eligibility.

An Eligible Contractor/subcontractor is not enrolled until the Program Administrator and OCIP insurers receive and approve a completed OCIP Enrollment via WrapPortal for each awarded contract. Subcontractor shall also upload declarations pages, including proof of rates from Subcontractor's current policies. Enrollment is required prior to commencement of on-site activities but no Subcontractor shall be enrolled sooner than 30 days prior to their start date. Subcontractors must provide the Required Insurance Coverages (see Sections 1.7 and 1.8) via WrapPortal.

Any Subcontractor who enrolls in the OCIP after their start date must provide a No- Known-Loss Letter to the Program Administrator, along with the enrollment documentation. Late Enrollment is not guaranteed and must be approved and accepted by the insurance carrier. Upon approval, the Program Administrator will provide evidence of OCIP coverage to the Subcontractor, as noted in Section 1.4

All Contractors/Subcontractors of all tiers shall cooperate with and require their Subcontractors to cooperate with the Owner and the Program Administrator regarding the administration and operation of the OCIP.

C. Contractor/Subcontractor Compliance with Other Forms and Procedures

All Enrolled Contractors/Subcontractors are required to complete and submit the following forms:

1. **Project Site Monthly Payroll Report**
   Project Site Monthly Payroll must be submitted to the Program Administrator by the 10th of each month via WrapPortal until the completion of the contract and in no event shall be later than the 15th of each month. This report must summarize the unburdened payroll by Workers' Compensation Class Code. Certified payroll is not a requirement of the OCIP and cannot be accepted. **If the Project Site Monthly Payroll Report is not submitted to the Program Administrator, the Contractor, Construction Manager and/or Owner may withhold payment from the prime or parent contractor until the report is received.** Subcontractor agrees to keep and maintain accurate and classified records of their payroll for operations at the Project Site. This payroll information is submitted to the OCIP insurer. At the end of each contract, a carrier audit may be performed using the reported payroll and other supporting documents, as required by the California Workers Compensation Insurance Rating Bureau (WCIRB).

   Workers' Compensation Insurance Rating Bureau Requirements
   Once an Eligible Contractor/Subcontractor is enrolled into the OCIP, a separate Workers' Compensation Policy will be issued to them. All Enrolled Contractors/Subcontractors shall comply with the rules and regulations of the California Workers Compensation Insurance Rating Bureau (WCIRB).

2. **Contractor's Completion Notice**
   Contractor's Completion Notice must be submitted to the Program Administrator via WrapPortal upon completion of work at the Project, which includes punch list items, but not warranty work. Contractor/Subcontractor shall cooperate with Contractor in completing the *Contractor's Completion Notice*. The Contractor's Completion Notice shall evidence all enrolled Contractors/Subcontractors' **final contract value, actual start and completion dates**, per contract. This information is used to confirm that each Workers' Compensation Policy was issued with correct policy term dates, covering the Contractors/Subcontractors for the duration of their work at the Project. This information is subsequently submitted to the Workers' Compensation Insurance Rating Bureau (WCIRB).

3. **Project Insurance Manual**
   A Project Insurance Manual will be provided to all awarded Contractors/Subcontractors, which includes a Program Summary, Claims Reporting Instructions, Project Safety Guidelines, necessary forms, and contact information. Copies can be requested from the Program Administrator.

Contractor/Subcontractor Compliance with all aspects of the OCIP
All Contractors/Subcontractors further acknowledge and agree to comply fully and promptly with such safety, loss control, and quality control rules, requirements, and directives as may from time to time be promulgated by Owner, the Program Administrator and/or the OCIP insurers or any of its or their respective consultants, agents, or representatives. Neither the Contractor or Subcontractor of any tier shall impede or otherwise prevent Owner, their representatives or the Program Administrator or their respective consultants from entering or otherwise accessing the project or its related off-site locations. Nothing in this document, or any other contract document or in the Project Insurance Manual, shall be deemed to render Owner or any of its affiliates of any tier an employer of Contractor/Subcontractor or any of its Subcontractors or any of its or their personnel or employees. **Failure to comply will be considered non-performance under the contract.**

It is the obligation of each Eligible Contractor/Subcontractor to enroll in the OCIP and to comply with all OCIP requirements set forth in these contractual provisions, in the OCIP insurance policies, in the Project Insurance Manual, and elsewhere in the contract documents. Contractor/Subcontractor shall provide each of its Subcontractors, among other things, with a copy of the Project Insurance Manual and a copy of these contractual provisions. Contractor/Subcontractor shall require in writing that each enrolling Subcontractor comply with, among other things, the provisions of the OCIP insurance policies, the Project Insurance Manual, and the contract documents. All such requirements shall be included in all subcontracts and sub-subcontracts with eligible parties. The failure of Contractor/Subcontractor or any other party to provide eligible Subcontractors with a copy of this document, the Project Insurance Manual, and/or all other applicable requirements shall not relieve any such Subcontractor of any of the obligations contained therein.

Contractor/Subcontractor shall keep and maintain accurate records and information in accordance with the requirements of the OCIP Insurer(s), the Project Administrator, the Project Insurance Manual, and the contract documents, and shall provide such records and information to Owner, the Program Administrator, and/or the OCIP insurers upon request.

1.6 OCIP DISCLAIMER

The Owner does not warrant or represent that the OCIP coverages constitute an insurance program that completely addresses all the risks of the Contractors/Subcontractors. Prior to the commencement of work under the contract, it is the responsibility of all Contractors/Subcontractors to ensure that the OCIP coverages provided sufficiently address their insurance needs. Any additional insurance coverage purchased will be at Contractor's/Subcontractor's option and sole expense.

1.7 REQUIRED CONTRACTOR/SUBCONTRACTOR PROVIDED INSURANCE COVERAGES

For any work under this contract, and until completion and final acceptance of the work by the Owner, the Contractors/Subcontractors shall, at their own expense, promptly furnish Certificates of Insurance evidencing that coverage is in force and any required Additional Insured Endorsements to the Owner, with a copy to the Program Administrator for the following coverages, before commencing work on the Project.

A. Automobile Liability Insurance Requirements and Limits: See Section **1.8** for Certificate Holder and Additional Insured Endorsement specifications. Automobile Liability Insurance must cover all vehicles owned by, hired by, or used on behalf of the Contractors/Subcontractors for both Project Site and off-site operations with the following minimum limits of liability:

Auto Liability Insurance Limits required:

All Contractors/Subcontractors*

General/Prime Contractor	Subcontractor	
$2,000,000	$1,000,000	Bodily Injury and Property Damage Liability

***See Section1.8 for additional insured language**

B. Workers' Compensation and Employer's Liability Insurance Limits:

Workers' Compensation –Statutory Benefits - All States
Employer's Liability:
$1,000,000 Bodily Injury each Accident
$1,000,000 Bodily Injury by Disease – Policy Limit
$1,000,000 Bodily Injury by Disease – Each Employee

C. General Liability Insurance, minimum limits of liability are as follows:

Eligible Contractors/Subcontractors

General/Prime Contractor	Subcontractor	
$2,000,000	$1,000,000	Bodily Injury and Property Damage Liability Per Occurrence
$2,000,000	$1,000,000	General Aggregate
$2,000,000	$1,000,000	Products/Completed Operations Aggregate
$2,000,000	$1,000,000	Personal/Advertising Injury Liability Per Person or Organization

Ineligible Contractors / Subcontractors (Excluded)

General/Prime Contractor	Subcontractor	
$2,000,000	$1,000,000	Bodily Injury and Property Damage Liability Per Occurrence
$2,000,000	$1,000,000	General Aggregate
$2,000,000	$1,000,000	Products/Completed Operations Aggregate
$2,000,000	$1,000,000	Personal/Advertising Injury Liability Per Person or Organization

D. Professional Liability Insurance: If Contractor's/Subcontractor's work requires design and/or design-assist services, or Contractor/Subcontractor performs professional services of any kind, Contractor/Subcontractor shall purchase and maintain, at its sole cost and expense, Professional Liability (Errors and Omissions) insurance for all professional services provided. This Professional Liability insurance shall include full prior acts coverage sufficient to cover the services under this agreement, with the following minimum limits of liability:

$1,000,000 per Claim/Annual Aggregate

Deductible or self-insured retention amount must not be greater than $100,000 per claim, including coverage of contractual liability.

Professional Liability Insurance is to be maintained during the term of the contract and for so long as the insurance is reasonably available as provided herein, for a period of ten (10) years after completion of the services.

E. Environmental and Asbestos Abatement Coverages: If the Contractor's/Subcontractor's scope of work involves the removal of asbestos, the removal/replacement of underground tanks, or the removal of toxic chemicals and substances, the Contractor/Subcontractor will be required to provide the following minimum limits of liability, for such exposures subject to requirements and approval of the Owner:

$1,000,000 per Claim/Aggregate

F. Aircraft or Watercraft Liability Insurance: If any Contractor/Subcontractor requires the use of Aircraft or Watercraft at the Project Site, the Contractor/Subcontractor shall purchase and maintain, or cause the operator of the Aircraft or Watercraft to purchase and maintain, Aircraft or Watercraft liability insurance. This must insure passengers and the General Public against personal injury, bodily injury or property damage arising out of the ownership, maintenance, use or entrustment to others. It includes Aircraft or Watercraft owned or operated by or rented or loaned to any insured. Use includes operation and "loading or unloading". Contractor/Subcontractor will be required to provide

the following minimum limits of liability, for such exposures subject to requirements and approval of the Owner:

$5,000,000 per Claim/Aggregate

1.8 REQUIRED CONTRACTOR/SUBCONTRACTOR CERTIFICATES OF INSURANCE AND ADDITIONAL INSURED ENDORSEMENTS

Certificates of Insurance and Additional Insured Endorsements acceptable to the Owner and Program Administrator must be filed with the Owner within ten (10) days after award of the contract to all Contractors/Subcontractors and prior to commencement of on-site activities.

All required insurance shall be maintained, without interruption, from the date of commencement of on-site activities, until the date of the final payment or expiration of any extended period, as set forth in this agreement. These certificates and additional insured endorsements required by Section 1.7 and 1.8 shall provide not less than thirty (30) days prior written notice to the Owner, with a copy to the Program Administrator, of any material change in the insurance, cancellation, or non-renewal.

Certificates of Insurance, the Project must be identified on the Certificate of Insurance in the "Description of Operations/Locations/Vehicles/Special Items" section. The Certificates of Insurance should name District, as the Certificate Holder, as specified below:

Certificate Holder:

Compton Community College District
c/o Keenan
2355 Crenshaw Blvd., Suite 200
Torrance, CA 90501

Additional Insured Endorsements: The Owner must be specifically named on the Schedule of an Additional Insured Endorsement, under the section titled, "Name of Person or Organization", as specified below:

1. **The District, CM, Architect, Inspector, the State of California, their officers, employees, agents, volunteers, and independent contractors as additional insureds.**
2. All Contractors/Subcontractors must provide an additional insured endorsement for automobile liability.

   Ineligible Contractors/Subcontractors must provide an additional insured endorsement on both the Automobile Liability and General Liability policies and a waiver of subrogation on workers' compensation.

   Compton Community College District
   c/o Keenan
   2355 Crenshaw Blvd., Suite 200
   Torrance, CA 90501

1.9 CONTRACTOR/SUBCONTRACTOR INSURANCE FOR PERSONAL PROPERTY AND EQUIPMENT

All Contractors/Subcontractors shall be solely responsible for any loss or damage to their personal property including, without limitation, their tools and equipment, mobile construction equipment, scaffolding, and temporary structures, whether owned, borrowed, used, leased, or rented by any Contractor/Subcontractor. Contractors/Subcontractors may at their sole discretion, purchase and maintain insurance or self-insure such equipment and property, and any deductible in relation thereto shall be their sole responsibility. Any insurance, including self-insurance, shall be the Contractors'/Subcontractors' sole source of recovery in the event of a loss.

Any type of insurance or any increase of limits of liability not described in this Section, which the Contractors/Subcontractors require for their own protection or on account of any statute, will be their own responsibility and at their expense.

1.10 ASSIGNMENT OF RETURN PREMIUMS

The Owner will be responsible for the payment of all premiums associated solely with the OCIP and will be the sole recipient of any dividend(s) and/or return premium(s) generated by the OCIP.

1.11 WAIVER OF SUBROGATION AND OWNER INDEMNIFICATION

With respect to their work on the Project:

1. Owner waives all rights of subrogation and recovery against the Contractors/Subcontractors for any loss or damage which is insured under the OCIP.
2. Contractors/Subcontractors waive all rights of subrogation and recovery against the Owner and other Contractors/Subcontractors for any loss or damage which is insured under the OCIP.
3. The Contractors/Subcontractors are obligated to indemnify the Owner for damages or claims not covered by the OCIP.

1.12 NO RELEASE

The provision of the OCIP by the Owner will in no way be interpreted as relieving the Contractors/Subcontractors of any other responsibility or liability under this agreement or any applicable law, statute, regulation, or order.

1.13 OWNER'S RIGHT TO AUDIT

The Contractor/Subcontractor will permit the Owner and/or its representative to examine and/or audit its books, records, and insurance policy information. Contractor/Subcontractor will also provide any additional information to the Owner, or it's appointed representatives, as may be required.

1.14 DUTIES IN THE EVENT OF A LOSS

Contractors/Subcontractors are required to report all losses and potential losses promptly to OCIP insurers and/or Program Administrator. A full description and details of the incurred loss are also required.

The Contractor/Subcontractor shall assist the Owner, its agents, and the Program Administrator, by providing the utmost cooperation in the adjustment of claims arising out of the operations conducted under, or in connection with, the Project and shall cooperate with the Owner's insurers in claims and demands that arise out of the Project and that the insurers are called upon to adjust.

In the event of an accident, it shall be the responsibility of the employing and/or responsible Contractor/Subcontractor to see that injured workers or members of the public are provided immediate medical treatment. All appropriate medical and claim forms must be filed in accordance with the claim procedures developed for this Project by Keenan & Associates, hereinafter called "Program Administrator." This includes notification to the appropriate state authorities, if necessary.

1.15 OCCUPATIONAL SAFETY AND HEALTH COMPLIANCE

All Contractors/Subcontractors are expected to comply with all applicable local, state, and federal occupational safety and health requirements. If additional safety and health requirements are set forth in the contract specifications, all contractors shall comply with these requirements.

It is the responsibility of each Contractor/Subcontractor to maintain an environment free of recognized hazards. All Contractors/Subcontractors shall exercise reasonable care to prevent work-related injuries; property and equipment damage at the Project, as well as minimize risk to the public and third-party property.

The Program Administrator shall conduct periodic loss control surveys on behalf of the District. These surveys will focus on evaluating the Contractors'/Subcontractors' efforts to minimize loss, assist in identifying loss exposures, and to recommend appropriate corrective measures. The Program Administrator is a resource to supplement the safety and loss prevention activity of Contractors/Subcontractors. Its loss control survey activities or other activities of the Program Administrator and/or OCIP insurers do not in any way relieve the Contractors/Subcontractors of their responsibilities for Project safety.

1.16 PROJECT SAFETY PROGRAM

In addition, local, state, and federal occupational safety and health laws, the following standards apply to all Enrolled and Non-Enrolled Contractors/Subcontractors.

A. Safety Orientation

1. Contractor/Subcontractor employees shall be provided with a project specific safety orientation prior the start of the project. At a minimum, the orientation will address the following items:
    a. The District's site safety requirements.
    b. Site specific safety hazards and protective measures for these hazards.
    c. Emergency telephone numbers and procedures.
    d. Local medical clinic/hospital information within the Medical Provider Network (MPN).

B. Program Management

1. Each Contractor/Subcontractors shall have the following safety programs:
    a. Injury and Illness Prevention Plans
    b. Hazard Communication Programs
    c. Heat Illness Prevention Plans
2. Each Contractor/Subcontractor shall have an onsite competent person responsible for occupational safety and health. A competent person is one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.

C. Mandatory 6' Fall Protection

1. Contractor/Subcontractor employees shall be protected from fall exposures of 6 feet or greater. Activities include but are not limited to:
    a. Steel erection
    b. Roofing
    c. Framing
    d. Decking
    e. Work performed from scaffolds
    f. Work performed from ladders

    Exceptions: The following exceptions apply only to framers and wood frame activities:

    a. When installing or "rolling" the joists, Cal/OSHA fall protection requirements shall govern.
    b. When framers are walking/working on securely braced joists, rafters, or roof trusses on center spacing not exceeding 24 inches, and more than 6' from an unprotected side or edge, they shall be considered protected from falls between the joists, rafters, or roof trusses.
2. A safety monitor as means of fall protection is prohibited.
3. Ladder jacks and lean-to scaffolds are prohibited.

4. Contractor/Subcontractors are required to provide training to their employees who might be exposed to a fall hazard prior to the exposure or upon hiring. This training shall be documented and available for review.
5. Methods of fall protection include but are not limited to the following:
   a. Railings
   b. Covers for Floor, Roof, and Wall Openings
   c. Personal Fall Arrest Systems, Personal Fall Restraint Systems, and Positioning Devices
   d. Controlled Access Zones
6. The design and construction of railings shall conform to the Cal/OSHA Construction Safety Orders.
7. The use of wire ropes as top rails and intermediate rails of guardrail systems used for perimeter protection, or at interior openings such as stairways and elevator shafts, shall be installed in accordance with Cal/OSHA requirements. Additionally, wire ropes shall be secured to each support and taut at all times. The maximum deflection of the top rail when a load of 200 pounds is applied in any direction at any point of the top rail shall not exceed 3 inches in one direction which includes the free hanging sag in the wire rope.
8. The minimum parapet height allowed for fall protection is 42 inches or greater.
9. Covers used to cover floor, roof, and wall openings shall be secured in place to prevent accidental removal or displacement and shall be marked in accordance with Cal/OSHA Construction Safety Orders.
10. Covers used to cover floor and roof openings shall be capable of safely supporting the greater of 400 pounds or twice the weight of the employees, equipment and materials that may be imposed on any one square foot area of the cover at any time.
11. Controlled access zones shall be defined by a control line or other means that restricts access. Each line shall have a minimum breaking strength of 200 pounds. Signs shall be posted to warn unauthorized employees to stay out of the controlled access zone.
12. Control lines shall consist of ropes, wires, tapes, or equivalent materials. Control lines shall be erected and supported in accordance with Cal/OSHA Construction Safety Orders.
13. Scaffold Access/Egress. An internal ladder system with hatches and drop-down ladders or temporary stairs shall be provided for safe access/egress on all scaffolds 20 feet or greater in height. External straight ladders are prohibited on all scaffolds if it exposes a user to a fall of 20 feet or greater in height. Exception: When adjustable scaffolds are utilized.
14. When adjustable scaffolds are utilized, they shall have rest platforms at 20-foot maximum vertical intervals.

D. Site Safety

According to industry practices, it is the responsibility of contractors of all tiers to exercise reasonable care to prevent work-related injuries; property and equipment damage at the project site, and to minimize risk to the third-party persons and property. Contractors/Subcontractors of all tiers shall be expected to comply with the following safety and loss control requirements:

1. All Subcontractors shall identify their contact person(s) to the General or Prime Contractor.
2. All Contractors/Subcontractors shall follow District procedures for dealing with the media.
3. At all times, hard hats shall be worn in the construction environment. Hard hats shall meet the requirements of ANSI Z89.1. No modification to the shell or suspension is allowed except when such changes are approved by the manufacturer.

4. 100% protective eyewear with side shield protection is required while in the construction environment, shop, or anytime eye hazards exist. Protective eyewear shall bear a legible and permanent "Z87" logo to indicate compliance with applicable ANSI/ASSE Standard.
5. All construction employees shall wear clothing suitable for the weather and work conditions. At a minimum, this shall be short sleeved shirts, long pants, and leather or other protective work shoes or boots.
6. Alcohol is prohibited on District property always.
7. Contractors/Subcontractors will be required to respond to all District complaints about objectionable levels of dust or noise and will be required to provide prompt and appropriate abatement.
8. Construction personnel cannot enter District grounds other than the construction site unless accompanied by District personnel and are allowed only "incidental" contact with students. Violations of these requirements by any construction employee will result in a mandatory background check of that employee – including fingerprinting – as required by state law.
9. All prime contractors must attend the site-specific pre-construction meeting.
10. No sexual reference or preference shall be permitted on any piece of clothing or the hardhat. Any employee observed disregarding this policy shall be removed from the job site until further notice.
11. Contractors and subcontractors at all times shall keep premises free from debris such as waste, rubbish, and excess materials and equipment caused by contract work. Contractors and subcontractors shall not leave debris under, in, or about the premises. Upon completion of the contract work, contractors and subcontractors shall clean the interior and exterior of the building or improvement including fixtures, equipment, walls, floors, ceilings, roofs, window sills and ledges, horizontal projections, and any areas where debris has collected so surfaces are free from foreign material or discoloration. Contractors and subcontractors shall clean and polish all glass, plumbing fixtures, and finish hardware and similar finish surfaces and equipment and contractor shall also remove temporary fencing, barricades, planking and construction toilet and similar temporary facilities from the site. No glass containers are permitted on the site.
12. Theft or willful damage to any property of the District, student, or other contractors will be prosecuted fully.
13. All Contractors/Subcontractors will advise non-English speaking employees in their native language either in a written format or via an interpreter of these policies.

E. Crane Safety

1. In accordance with Title 8, California Code of Regulations, section 5006.1, employers shall only permit operators who have a valid certificate (license) of competency to operate cranes. The operator shall have his license on his person, readily available for review.
2. All cranes used in lifting service, exceeding 3 tons rated capacity, and their accessory gear shall not be used until the employer has ascertained that such equipment has been certificated in accordance with Cal/OSHA as evidenced by current and valid documents. Certificates (annual and quadrennial) attesting to current compliance with testing and examination standards shall be maintained, readily available for each crane.
3. The contractor shall provide an erection plan and procedure for erection of trusses and beams over 25 feet long. The erection plan and procedure shall be prepared by a civil engineer currently registered in California. This plan and procedure shall be followed and kept available on the job site.

F. Fire Prevention During Welding, Cutting, and Other Hot Work

1. Contractors engaged in welding and allied processes, heat treating, grinding, cutting, thawing pipe, powder-driven fasteners, hot riveting, torch-applied roofing in conjunction with the requirements of NFPA 241, and similar applications producing or using a spark, flame, or heat shall adhere to National Fire Protection Association Standard 51B entitled "Standard for Fire Prevention During Welding, Cutting, and Other Hot Work."

G. Incident Investigation Requirements

1. The contractor shall perform thorough, in-depth investigations and evaluations of all incidents. A formal incident investigation shall be conducted whenever any incident occurs, including, without limitation, both non-injury incidents and incidents involving first aid. Additionally, near miss accidents and/or incidents must be reported and undergo the same in-depth investigation, root cause analysis and lessons learned process. The incident investigation report shall be e-mailed to Keenan and Associates within 5 working days.
2. Recommendations and lessons learned to prevent recurrence of incidents shall be documented and communicated to all employees of contractor and subcontractors through safety meetings and on-the-job training.

H. Return to Work:

1. The District and OCIP Carrier are committed to working with all Enrolled Contractors and Subcontractors to promote the successful & timely return to work of injured employees following a work-related injury. The purpose of this policy is to ensure that Enrolled Contractor/Subcontractor employees who temporarily cannot return to their normal duties due to job-related injury or illness but can safely perform transitional duties while recovering is offered appropriate transitional duties for a limited time only.
    a. An employee who has experienced a job-related injury requiring medical treatment must provide a proper medical release prior to returning to work.
    b. An employee who has been removed from the jobsite ambulatory must provide a proper medical release prior to returning to work.
    c. Each Enrolled Contractor/Subcontractor will cooperate with the OCIP Carrier to facilitate the return to work of any injured employee capable of safely performing transitional duties.
    d. When the employee is released to transitional duties, it is the Enrolled Contractor/Subcontractor's responsibility to facilitate the injured employee's return to work.
    e. The Enrolled Contractor/Subcontractor is expected to accommodate the injured employee and facilitate the return to work.
    f. It will be the responsibility of the insurance carrier to maintain communication with the treating physician and the Enrolled Contractor/Subcontractor to facilitate the prompt return of an employee to full work status.

I. Conflicting Safety Requirements:

Contractors and subcontractors shall adhere to all applicable federal, state, local, and contractual safety and health requirements. If there is a conflict between any of these safety and health requirements, the most stringent requirement shall apply.

J. Noncompliance and Unsafe Practices

Owner or their representative shall have the authority to immediately cease any and all operation (s) on the jobsite that is deemed by Owner or their representative to be unsafe to property or has the potential to cause Bodily Injury, pursuant to Title VIII California Code of Regulation, Section 1511. Any such cession of work shall not constitute recoverable delay or other contractual

remedies for liquidated damages and may expose the offending contractor to any such losses to the District or other trades.

K. Professional Conduct Clause

Contractors and subcontractors shall at all times adhere to safety requirements (contractual and regulatory) and shall encourage safe and professional behavior among their employees. Contractor and subcontractors shall not allow on the job site any unfit person, unsafe person, anyone unskilled and unqualified to perform the work assigned to them, or anyone exhibiting such qualities. Any person in the employ of the contractor or subcontractor whom the District or the District's agent/representative may deem incompetent, unsafe, or unfit shall be immediately dismissed from the OCIP job site and shall not again be allowed on the OCIP the job site except with the written consent of District or the District's agent/representative. The District reserves the right to request that the contractor or subcontractor's assigned Project Supervisor/Manager be replaced immediately.

1.17 OWNER'S INSURANCE OBLIGATIONS; CONTRACTORS'/SUBCONTRACTORS' OBLIGATIONS; REPRESENTATIONS, WARRANTIES AND DISCLAIMERS

(a) Owner assumes no obligation to provide insurance other than that summarily described in these Contractual Provisions, in the Project Insurance Manual, and in the OCIP insurance policies. Contractor/Subcontractor shall review the OCIP coverages, limits of liability, and insurance policies to satisfy themselves that the coverages offered thereby meet its needs. Nothing contained herein shall be deemed to place any responsibility on Owner, and Owner disclaims any responsibility, for ensuring that the insurance provided by the OCIP is sufficient for the conduct of Contractor's/Subcontractor's business or performance of the Work, including, without limitation, the adequacy of the limits of liability provided by, and as to all other terms, conditions, and exclusions of, the OCIP insurance policies. The furnishing of insurance by Owner through the OCIP shall in no way relieve or limit or be construed to relieve or limit Contractor/Subcontractor of any responsibility, liability or obligation imposed by the contract, the contract documents, the Project Insurance Manual, the OCIP insurance policies, or by law, including, without limitation, all indemnification obligations on the part of Contractor/Subcontractor.

(b) By enrolling in the OCIP, Contractor/Subcontractor acknowledge that (i) the limits of liability of the OCIP insurance policies are shared by all insured parties under the OCIP; (ii) Owner is not an insurer or in the business of insurance and is not an agent, broker, partner or guarantor of Contractor/Subcontractor or any of the insurance companies providing coverage under the OCIP (the "OCIP insurers"); and (iii) Owner is not responsible for (a) the availability, adequacy, or exhaustion of the limits of the OCIP, (b) the present or future solvency of any of the OCIP insurers or (c) any claims or disputes by, between or among Owner, Contractor/Subcontractor and any of the OCIP insurers, including, without limitation, claims or disputes arising out of any the OCIP insurers' payment or nonpayment of claims or losses, or such insurers' contractual or extra-contractual duties, including, without limitation, defense and/or indemnity obligations. Any type of insurance coverage or limits of liability not provided by the OCIP which Contractor/Subcontractor desires for its own protection, or which is required by applicable laws or regulations, shall be its sole responsibility and expense and shall not be included in its compensation for performance of the contract work. If Contractor/Subcontractor believes that additional limits of liability beyond those provided by the OCIP would be prudent for its protection, it agrees to investigate and procure such additional limits of liability for itself at its sole cost.

(c) By enrolling in the OCIP, Contractor/Subcontractor represents and warrants that it has had the opportunity to read and analyze (and to obtain professional assistance to read and analyze) a copy of the OCIP insurance policies and understand the contents thereof. Any reference in these contractual provisions, in the Project Insurance Manual, or elsewhere in any contract document as to amount, nature, type or extent of coverage provided under the OCIP and/or potential applicability to any potential claim or loss is for reference

only and Contractor/Subcontractor represents and warrants that it has not relied upon any such reference or any other oral or written statement by or on behalf of Owner, the Project Administrator, or any of its or their agents, employees or representatives, but solely upon its own independent review and analysis of the OCIP insurance policies in formulating any understanding and/or belief as to amount, nature, type or extent of any coverage, conditions, extensions, or limits of liability provided by and as to all other terms of the OCIP insurance policies and/or their potential applicability to any claim or loss or their sufficiency for the conduct of Contractor's/Subcontractor's business or performance under the contract documents. To the extent that Contractor/Subcontractor deems it prudent to secure and maintain additional, supplemental, excess, or wholly independent insurance or liability associated with its work on the Project or otherwise, it shall be responsible to do so at its sole expense.

(d) Contractor/Subcontractor hereby releases Owner, the Program Administrator and their respective representatives, agents, directors, officers, employees, partners, shareholders, members, affiliates of every tier, successors, and assigns from any and all claims and liabilities arising out of or relating to acts, errors, omissions or negligence (i) in the design, selection, placement, adequacy, amount, limits, scope and nature of insurance coverage afforded by the OCIP, (ii) in the selection, performance and present and future solvency of the OCIP insurers, and (iii) in the implementation and administration of the OCIP. Contractor/Subcontractor shall make its own determinations regarding such matters and expressly waives all rights and benefits conferred upon it by the provisions of California Civil Code Section 1542, which provides:

"**A general release does not extend to claims that the creditor or releasing party does not know or suspect to exist in his or her favor at the time of executing the release and that, if known by him or her, would have materially affected his or her settlement with the debtor or released party."**

Contractor/Subcontractor expressly acknowledges that the foregoing waiver of the provisions of Section 1542 was separately bargained for, and expressly agrees that the release provision shall be given full force and effect, including, without limitation, as to unknown or unsuspected claims, demands, liabilities and causes of action, if any may exist or arise. This release provision shall survive the completion of the contract work and the expiration or other termination of the Agreement.

1.18 JOINT DEFENSE OF CLAIMS AND SUITS AGAINST MORE THAN ONE INSURED

(a) If a claim, demand, suit, or other proceeding ("Claim") is brought against more than one insured under the OCIP, Owner and Contractor/Subcontractor recognize the common interest of all OCIP insureds in jointly defending that Claim. To the fullest extent permitted by law, and absent a material, current, actual, conflict of interest that cannot be waived and which mandates the appointment of separate counsel under applicable law, Owner and Contractor/Subcontractor insured under the OCIP (i) shall be defended by the same counsel and by the same consultants and experts selected by Owner and/or the OCIP insurers at its or their sole discretion, regardless of whether the defense under the OCIP is provided subject to a reservation of rights issued by any OCIP insurer, and (ii) waive their respective rights to independent counsel as to any and all such Claims. This waiver is deemed to be continuing. Contractor/Subcontractor agrees to execute such other documents as are required to effectuate this waiver and fulfill the purpose of this Section 1.18.

(b) In defense of Claims arising under the OCIP, information shared with counsel engaged to defend the insureds ("Defense Counsel") will be protected from disclosure and shall remain privileged even after the termination of the OCIP and/or the completion of the Project. Contractor/Subcontractor agrees not to disclose to any person or entity, other than to Owner and to Defense Counsel, any confidential information obtained in the defense or pursuit of Claims covered, or potentially covered, under the OCIP. Any such confidential information shall only be used in matters that arise directly pursuant to such OCIP Claims. However, disclosures of such confidential information may be made (i) upon written approval from Defense Counsel or (ii) where required by court order or by applicable law.

(c) Nothing in this Section 1.18 shall preclude Contractor/Subcontractors from engaging counsel of its choice, at its sole expense, to associate in the defense of any such Claim.

1.19 Duty of Care

Nothing contained in the OCIP insurance policies, the contract, these contractual provisions, any other contract document, or the Project Insurance Manual shall relieve Contractor/Subcontractor of its obligations to exercise due care in the performance of its duties in connection with the contract work and to complete the contract work in strict compliance with the contract documents.

NOTE: THE OWNER AND PROGRAM ADMINISTRATOR MUST APPROVE CHANGES TO ANY OCIP REQUIREMENT OR PROCEDURE. NO CONTRACTOR OR SUBCONTRACTOR HAS THE AUTHORITY TO AMEND THE OCIP REQUIREMENTS.

OCIP EXHIBIT A

PROTECTIVE SAFEGUARDS

APPLICABLE TO 'WOOD FRAME' PROJECTS ONLY:

The Builders Risk Policy will not pay for LOSS caused by or resulting from exposures, if the applicable protective safeguards are not maintained during the Builders Risk Policy term of INSURED PROJECT.

As a condition precedent to fire, theft, vandalism, and malicious mischief coverage provided by the Builders Risk Policy, the following protective safeguards will be maintained at every INSURED PROJECT site of Wood Frame construction insured by the Builders Risk Policy.

1. **Fencing – The entire INSURED PROJECT** site shall be surrounded with a six foot chain link fence suitably anchored in the ground and placed a reasonable distance from the insured property. Gates through the chain link fence shall be securely locked during non-working hours.

2. **Lighting – The entire INSURED PROJECT** site shall be illuminated from sunset to sunrise, each day.

**Wood Frame Projects with total insured values greater than $15M may also be required to provide the following:

- Electronic Security – Electronic security by a contracted service from a surveillance company that owns and operates a UL-certified, North American based monitoring center. The surveillance system must be cloud-based and operational covering 100% of the INSURED PROJECT site utilizing infrared illumination or thermal imaging cameras. The electronic security system must have the following capabilities:

  - Live audible voice-over functionality;
  - Lighting or visual indication features;
  - Four hour back up battery life in the event AC power is lost.

OCIP EXHIBIT B

EXHIBIT B

Owner Controlled Insurance Program (OCIP)

Project Insurance Manual

This manual is intended to provide only a general overview of the Owner Controlled Insurance Program and does not in any way alter or take precedence over the language in the actual insurance policies and contracts. It makes no promise to provide insurance to those not enrolled in the Owner Controlled Insurance Program

Program Administrator:
Keenan & Associates
Construction Services Department

Keenan & Associates | CA License No. 0451271 | www.keenan.com

Keenan

Compton College Student Housing (v.07-2024)

Table of Contents

Preface

This Manual

- Identifies responsibilities of the various parties involved in the project
- Provides a basic description of the OCIP coverage and program structure
- Describes audit and administrative procedures
- Provides answers to basic questions about the OCIP
- Provides claim reporting procedures
- Will be updated as necessary

This Manual Does Not

- Provide OCIP coverage interpretations
- Provide complete information about OCIP coverages (Refer to OCIP policies)
- Provide answers to specific claims questions

1.0 Introduction

Compton College (herein referenced as the "District" or the "Owner") is providing an Owner Controlled Insurance Program (OCIP) for work performed at specific project sites. The OCIP is an insurance program that insures eligible and enrolled subcontractors, for work performed at the Job Site (at times referenced herein as the "Work"). **Keenan & Associates**, hereinafter called "Program Administrator", will administer the OCIP on behalf of Compton College.

Certain subcontractors are excluded from this OCIP. These parties are identified in the Contract Documents and Section 3 (Definitions) of this manual.

The Owner / District will pay the insurance premiums for the OCIP coverage described in this manual. You should notify your insurer(s) to endorse your coverage to be excess and contingent over the insurance provided under this OCIP for on-site activities and the related costs. Each bidding prime or general contractor ("Contractor") and subcontractors of every tier ("Subcontractor") is required to exclude from its bid price and requests for payment the cost of insurance coverages that will be provided by the OCIP.

Note
The guidelines in this manual are to be used for informational purposes only. This manual does not constitute a contractual agreement. If conflicts exist between this manual and OCIP Insurance Policies, or this manual and the Contracts between the District, Construction Manager, and Contractor (Enrolled Parties), the OCIP Policies or Owner's Contracts will govern.

1.1 Participation & Contractor Compliance

Participation in the OCIP is mandatory but not automatic. Enrollment eligibility will be determined upon completion of an online enrollment form which will include documentation of trade, scope of work, estimated value, estimated start and completion. All Contractors and Subcontractors of all tiers must register via the OCIP's online portal ("WrapPortal") (www.keenanwrap.com) and adhere to all program requirements, as specified in Section 5.0.

The program Administrator will provide a User Name, Password and URL for website enrollment to each subcontractor upon entry of Subcontractor identifying information into WrapPortal by its Contractor or Parent Subcontractor.

Enrollment of each Contractor's eligible Subcontractors is mandatory. Contractor shall notify Owner and the Program Administrator in writing of the identity of each Subcontractor regardless of enrollment eligibility and shall cause each Subcontractor to notify the Program Administrator in writing of the identity of each of its Sub-subcontractors, prior to such parties' commencement of their portion of the Work and prior to their entry onto the Project. Contractors and subcontractors of all tiers shall not be deemed enrolled until the Program Administrator and OCIP insurers receive and approve a completed Contract Enrollment Form, for each awarded contract. Enrollment is required prior to commencement of on-site activities but no contractor shall be enrolled sooner than 30 days prior to their start date. Each Contractor/Subcontractor shall be solely responsible for any and all losses, damages, claims, liabilities, and suits arising out of such Subcontractor's failure to enroll, or delay in enrolling, any of its Subcontractors.

Enrollment (Definition): An Eligible Subcontractor is considered Enrolled once all required documents are received, reviewed and processed by the OCIP Program Administrator and Insurer.

1.2 Subcontractor Eligibility

A. Eligible

Includes all Contractors and Subcontractors providing direct labor on the Project and excludes Ineligible contractors as defined below. Temporary labor services and leasing companies are to be treated as Eligible Contractors.

B. Ineligible Contractor (Excluded)

It is not the intent to insure certain entities and scopes of work, including, but not necessarily limited to the following: consultants; suppliers; abatement and/or removal of hazardous materials; vendors; off-site fabricators; materials dealers; surveyors; guard services; non-construction janitorial services; and truckers, including trucking to the Project where delivery is the only scope of work performed; contractors subbing out installation who are not performing labor on the project site; and contractors performing landscape maintenance (though landscape work itself is covered). Ineligible parties are required to ensure that any eligible subcontractors who provide on-site labor comply with the OCIP Enrollment and are provided with a copy of this OCIP Manual. Program Administrator reserves the right to reconsider an ineligible entity's participation in the OCIP should its scope of work or contract change at any time. Ineligible contractors will be required to adhere to insurance certificate requirements as stated in section 4.0, under Contractor-Provided Insurance Coverage. In addition, any party deemed an Ineligible Contractor, but who has direct labor on the Project, will be required to participate in the Project Safety Program (see Section 6.0).

Any questions regarding a Subcontractor's status as "Eligible" or "Ineligible" should be referred by written request to Contractor and Owner and approved by the Program Administrator.

1.3 Project Site and Offsite Premises

Coverages provided by the OCIP are Project Site specific. The Project-Site must be designated by the Owner. The Project Site includes the:

1. Ways and means adjoining the endorsed project site.
2. Adjacent locations to the endorsed projects sites where incidental operations are being performed, excluding permanent locations.

With the exception of 1 and 2 mentioned above, off-site locations, labor and operations are not covered by the OCIP. It will be the responsibility of each contractor to maintain off-site insurance, as identified in Section 4.3, which specifies coverage types and minimum limits. Contractor will promptly furnish to the Owner, or their designated representative, Certificates of Insurance evidencing that all required insurance is in force.

2.0 Information Directory

2.1 Program Administrator

Keenan & Associates – Construction Services Department
2355 Crenshaw Blvd., Suite 200
Torrance, CA 90501
Phone: 800.654.8102

Questions Regarding OCIP
Refer questions concerning the OCIP and its administration or coverages to the Program Administrator. Answers to questions may also be found in Section 9.0 - Frequency Asked Questions.

2.2 Insurance Companies

Workers' Compensation	To Be Determined
General Liability	To Be Determined
Excess Liability	To Be Determined
Builder's Risk	To Be Determined
Contractor's Pollution Liability	To Be Determined

See Section 6 For Claims Reporting Instructions and Procedures.

3.0 OCIP Coverages

Description of Owner Controlled Insurance Program (OCIP) Coverages

The OCIP is for the benefit of the Owner and all Enrolled Contractor/Subcontractors who have on-site employees. OCIP coverage applies only to Work performed under the contract at the Project Site specified by the Owner. All Contractors must provide their own insurance for Automobile Liability and off-site locations, labor, and operations. The following coverages are provided by the OCIP:

Workers' Compensation and Employers Liability

Commercial General & Excess Liability

Builder's Risk

Contractor's Pollution Liability

A Certificate of Insurance evidencing workers' compensation & employer's liability, general and excess liability and pollution liability insurance will be issued to each contractor that is enrolled for coverage in the OCIP ("Enrolled Party") via WrapPortal. Other documentation including forms, posting notices, etc., will be provided to each Enrolled Party.

OCIP Disclaimer
The OCIP is intended to provide broad coverages and high limits, to all Enrolled Contractors/Subcontractors. The Owner does not warrant or represent that the OCIP coverages constitute an insurance program that completely addresses the risks of the Contractors/Subcontractors. Prior to contract award, it is the responsibility of all Contractors/Subcontractors to ensure that the OCIP coverages provided sufficiently address their insurance needs. Upon request, OCIP policies are available for review.

3.1 Workers' Compensation and Employer's Liability Insurance

Workers' Compensation and Employer's Liability Insurance will be provided in accordance with applicable state laws to all Enrolled Contractors/Subcontractors (each as a named insured, and issued an individual policy) reflecting the following Limits of Liability:

Coverage A – Workers' Compensation

Liability imposed by the Workers' Compensation and/or Occupational Disease statute of the State of California or governmental authority having jurisdiction related to the work performed on the Project.

Coverage B – Employers Liability

$1,000,000 Bodily Injury each Accident
$1,000,000 Bodily Injury by Disease – Policy Limit
$1,000,000 Bodily Injury by Disease – Each Employee

Contractor Deductible: None

Exclusions: The known exclusions for this coverage are listed in Section 10.0 – Known Policy Exclusions. This is a summary and may not be exhaustive. The policy language may contain additional exclusionary language, limitations or carve-backs that may not be identified in the list. It is the responsibility of the Contractor/Subcontractor to review the policy for the complete details of all exclusions.

Policy Term: The master policy effective date is October 1, 2023. The policy term is three years, with one automatic two-year renewal. The policy is intended to remain in effect for duration of the contractor's contracted work. Warranty work and post contract repair work is excluded. Each Contractor/Subcontractor is insured under the policy for the length of its work at the Project.

3.2 Commercial General Liability & Excess Liability Insurance

All Enrolled Contractors/Subcontractors are considered Named Insureds under the General & Excess Liability policies. The Policies are available for review by Contractors/Subcontractors, upon request to the Owner or the Program Administrator.

Primary Coverage: Total Limits for Bodily Injury and Property Damage

$27,000,000 Each Occurrence
$29,000,000 General Annual Aggregate
$29,000,000 Products and Completed Operations Aggregate

- Ten (10) year Products and Completed Operations Extension after project completion with a single non-reinstated aggregate limit.

Policy Forms: "Occurrence" Form

Contractor Deductible: $25,000

Exclusions: This insurance does not provide coverage for products liability of any enrolled party for any product manufactured, assembled or otherwise worked upon away from the Project Site.

The known exclusions for this coverage are listed in Section 10.0 – Known Policy Exclusions. This list is a summary and may not be exhaustive. The policy language may contain additional exclusionary

language, limitations or carve-backs that may not be identified in the list. It is the responsibility of the Contractor/Subcontractor to review the policy for the complete details of all exclusions.

Policy Term: The policy effective date is to be determined. The policy is intended to remain in effect for the length of the Project.

3.3 Builder's Risk Insurance

The Builders Risk Policy names the Owner as named insured and enrolled Contractors/Subcontractors as additional insureds. This policy is available for review by Contractors/Subcontractors, upon request to the Owner or the Program Administrator.

Primary Coverage: Builders Risk coverage will be in place during the course of construction of the Project. Such insurance shall be written on a repair or replacement cost basis, subject to exclusions, sub limits, property limitations and conditions. The policy covers materials, supplies, equipment, fixtures, or machinery, which will become a permanent part of the building or structure at the Project site specified, limited to policy terms, limits, and exclusions.

Deductible: A deductible, which shall be determined by the type of construction, will apply to each occurrence. The deductible schedule is as follows:

New Construction & Renovation

- $5,000 - $100,000 deductible (depending on type of structure) for Wood Frame, Masonry Non-Combustible or Joisted Masonry, and Fire Resistive / Non-Combustible.
- Up to $250,000 deductible for Water Damage to All Construction Classifications.
- Deductibles are subject to increase if a Project's Builder's Risk term is extended 60 days or more

Contractor Deductible: Contractor/Subcontractors shall be responsible for the applicable deductible. The deductible shall apply to each occurrence and must be satisfied prior to payment of the loss. **The deductible shall not be reimbursed by the OCIP Insurance Program or the District.**

Exclusions: The known exclusions for this coverage are listed in Section 10.0 – Known Policy Exclusions. This is a summary and may not be exhaustive. The policy language may contain additional exclusionary language, limitations or carve-backs that may not be identified in the list. It is the responsibility of the Contractor/Subcontractor to review the policy for the complete details of all exclusions.

Policy Term: The policy term is the term of the project.

Note:
All Contractors/Subcontractors shall be responsible for any loss or damage to their personal property. This would include, but is not limited to, tools, equipment, mobile construction equipment, or materials NOT intended to be a permanent part of the building, whether owned, borrowed, used, leased, or rented by any Contractor/Subcontractor. Any insurance purchased by the Contractors/Subcontractors, or self-insurance, shall be the Contractors'/Subcontractors' sole source of recovery in the event of a loss.

8

3.4 Contractor's Pollution Liability Insurance

Contractor's Pollution Liability is written on an "Occurrence" form liability policy . This policy is available for review by Contractors/Subcontractors, upon request to the Owner or the Program Administrator. Certificates of Insurance will be provided to all enrolled Contractors/Subcontractors, as named insured.

Primary Coverage: Bodily Injury or Property Damage from a pollution event as defined within the policy form resulting from covered operations or completed operations.

Limits: $15,000,000 Per Occurrence / $25,000,000 Policy Aggregate
Defense costs included within limits

Deductible: $10,000 Per Occurrence

Contractor/Subcontractor shall be liable, at its expense; to the extent claims payable are attributable to their acts or omissions and/or the acts or omissions of its Subcontractors of any tier or any other entity or person for whom it may be responsible. The deductible amount shall not be reimbursed by the OCIP Insurance Program or the District.

Exclusions: The known exclusions for this coverage are listed in Section 10.0 – Known Policy Exclusions. This is a summary and may not be exhaustive. The policy language may contain additional exclusionary language, limitations or carve-backs that may not be identified in the list. It is the responsibility of the Contractor/Subcontractor to review the policy for the complete details of all exclusions.

Policy Term: The master policy effective date is October 1, 2023. The policy is intended to remain in effect for the length of the Project or through October 1, 2028 at 12:01am, whichever comes first.

3.5 OCIP Certificates

All Enrolled Contractors/Subcontractors will receive their own Workers' Compensation policy. Certificates of Insurance will be furnished for the General Liability, Excess Liability, Contractor's Pollution Liability, and Builder's Risk coverages. These policies are available for review by the Contractor/Subcontractor, upon request to the Owner or the Program Administrator. Such policies or programs may be amended from time to time and the terms of such policies or programs are incorporated herein by reference. Contractors/Subcontractors hereby agree to be bound by the terms of coverage, as contained in such insurance policies and/or self-insurance programs.

4.0 Contractor Required Insurance

For any work under this contract, and until completion and final acceptance of the work by the Owner, the Contractors/Subcontractors shall, at their own expense, promptly furnish required Certificates of Insurance and Additional Insured Endorsements acceptable to the Owner and Program Administrator. Copies should be provided to the Program Administrator via WrapPortal, for both Project Site and Off-Site operations, within ten (10) days after award of the contract to all Contractors/Subcontractors and prior to commencement of on-site activities.

All required insurance shall be maintained, without interruption, from the date of commencement of on-site activities, until the date of the final payment or expiration of any extended period. Certificates and additional insured endorsements shall provide not less than thirty (30) days prior written notice to the Program Administrator, of any material change in the insurance, cancellation or non- renewal.
9

The OCIP places contractors and subcontractors into one of two main categories: Enrolled Contractors or Ineligible (Excluded) Contractors.

4.1 Verification of Required Insurance Coverages

A. Enrolled Contractor/Subcontractors:

- **Certificates of Insurance** must be provided, evidencing Workers' Compensation & Employer's Liability, and General Liability, Excess/Umbrella Liability insurance for off-site activities, and Automobile Liability insurance for on and off-site activities as per the insurance specifications in the Contract.
- **Additional Insured Endorsements** for Auto Liability. These endorsements must name **the District** specifically as additional insured. If the insured's policy has a 'Blanket' Additional Insured Endorsement and cannot name any entity, provide a copy of the endorsement for our review.

B. Ineligible (Excluded) Contractors/Subcontractors:

- **Certificates of Insurance** must be provided, evidencing Workers' Compensation & Employer's Liability, General Liability, Excess/Umbrella Liability and Automobile Liability insurance for all activities including both on-site and off-site activities as per the insurance specifications in the Contract.
- **Additional Insured Endorsements** for General Liability and Auto Liability. These endorsements must name **the District** specifically as additional insured. If the insured's policy has a 'Blanket' Additional Insured Endorsement and cannot name any entity, provide a copy of the endorsement for our review.
- **Waiver of Subrogation** for Workers Compensation and General Liability in favor of the owner.

4.2 Contractor Maintained Insurance Coverage

***Indicates off-site required coverage / **Indicates off-site & on-site required coverage**

A. Workers' Compensation and Employer's Liability Insurance*

- Enrolled & Ineligible/Excluded Contractors
- Required limits on Certificate of insurance are as follows:

Subcontractors	
Part 1: Workers Compensation	California Statutory Benefits
Part 2: Employer's Liability	
$1,000,000	Bodily Injury each Accident
$1,000,000	Bodily Injury by Disease – Policy Limit
$1,000,000	Bodily Injury by Disease – Each Employee

- Ineligible/Excluded Subcontractors must also provide **Waiver of Subrogation** for Workers Compensation in favor of the owner.

10

B. General Liability Insurance*

- Enrolled & Ineligible/Excluded Subcontractors
- Minimum Required limits of insurance are as follows:

General/Prime Contractor	Subcontractor	
$2,000,000	$1,000,000	Bodily Injury and Property Damage Liability Per Occurrence
$2,000,000	$1,000,000	General Aggregate
$2,000,000	$1,000,000	Products/Completed Operations Aggregate
$2,000,000	$1,000,000	Personal/Adv. Injury Liability Any One Person or Organization

- It is recommended that the Designated Operations Covered by a Consolidated (Wrap-Up) Insurance Program (CG 21 31 05 09) endorsement be added to your primary general liability policy. This will ensure appropriate coverage for any off-site exposures associated with this OCIP project.

C. Automobile Liability Insurance**

- Enrolled & Ineligible/Excluded Subcontractors
- Must cover all vehicles owned by, hired by, or used on behalf of the Contractors/Subcontractors for both Project Site and off-site operations with the following minimum limits of liability:

General/Prime Contractor	Subcontractor	
$2,000,000	$1,000,000	Bodily Injury and Property Damage

D. Professional Liability Insurance**

- Enrolled & Ineligible/Excluded Subcontractors
- If Subcontractor's work requires design and/or design-assist services, or Subcontractor performs professional services of any kind, Subcontractor shall purchase and maintain, at its sole cost and expense, Professional Liability (Errors and Omissions) insurance for all professional services provided.
- Subcontractor's policy shall include full prior acts coverage sufficient to cover the services under this agreement, with the following minimum limits of liability:
  $2,000,000 per Claim/Annual Aggregate
- Deductible or self-insured retention amount must not be greater than $100,000 per claim, including coverage of contractual liability.
- Coverage must be maintained during the term of the contract and for so long as the insurance is reasonably available as provided herein, for a period of ten (10) years after completion of the services.

E. Environmental and Asbestos Abatement Coverages**

- Ineligible Subcontractors

11

- If Subcontractor's scope of work involves the removal of asbestos, the removal/replacement of underground tanks, or the removal of toxic chemicals and substances, the Contractor/Subcontractor will be required to provide the following minimum limits of liability, for such exposures subject to requirements and approval of the Owner:

  $2,000,000 per Claim/Aggregate

F. Aircraft or Watercraft Liability Insurance**

- If any Subcontractor requires the use of Aircraft or Watercraft at the Project Site, the Subcontractor shall purchase and maintain, or cause the operator of the Aircraft or Watercraft to purchase and maintain, Aircraft or Watercraft liability insurance.
- Must insure passengers and the General Public against personal injury, bodily injury or property damage arising out of the ownership, maintenance, use or entrustment to others.
- Includes Aircraft or Watercraft owned or operated by or rented or loaned to any insured.
- Use includes operation and "loading or unloading". Contractor/Subcontractor will be required to provide the following minimum limits of liability, for such exposures subject to requirements and approval of the Owner:

  $5,000,000 per Claim/Aggregate

  Please note, Drones are considered aircraft and coverage is expressly excluded from the OCIP policies.

4.3 Certificates of Insurance

The Project must be identified on the Certificate of Insurance in the "Description of Operations/Locations/Vehicles/Special Items" section. The Certificates of Insurance should name District, as the Certificate Holder, as specified below:

Certificate Holder:

Compton Community College District
c/o Keenan
2355 Crenshaw Blvd., Suite 200
Torrance, CA 90501

4.4 Additional Insured Endorsements

The Owner must be specifically named on the Schedule of an Additional Insured Endorsement, under the section titled, "Name of Person or Organization", as specified below:

- **The District, CM, Architect, Inspector, the State of California, their officers, employees, agents, volunteers and independent contractors as additional insureds.**
- All Contractors must provide an additional insured endorsement for automobile liability.
- Ineligible/Excluded Contractors must provide an additional insured endorsement on both the Automobile Liability and General Liability policies and a waiver of subrogation on workers' compensation.

12

Compton Community College District
c/o Keenan
2355 Crenshaw Blvd., Suite 200
Torrance, CA 90501

5.0 Contractor Responsibilities / Requirements

Throughout the course of the Project, Subcontractors will be responsible for reporting and maintaining certain records as outlined in this section.

All Subcontractors shall cooperate with, and require their tier Subcontractors to cooperate with, the Owner and the Program Administrator, regarding administration and operation of the OCIP. **Each Subcontractor must include this document with their bid specifications to any and all Subcontractors**.

Responsibilities of Subcontractors:

- Enrolling in the OCIP and assuring all eligible tier subcontractors promptly enroll in the OCIP, via WrapPortal, prior to the start of any work
- Complying with the provisions of the OCIP Manual and cooperating in the administration and operation of the OCIP
- Including OCIP Provisions in all subcontracts, as appropriate
- Identifying and removing from bid the cost of OCIP-provided insurance (by all eligible contractors / subcontractors)
- Providing each Subcontractor with a copy of the OCIP manual
- Providing timely evidence of insurance to the Construction Services Department via WrapPortal
- Notifying the Construction Services Department of all awarded subcontracts via WrapPortal
- Maintaining and reporting monthly payroll records (by all eligible subcontractors) via WrapPortal
- Complying with the OCIP Administrator's requests for information
- Complying with insurance, claim and safety procedures
- Notifying OCIP Administrator immediately of any insurance cancellation or non-renewal of Contractor required insurance
- Complying with the OCIP insurance policy requirements, including but not limited to, physical audit of payroll records by the insurance company or its representatives.

5.1 Contractor Bids & Change Orders - Removing Insurance Costs

The Owner / School District provides insurance for all eligible, Enrolled Contractors/Subcontractors for work performed at the project site(s). The Owner pay's the

insurance premiums for the OCIP coverages described in this manual under section 3.0 OCIP Coverages.

A. Contractor Insurance Cost Identification
Contractor's base bid shall exclude all costs for insurance coverages provided under the OCIP. If insurance cost is not removed, the bidder may not qualify as the lowest responsive bidder. The Bidder declares under penalty of perjury under California law, that the base bid excludes any costs relating to any insurance coverages afforded under the OCIP and that each subcontractor to the Bidder has similarly excluded costs for any insurance coverage afforded under the OCIP.

B. Change Order Pricing
All Contractors/Subcontractors declare, under penalty of perjury under California law, that any change order issued to the contract is priced to exclude any costs relating to any insurance coverage afforded under the OCIP.

5.2 Program Compliance

A. Participation in the OCIP is mandatory but not automatic. An Eligible contractor is not enrolled until the Program Administrator receives and approves the following items:

- Completed Contract Enrollment, for each awarded contract, within ten (10) days of Contract Award and prior to commencement of on-site activities. Enrollments can be completed and submitted electronically visiting www.keenanwrap.com
- Certificates of Insurance, evidencing Insurance for Workers' Compensation & General Liability coverages for off-site locations, labor, and operations
- Certificate of Insurance, including an Additional Insured Endorsement, naming the Owner as an Additional Named Insured, for Automobile Liability for both Project Site and Off-Site operations
- Policy Declarations pages, including proof of rates from your current policies

B. All Contractors/Subcontractors of all tiers shall cooperate with, and require their Subcontractors to cooperate with, the Owner and the Program Administrator in regard to the administration and operation of the OCIP.

C. All Contractors/Subcontractors further acknowledge and agree to comply fully and promptly with such safety, loss control, and quality control rules, requirements, and directives as may from time to time be promulgated by Owner, the Program Administrator and/or the OCIP insurers or any of its or their respective consultants, agents, or representatives. Nothing in this document or any other contract document or in the Project Insurance Manual, shall be deemed to render Owner or any of its affiliates of any tier an employer of Contractor/Subcontractor or any of its Subcontractors or any of its or their personnel or employees. **Failure to comply will be considered non-performance under the contract.**

OCIP Enrollment completed through WrapPortal by the following deadline:

- Subcontractors (All Tiers): Within ten (10) days of Contract Award and prior to commencement of On-site activities

All questions regarding enrollment compliance should be directed to the assigned OCIP Administrator.

Any Subcontractor who enrolls in the OCIP after their start date will have to provide a No-Known-Loss Letter to the Program Administrator, along with enrollment documentation.

For any work under this contract, and until completion and final acceptance of the work by the Owner, the Subcontractors shall, at their own expense, promptly furnish Certificates of Insurance to the Program Administrator before commencing work on the Project Site. Automobile Liability Insurance must be maintained for both Project Site and off-site operations.

5.3 Confirmation of Enrollment & Evidence of OCIP Coverages

Upon review of completed enrollment, OCIP Administrator will acknowledge acceptance of the Eligible Subcontractor into the Owner's OCIP, by issuing the following to each Enrolled Party:

- Confirmation Letter
- OCIP Certificates of Insurance
- Claims Kit, including DWC1 and MPN Notices

These documents, as issued by the OCIP Administrator, will clearly identify the effective dates of the OCIP coverages for the Contract. A separate Workers' Compensation policy will be issued and sent to each Enrolled Party.

Should an Enrolled Party perform work on several contracts/projects, an Enrollment Form must be completed for each contract. The OCIP Administrator will issue confirmation letters and certificates of insurance to each Enrolled Party for each separate contract. However, only one individual Workers' Compensation policy (that will apply to all contracts/projects) will be issued to each Enrolled Party.

Note:
Verify that the Workers' Compensation effective date, listed on your OCIP Certificate of Insurance, reflect the same date as your start date.

5.4 Payroll Reporting Compliance

Project Site Monthly Payroll Report Requirements

- Project Site Monthly Payroll must be submitted to the Program Administrator by the 10th of each month via WrapPortal until the completion of the contract and in no event shall be later than the 15th of each month. Payroll shall be reported only for labor performed at the project jobsite.
- Monthly Payroll Reporting is to begin from the enrollment effective date until the completion of the contract or the policy end date.
- Should no work be performed on the Project Site during a given month, each Enrolled Party is required to submit a form stating that "Non-Performance."
- Payroll reporting must summarize the unburdened payroll by Workers' Compensation Class Code. Certified payroll is not a requirement of the OCIP and cannot be accepted.
- If Monthly Payroll Report is not submitted to Program Administrator on a monthly basis, the Construction Manager and/or Owner can withhold payment until the report is received.

15

- For those Enrolled Parties performing Work under multiple contracts, for each contract, a Monthly Payroll Report is required each month until contract is finalized.
- All reported project site monthly payroll reported from October through the end of September is submitted by Program Administrator to the OCIP Insurance Carrier for auditing.
- Subcontractor shall keep and maintain accurate and classified records of their payroll for operations at the Project Site.
- A carrier audit may be performed using the reported payroll and other supporting documents. Contractor / Subcontractor agrees to cooperate with the OCIP insurance carrier(s) or their third-party auditors by responding to and providing documents as requested in a timely manner.

Workers' Compensation Insurance Rating Bureau Requirements

- **Payroll Reporting for Each Workers' Compensation Policy Issued -** Once an Eligible Contractor/Subcontractor is enrolled into the OCIP, the Program Administrator will issue a separate Workers' Compensation Policy. All Enrolled Subcontractors will need to comply with the rules and regulations of the California Workers Compensation Insurance Rating Bureau (WCIRB). This requires each Enrolled Party to maintain payroll records for each Contract under the policy issued. Such records will allocate the payroll by Workers' Compensation classification(s) and exclude the excess or premium paid for overtime (i.e., only the straight-time rate will apply to overtime hours worked).
- **Insurance Company Payroll Audit -** Each Enrolled Party must properly classify payrolls, as these are reported to the rating bureau for calculation of future Experience Modifiers for the Enrolled Party's firm. All Enrolled Parties shall make available for inspection and copying their respective company books, vouchers, contracts, documents, and records, of any and all types, for physical inspection by the auditors of the OCIP insurance carrier(s) or Owner's representatives. Availability of records must be for a reasonable time during the policy period, any extension, or during a final audit period, as required by the OCIP Insurance Policies.

5.5 Contract Completion / Closeout Compliance

A. Contractor's Completion Notice

- Contractor's Completion Notice must be submitted to the Program Administrator via WrapPortal, (www.keenanwrap.com) upon completion of contract work at the Project Site, which includes punch list items, but not warranty or service contract work.
- This form evidences all enrolled Contractors'/Subcontractors' actual start and completion dates, per each contract.
- Completion Notice information is reported to OCIP Insurance carrier to confirm coverage and payroll reporting requirements has ended for the contract.

6.0 Safety

It is the responsibility of each Subcontractor to maintain an environment free of recognized hazards. All Subcontractors shall exercise reasonable care to prevent work-related injuries; property and equipment damage at the Project, as well as minimize risk to the public and third-party property.

16

In the event of an accident, it shall be the responsibility of the employing and/or responsible Subcontractor to see that injured workers or members of the public are provided immediate medical treatment. All appropriate medical and claim forms must be filed in accordance with the claim procedures developed for this Project by the Program Administrator. This includes notification to the appropriate state authorities, if necessary.

The Program Administrator shall conduct periodic loss control surveys on behalf of the District. These surveys will focus on evaluating the Subcontractors' efforts to minimize loss, assist in identifying loss exposures, and to recommend appropriate corrective measures. The Program Administrator is a resource to supplement the safety and loss prevention activity of Subcontractors. Its loss control survey activities or other activities of the Program Administrator and/or OCIP insurers do not in any way relieve the Contractors/Subcontractors of their responsibilities for Project safety.

6.1 Occupational Safety and Health Compliance

All Contractors/Subcontractors are expected to comply with all applicable local, state, and federal occupational safety and health. If additional safety and health requirements are set forth in the contract specifications, all contractors shall comply with these requirements

In addition, local, state, and federal occupational safety and health laws, the following standards apply to all OCIP Enrolled and Non-Enrolled Contractors/Subcontractors.

6.2 Safety Orientation

a. Subcontractor employees shall be provided with a project specific safety orientation prior the start of the project. At a minimum, the orientation will address the following items:

   i. The District's site safety requirements.
   ii. Site specific safety hazards and protective measures for these hazards.
   iii. Emergency telephone numbers and procedures.
   iv. Local medical clinic/hospital information within the Medical Provider Network (MPN).

6.3 Program Management

a. Each Subcontractors shall have the following safety programs:

   i. Injury and Illness Prevention Plans
   ii. Hazard Communication Programs
   iii. Heat Illness Prevention Plans

b. Each Contractor/Subcontractor shall have an onsite competent person responsible for occupational safety and health. A competent person is one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.

6.4 Site Safety

According to industry practices, it is the responsibility of contractors of all tiers to exercise reasonable care to prevent work-related injuries; property and equipment damage at the project site, as well as minimize risk to the third-party persons and property. Subcontractors of all tiers shall be expected to comply with the following safety and loss control requirements:

a. All Subcontractors shall identify their contact person(s) to the General or Prime Contractor.

b. All Contractors/Subcontractors shall follow District procedures for dealing with the media.

c. At all times, hard hats shall be worn in the construction environment. Hard hats shall meet the requirements of ANSI Z89.1. No modification to the shell or suspension is allowed except when such changes are approved by the manufacturer.

d. 100% protective eyewear with side shield protection is required while in the construction environment, shop, or anytime eye hazards exist. Protective eyewear shall bear a legible and permanent "Z87" logo to indicate compliance with applicable ANSI/ASSE Standard.

e. All construction employees shall wear clothing suitable for the weather and work conditions. At a minimum, this shall be short sleeved shirts, long pants, and leather or other protective work shoes or boots.

f. Alcohol is prohibited on District property at all times.

g. Contractors/Subcontractors will be required to respond to all District complaints about objectionable levels of dust or noise and will be required to provide prompt and appropriate abatement.

h. Construction personnel cannot enter District grounds other than the construction site unless accompanied by District personnel and are allowed only "incidental" contact with students. Violations of these requirements by any construction employee will result in a mandatory background check of that employee – including fingerprinting – as required by state law.

i. All prime contractors must attend the site-specific pre-construction meeting.

j. No sexual reference or preference shall be permitted on any piece of clothing or the hardhat. Any employee observed disregarding this policy shall be removed from the job site until further notice.

k. Contractors and subcontractors at all times shall keep premises free from debris such as waste, rubbish, and excess materials and equipment caused by contract work. Contractors and subcontractors shall not leave debris under, in, or about the premises. Upon completion of the contract work, contractors and subcontractors shall clean the interior and exterior of the building or improvement including fixtures, equipment, walls, floors, ceilings, roofs, windowsills and ledges, horizontal projections, and any areas where debris has collected so surfaces are free from foreign material or discoloration. Contractors and subcontractors shall clean and polish all glass, plumbing fixtures, and finish hardware and similar finish surfaces and equipment and contractor shall also remove temporary fencing, barricades, planking and construction toilet and similar temporary facilities from the site. No glass containers are permitted on the site.

l. Theft or willful damage to any property of the District, student, or other contractors will be prosecuted fully.

m. All Contractors/Subcontractors will advise non-English speaking employees in their native language either in a written format or via an interpreter of these policies.

18

6.5 Mandatory 6 Foot Fall Protection

a. Contractor/Subcontractor employees shall be protected from fall exposures of 6 feet or greater. Activities include but are not limited to:
   i. Steel erection
   ii. Decking
   iii. Roofing
   iv. Framing
   v. Work performed from scaffolds
   vi. Work performed from ladders

   Exceptions: The following exceptions apply only to framers and wood frame activities:
   i. When installing or "rolling" the joists, Cal/OSHA fall protection requirements shall govern.
   ii. When framers are walking/working on securely braced joists, rafters, or roof trusses on center spacing not exceeding 24 inches, and more than 6' from an unprotected side or edge, they shall be considered protected from falls between the joists, rafters, or roof trusses

b. A safety monitor as means of fall protection is prohibited.

c. Ladder jacks, lean-to, and prop-scaffolds are prohibited.

d. Contractor/Subcontractors are required to provide training to their employees who might be exposed to a fall hazard prior to the exposure or upon hiring. This training shall be documented and available for review.

e. Methods of fall protection include but are not limited to the following:
   i. Railings
   ii. Covers for Floor, Roof, and Wall Openings
   iii. Personal Fall Arrest Systems, Personal Fall Restraint Systems, and Positioning Devices
   iv. Controlled Access Zones

f. The design and construction of railings shall conform to the Cal/OSHA Construction Safety Orders.

g. The use of wire ropes as top rails and intermediate rails of guardrail systems used for perimeter protection, or at interior openings such as stairways and elevator shafts, shall be installed in accordance with Cal/OSHA requirements. Additionally, wire ropes shall be secured to each support and taut at all times. The maximum deflection of the top rail when a load of 200 pounds is applied in any direction at any point of the top rail shall not exceed 3 inches in one direction which includes the free hanging sag in the wire rope.

h. The minimum parapet height allowed for fall protection is 42 inches or greater.

i. Covers used to cover floor, roof, and wall openings shall be secured in place to prevent accidental removal or displacement and shall be marked in accordance in accordance with Cal/OSHA Construction Safety Orders.

j. Covers used to cover floor and roof openings shall be capable of safely supporting the greater of 400 pounds or twice the weight of the employees, equipment and materials that may be imposed on any one square foot area of the cover at any time.

19

k. Controlled access zones shall be defined by a control line or other means that restricts access. Each line shall have a minimum breaking strength of 200 pounds. Signs shall be posted to warn unauthorized employees to stay out of the controlled access zone.

l. Control lines shall consist of ropes, wires, tapes, or equivalent materials. Control lines shall be erected and supported in accordance with Cal/OSHA Construction Safety Orders.

m. Scaffold Access/Egress. An internal ladder system with hatches and drop-down ladders or temporary stairs shall be provided for safe access/egress on all scaffolds 20 feet or greater in height. External straight ladders are prohibited on all scaffolds if it exposes a user to a fall of 20 feet or greater in height.

n. When adjustable scaffolds are utilized, they shall have rest platforms at 20-foot maximum vertical intervals.

6.6 Crane Safety

a. In accordance with Title 8, California Code of Regulations, section 5006.1, employers shall only permit operators who have a valid certificate (license) of competency to operate cranes. The operator shall have his license on his person, readily available for review.

b. All cranes used in lifting service, exceeding 3 tons rated capacity, and their accessory gear shall not be used until the employer has ascertained that such equipment has been certificated in accordance with Cal/OSHA as evidenced by current and valid documents. Certificates (annual and quadrennial) attesting to current compliance with testing and examination standards shall be maintained, readily available for each crane.

c. The contractor shall provide an erection plan and procedure for erection of trusses and beams over 25 feet long. The erection plan and procedure shall be prepared by a civil engineer currently registered in California. This plan and procedure shall be followed and kept available on the job site.

6.7 Fire Prevention During Welding, Cutting, and Other Hot Work

a. Contractors engaged in welding and allied processes, heat treating, grinding, cutting, thawing pipe, powder-driven fasteners, hot riveting, torch-applied roofing in conjunction with the requirements of NFPA 241, and similar applications producing or using a spark, flame, or heat shall adhere to National Fire Protection Association Standard 51B entitled "Standard for Fire Prevention During Welding, Cutting, and Other Hot Work."

6.8 Incident Investigation Requirements

a. The contractor shall perform thorough, in-depth investigations and evaluations of all incidents. A formal incident investigation shall be conducted whenever any incident occurs, including, without limitation, both non-injury incidents and incidents involving first aid. Additionally, near miss accidents and/or incidents must be reported and undergo the same in-depth investigation, root cause analysis and lessons learned process. The incident investigation report shall be e-mailed to Keenan and Associates within 5 working days.

b. Recommendations and lessons learned to prevent recurrence of incidents shall be documented and communicated to all employees of contractor and subcontractors through safety meetings

20

6.9 Return to Work:

The District and OCIP Carrier are committed to working with all Enrolled Contractors and Subcontractors to promote the successful & timely return to work of injured employees following a work-related injury. The purpose of this policy is to ensure that Enrolled Contractor/Subcontractor employees who temporarily cannot return to their normal duties due to job-related injury or illness but can safely perform transitional duties while recovering is offered appropriate transitional duties for a limited time only.

a. An employee who has experienced a job-related injury requiring medical treatment must provide a proper medical release prior to returning to work.

b. An employee who has been removed from the jobsite ambulatory must provide a proper medical release prior to returning to work.

c. Each Enrolled Contractor/Subcontractor will cooperate with the OCIP Carrier to facilitate the return to work of any injured employee capable of safely performing transitional duties.

d. When the employee is released to transitional duties, it is the Enrolled Contractor/Subcontractor's responsibility to facilitate the injured employee's return to work.

e. The Enrolled Contractor/Subcontractor is fully expected to accommodate the injured employee and facilitate the return to work.

f. It will be the responsibility of the Insurance Carrier to maintain communication with the treating physician and the Enrolled Contractor/Subcontractor to facilitate the prompt return of an employee to full work status.

6.10 Conflicting Safety Requirements:

Contractors and subcontractors shall adhere to all applicable federal, state, local, and contractual safety and health requirements. If there is a conflict between any of these safety and health requirements, the most stringent requirement shall apply.

6.11 Noncompliance and Unsafe Practices

Owner or their representative shall have the authority to immediately cease any and all operation (s) on the jobsite that is deemed by Owner or their representative to be unsafe to property or has the potential to cause Bodily Injury, pursuant to Title VIII California Code of Regulation, Section 1511. Any such cession of work shall not constitute recoverable delay or other contractual remedies for liquidated damages and may expose the offending contractor to any such losses to the District or other trades.

6.12 Professional Conduct Clause

Contractors and subcontractors shall at all times adhere to safety requirements (contractual and regulatory) and shall encourage safe and professional behavior among their employees. Contractor and subcontractors shall not allow on the job site any unfit person, unsafe person, anyone unskilled and unqualified to perform the work assigned to them, or anyone exhibiting such qualities. Any person in the employ of the contractor or subcontractor whom the District or the District's

agent/representative may deem incompetent, unsafe, or unfit shall be immediately dismissed from the OCIP job site and shall not again be allowed on the OCIP the job site except with the written consent of District or the District's agent/representative. The District reserves the right to request that the contractor or subcontractor's assigned Project Supervisor/Manager be replaced immediately.

7.0 Claims Reporting

Accident/Claims Reporting Procedures - Overview

This section describes the basic procedures for reporting claims: Workers' Compensation, General Liability, Pollution Liability, and Damage to the Project (Builders Risk).

The OCIP Administrator provides an Accident Claims Reporting Guide to Enrolled Contractors and Subcontractors. The Accident Claims Reporting Guide provides instructions and necessary information for reporting a claim, including policy numbers and site location codes. **This manual includes the required claim forms and postings**. Additional claim forms can be obtained from the OCIP Administrator upon request.

7.1 Workers' Compensation Claim Reporting & Procedures

If the injury requires a doctor (or medical office) visit or involves lost time, please follow the procedures listed below.

Contractors'/Subcontractors' on-site personnel must follow these procedures if any employee is involved in an accident or occurrence resulting in bodily injury or death:

The main responsibility for any Contractor and Subcontractor is first to see that the injured worker receives immediate medical care. Immediately contact 911 for any serious, traumatic, and life-threatening injuries.

If an employee reports a work injury or illness that is minor and does not require a doctor visit or time off from work, the supervisor should refer the employee to the nearest **First Aid Treatment** available at the jobsite.

Call Liberty Mutual Insurance Company at **1-800-362-0000 or email them at** **CLclaimsreports@libertymutual.com** to report the injury. Access the Workers' Compensation Claim Kit, sent to you by the Program Administrator, which contains forms to be completed by employee and employer, as well as accident reporting guidelines. Have the following items ready when reporting the claim:

- **Workers' Compensation Policy Number (Provided at time of enrollment)**
- **Site Location Code**

Medical Provider Network (MPN)

Liberty Mutual Insurance, the Statewide Educational Wrap Up Program's insurance carrier, has implemented the following Medical Provider Network (MPN):

Liberty Mutual Insurance MPN

The above MPN is to be utilized for the medical treatment of injured employees, unless the employee has pre-designated their medical provider prior to the date of loss. In emergency situations, it is always recommended that the injured worker be treated at an emergency medical facility first, and then sent to a physician in the Medical Provider Network (MPN).

MPN Regulations & Guidelines:

- California MPN rules and regulations require that the injured worker must receive the Full Written MPN Notification when an injury is reported, or at the time of injury. The English version is given to English speaking employees and the Spanish version is given to Spanish speaking employees. The Full Written MPN Notification must also be given to the injured worker when changing to and transferring open claims to the Gallagher Bassett Platinum MPN.
- The MPN regulations are silent about Employee Acknowledgement Letters. As an employer, you have the right to use acknowledgement letters for your employees to sign when you give your employee the Full Written MPN Notification.
- An MPN Panel Card shall be posted at Project Jobsite, Displaying the Name, Address and a Map of Designated Medical Clinic close to the jobsite.
- **For locating participating medical providers** within the Liberty Mutual Insurance MPN, use your Internet Browser to access the below website, which will provide links for locating a medical provider within the network by specialty and by location,

  https://lmi.co/LMnetworks

State Required Workers' Compensation Forms

The Labor Code requires that an employee report any injury immediately to the employer. There are essential requirements for both the employer and employee to after the injury has been reported.

The Labor Code provides for possible penalties to be assessed if the following timelines are not met:

- Provision of the Employee Claim Form, DWC-1; report within one (1) working day of the employer's knowledge of a disability or injury beyond first aid. Each employer is responsible for providing this form to an injured employee. Should the employee not be available for hand delivery, mail the DWC-1 to the employee at their home address.
- Provision of the Employer's Report of Injury, Form 5020; report, within five (5) days of knowledge, every occupational injury or illness which results in lost time beyond the date of the incident or requires medical treatment at a medical facility. In addition, every serious illness/injury or death must be reported immediately by telephone or fax to the nearest office of the California Division of Occupational Safety and Health.

7.2 General Liability Claim Reporting

Contractors/Subcontractor must immediately report all known or suspected First Party, Third Party or Pollution Liability incidents occurring at the Project Site involving bodily injury, death, or any damage to property to the following:

- Program Administrator (Keenan) – Email: TMyer@keenan.com, Phone: (800) 654-8102 x.2116. Notice of Occurrence - Accident/Incident Report may be email or faxed.

Note:
Always take appropriate emergency measures to prevent additional injury or damage, including contacting police and fire authorities as required by law.

7.3 Builder's Risk Claim Reporting

Contractors/Subcontractors must immediately report all property damage to your work or work of any other Contractor/Subcontractor at the Project Site, to the following:

23

- Program Administrator (Keenan) – Email: TMyer@keenan.com, Phone: (800) 654-8102 x.2116.

Note:
Always take appropriate emergency measures to prevent additional injury or damage, including contacting police and fire authorities as required by law.

7.4 Contractor's Pollution Liability Claim Reporting

Contractors/Subcontractors must immediately report all third-party accidents related to a known or suspected pollution incident at the Project Site involving bodily injury, death, or any damage to property to the following:

- Program Administrator (Keenan) – Email: TMyer@keenan.com, Phone: (800) 654-8102 x.2116.

7.5 Automobile Claim Reporting

NO coverage is provided for automobile use by Contractors/Subcontractors under the OCIP. It is the sole responsibility of each Contractor and Subcontractor to report claims involving their automobiles to their own insurance carrier.

7.6 Instructions and Procedures – Litigation Papers, Legal Documents, etc.

If your firm is served with a lawsuit arising out of your involvement with the Owner's Project, or if receipt of litigation papers or legal documents is your first notice of a claim, forward to the following:

- Program Administrator (Keenan) – Email: TMyer@keenan.com, Phone: (800) 654-8102 x.2116

7.7 Investigation Assistance/Confirmation of Claim Receipt

All Contractors/Subcontractors will assist in the investigation of any accident or occurrence involving injury to persons or property. All Contractors/Subcontractors must cooperate with the companies involved in adjusting any claim by securing and giving evidence and obtaining the participation and attendance of witnesses required for the investigation and defense of any claim or suit.

Upon receipt of the claim or incident from the Contractor, the respective OCIP insurance carrier will send a claims acknowledgment letter with the assigned claims file number. Always cooperate with the Owner or the OCIP insurer representatives in the accident investigation.

8.0 Required Project Forms

- **8.1 First Report of Injury (5020)**
- **8.2 Workers' Compensation Claim Form (DWC-1)**
- **8.3 Notice of Occurrence - Accident/Incident Report – General Liability, Pollution, Builder's Risk**

25

8.1 First Report of Injury (5020)

District Name: _____

Project Name: _____

State of California
EMPLOYER'S REPORT OF OCCUPATIONAL INJURY OR ILLNESS

PLEASE COMPLETE (TYPE, IF POSSIBLE). MAIL TWO COPIES TO:

OSHA CASE NO.

☐ FATALITY

Any person who makes or causes to be made any knowingly false or fraudulent material statement or material representation for the purpose of obtaining or denying workers compensation benefits or payments of guilty of a felony.

NOTICE: California law requires employers to report within five days of knowledge every occupational injury or illness which results in lost time beyond the date of the incident OR requires medical treatment beyond first aid. If an employee subsequently dies as a result of a previously reported injury or illness, the employer must file within five days of knowledge an amended report indicating death. In addition, every serious illness/injury or death must be reported immediately by telephone or telegraph to the nearest office of the California Division of Occupational Safety and Health

EMPLOYER

1. FIRM NAME | 1A. POLICY NUMBER | DO NOT USE THIS COLUMN
2. MAILING ADDRESS (Number and Street, City, ZIP) | 2A. PHONE NUMBER | Case No.
3. LOCATION, IF DIFFERENT FROM MAILING ADDRESS (Number and Street, City, ZIP) | 3A. LOCATION CODE | Ownership
4. NATURE OF BUSINESS, e.g., painting contractor, wholesale grocer, sawmill, hotel, etc. | 5. STATE UNEMPLOYMENT INSURANCE ACCT NUMBER | Industry
6. TYPE OF EMPLOYER ☐ PRIVATE ☐ STATE ☐ CITY ☐ COUNTY ☐ SCHOOL DIST. ☐ OTHER GOV. – SPECIFY _____ | Occupation

EMPLOYEE

7. EMPLOYEE NAME | 8. SOCIAL SECURITY NUMBER | 9. DATE OF BIRTH (mm dd yy) | Sex
10. HOME ADDRESS (Number and Street, City, ZIP) | 10A. PHONE NUMBER | Age
11. SEX ☐ MALE ☐ FEMALE | 12. OCCUPATION (Regular job title – NO initials, abbreviations or numbers) | 13. DATE OF HIRE (mm dd yy) | Daily Hours
14. EMPLOYEE USUALLY WORKS ____ hours per day ____ days per week ____ total wkly. hrs | 14A. EMPLOYMENT STATUS (check applicable status at time of injury) ___ regular ___ part full-time ___ time temp. ___ seasonal | 14B. Under what class code of your policy were wages assigned | Days/week
15. GROSS WAGES/SALARY $_____ PER _____ | 16. OTHER PAYMENTS NOT REPORTED AS WAGES/Salary (e.g., tips, meals, lodging, overtime, bonuses, etc.)? ☐ YES $_____ PER _____ ☐ NO | Weekly Hours

INJURY OR ILLNESS

17. DATE OF INJURY OR ONSET OF ILLNESS (mm dd yy) | 18. TIME INJURY ILLNESS OCCURRED A.M. P.M. | 19. TIME EMPLOYEE BEGAN WORK A.M. P.M. | 20. IF EMPLOYEE DIED, DATE OF DEATH (mm dd yy) | Weekly Wage
21. UNABLE TO WORK FOR AT LEAST ONE FULL DAY AFTER DATE OF INJURY ☐ YES ☐ NO | 22. DATE LAST WORKED (mm dd yy) | 23. DATE RETRUNED TO WORK (mm dd yy) | 24. IF STILL OFF WORK, CHECK THIS BOX ☐ | County
25. PAID FULL WAGES FOR DAY OF INJURY OR LAST DAY WORKED ☐ YES ☐ NO | 26. SALARY BEING CONT'D? ☐ YES ☐ NO | 27. DATE OF EMPLOYER'S KNOWLEDGE NOTICE OF INJURY/ILLNESS (mm dd yy) | 28. DATE EMPLOYEE WAS PROVIDED EMPLOYEE CLAIM FORM (mm dd yy) | Nature of Injury
29. SPECIFIC INJURY/ILLNESS AND PART OF BODY AFFECTED, MEDICAL DIAGNOSIS, if available , e.g., second degree burns on right arm, tendonitis of left elbow, lead poisoning | Part of Body
30. LOCATION WHERE EVENT OR EXPOSURE OCCURRED (Number and Street, City) | 30A. COUNTY | 30B. ON EMPLOYER'S PREMISES ☐ YES ☐ NO | Source
31. DEPARTMENT WHERE EVENT OR EXPOSURE OCCURRED, e.g. shipping department, machine shop. | 32. OTHER WORKERS INJURED/ ILL IN THIS EVENT? ☐ YES ☐ NO | Event
33. EQUIPMENT, MATERIALS AND CHEMICALS THE EMPLOYEE WAS USING WHEN EVENT OR EXPOSURE OCCURRED, e.g., acetylene, welding torch, farm tractor, scaffold | Sec. Source
34. SPECIFIC ACTIVITY THE EMPLOYEE WAS PERFORMING WHEN EVENT OR EXPOSURE OCCURRED, e.g., welding seams of metal forms, loading boxes into truck | Extent of Injury
35. HOW INJURY/ILLNESS OCCURRED. DESCRIBE SEQUENCE OF EVENTS SPECIFY OBJECT OR EXPOSURE WHICH DIRECTLY PRODUCED THE INJURY/ILLNESS (e.g., worker stepped back to inspect work and slipped on scrap material. As he fell, he brushed against fresh weld and burned right hand). USE SEPARATE SHEET IF NECESSARY
36. NAME AND ADDRESS OF PHYSICIAN (Number and Street, City, ZIP) | 36A. PHONE NUMBER
37. IF HOSPITALIZED AS AN INPATIENT, NAME AND ADDRESS OF HOSPITAL (Number and Street, City, ZIP) | 37A. PHONE NUMBER

COMPLETED BY (type or print) | SIGNATURE | TITLE | DATE

26

8.2 Workers' Compensation Claim Form (DWC-1)

Formulario de Reclamo de Compensación para Trabajadores (DWC 1) y Notificación de Posible Elegibilidad

If you are injured or become ill, either physically or mentally, because of your job, including injuries resulting from a workplace crime, you may be entitled to workers' compensation benefits. Attached is the form for filing a workers' compensation claim with your employer. **You should read all of the information below.** Keep this sheet and all other papers for your records. You may be eligible for some or all of the benefits listed depending on the nature of your claim. If required you will be notified by the claims administrator, who is responsible for handling your claim, about your eligibility for benefits.

To file a claim, complete the "Employee" section of the form, keep one copy and give the rest to your employer. Your employer will then complete the "Employer" section, give you a dated copy, keep one copy and send one to the claims administrator. Benefits can't start until the claims administrator knows of the injury, so complete the form as soon as possible.

Medical Care: Your claims administrator will pay all reasonable and necessary medical care for your work injury or illness. Medical benefits may include treatment by a doctor, hospital services, physical therapy, lab tests, x-rays, and medicines. Your claims administrator will pay the costs directly so you should never see a bill. For injuries occurring on or after 1/1/04, there is a limit on some medical services.

The Primary Treating Physician (PTP) is the doctor with the overall responsibility for treatment of your injury or illness. Generally your employer selects the PTP you will see for the first 30 days, however, in specified conditions, you may be treated by your predesignated doctor. If a doctor says you still need treatment after 30 days, you may be able to switch to the doctor of your choice. Special rules apply if your employer offers a Health Care Organization (HCO) or after 1/1/05, has a medical provider network. Contact your employer for more information. If your employer has not put up a poster describing your rights to workers' compensation, you may choose your own doctor immediately.

Within one working day after an employee files a claim form, the employer shall authorize the provision of all treatment, consistent with the applicable treating guidelines, for the alleged injury and shall continue to provide treatment until the date that liability for the claim is accepted or rejected. Until the date the claim is accepted or rejected, liability for medical treatment shall be limited to ten thousand dollars ($10,000).

Disclosure of Medical Records: After you make a claim for workers' compensation benefits, your medical records will not have the same privacy that you usually expect. If you don't agree to voluntarily release medical records, a workers' compensation judge may decide what records will be released. If you request privacy, the judge may "seal" (keep private) certain medical records.

Payment for Temporary Disability (Lost Wages): If you can't work while you are recovering from a job injury or illness, you will receive temporary disability payments. These payments may change or stop when your doctor says you are able to return to work. These benefits are tax-free. Temporary disability payments are two-thirds of your average weekly pay, within minimums and maximums set by state law. Payments are not made for the first three days you are off the job unless you are hospitalized overnight or cannot work for more than 14 days.

Si Ud. se lesiona o se enferma, ya sea física o mentalmente, debido a su trabajo, incluyendo lesiones que resulten de un crimen en el lugar de trabajo, es posible que Ud. tenga derecho a beneficios de compensación para trabajadores. Se adjunta el formulario para presentar un reclamo de compensación para trabajadores con su empleador. **Ud. debe leer toda la información a continuación.** Guarde esta hoja y todos los demás documentos para sus archivos. Es posible que usted reúna los requisitos para todos los beneficios, o parte de éstos, que se enumeran, dependiendo de la índole de su reclamo. Si se requiere, el/la administrador(a) de reclamos, quien es responsable del manejo de su reclamo, le notificará a usted, lo referente a su elegibilidad para beneficios.

Para presentar un reclamo, complete la sección del formulario designada para el "Empleado", guarde una copia, y déle el resto a su empleador. Entonces, su empleador completará la sección designada para el "Empleador", le dará a Ud. una copia fechada, guardará una copia, y enviará una al/a la administrador(a) de reclamos. Los beneficios no pueden comenzar hasta, que el/la administrador(a) de reclamos se entere de la lesión, así que complete el formulario lo antes posible.

Atención Médica: Su administrador(a) de reclamos pagará toda la atención médica razonable y necesaria, para su lesión o enfermedad relacionada con el trabajo. Es posible que los beneficios médicos incluyan el tratamiento por parte de un médico, los servicios de hospital, la terapia física, los análisis de laboratorio y las medicinas. Su administrador(a) de reclamos pagará directamente los costos, de manera que usted nunca verá un cobro. Para lesiones que ocurren en o después de 1/1/04, hay un límite de visitas para ciertos servicios médicos.

El Médico Primario que le Atiende-*Primary Treating Physician PTP* es el médico con toda la responsabilidad para dar el tratamiento para su lesion o enfermedad. Generalmente, su empleador selecciona al *PTP* que Ud. Verá durante los primeros 30 días. Sin embargo, en condiciones específicas, es posible que usted pueda ser tratado por su médico pre-designado. Si el doctor dice que usted aún necesita tratamiento después de 30 días, es possible que Ud. pueda cambiar al médico de su preferencia. Hay reglas especiales que son aplicables cuando su empleador ofrece una Organización del Cuidado Médico (HCO) o depués de 1/1/05 tiene un Sistema de Proveedores de Atención Médica. Hable con su empleador para más información. Si su empleador no ha colocado un poster describiendo sus derechos para la compensación para trabajadores, Ud. puede seleccionar a su propio medico inmediatamente.

El empleador autorizará todo tratamiento médico consistente con las directivas de tratamiento applicables a la lesión o enfermedad, durante el primer día laboral después que el empleado efectúa un reclamo para beneficios de compensación, y continuará proveyendo este tratamiento hasta la fecha en que el reclamo sea aceptado o rechazado. Hasta la fecha en que el reclamo sea aceptado o rechazado, el tratamiento médico será limitado a diez mil dólares ($10,000).

Divulgación de Expedientes Médicos: Después de que Ud. presente un reclamo para beneficios de compensación para los trabajadores, sus expedientes médicos no tendrán la misma privacidad que usted normalmente espera. Si Ud. no está de acuerdo en divulgar voluntariamente los expedientes médicos, un(a) juez de compensación para trabajadores posiblemente decida qué expedientes se revelarán. Si Ud. Solicita privacidad, es posible que el/la juez "selle" (mantenga privados) ciertos expedientes médicos.

Pago por Incapacidad Temporal (Sueldos Perdidos): Si Ud. no puede trabajar, mientras se está recuperando de una lesión o enfermedad relacionada con el trabajo, Ud. recibirá pagos por incapacidad temporal. Es posible que estos pagos cambien o paren, cuando su médico diga que Ud. está en condiciones de regresar a trabajar. Estos beneficios son libres de impuestos. Los pagos por incapacidad temporal son dos tercios de su pago semanal promedio, con cantidades mínimas y máximas establecidas por las leyes estatales. Los pagos no se hacen durante los primeros tres

Return to Work: *To help you to return to work as soon as* pos you should actively communicate with your treating do claims administrator, and employer about the kinds of work you can do while recovering. They may coordinate efforts to return you to modified duty or other work that is medically appropriate. This modified or other duty may be temporary or may be extended depending on the nature of your injury or illness.

Payment for Permanent Disability: If a doctor says your injury or illness results in a permanent disability, you may receive additional payments. The amount will depend on the type of injury, your age, occupation, and date of injury.

Vocational Rehabilitation (VR): If a doctor says your injury or illness prevents you from returning to the same type of job and your employer doesn't offer modified or alternative work, you may qualify for VR. If you qualify, your claims administrator will pay the costs, up to a maximum set by state law. VR is a benefit for injuries that occurred prior to 2004.

Supplemental Job Displacement Benefit (SJDB): If you do not return to work within 60 days after your temporary disability ends, and your employer does not offer modified or alternative work, you may qualify for a nontransferable voucher payable to a school for retraining and/or skill enhancement. If you qualify, the claims administrator will pay the costs up to the maximum set by state law based on your percentage of permanent disability. SJDB is a benefit for injuries occurring on or after 1/1/04.

Death Benefits: If the injury or illness causes death, payments may be made to relatives or household members who were financially dependent on the deceased worker.

It is illegal for your employer to punish or fire you for having a job injury or illness, for filing a claim, or testifying in another person's workers' compensation case (Labor Code 132a). If proven, you may receive lost wages, job reinstatement, increased benefits, and costs and expenses up to limits set by the state.

You have the right to disagree with decisions affecting your claim. If you have a disagreement, contact your claims administrator first to see if you can resolve it. If you are not receiving benefits, you may be able to get State Disability Insurance (SDI) benefits. Call State Employment Development Department at (800) 480-3287.

You can obtain free information from an information and assistance officer of the State Division of Workers' Compensation, or you can hear recorded information and a list of local offices by calling **(800) 736-7401**. You may also go to the DWC web site at **www.dir.ca.gov**. Link to Workers' Compensation.

You can consult with an attorney. Most attorneys offer one free consultation. If you decide to hire an attorney, his or her fee will be taken out of some of your benefits. For names of workers' compensation attorneys, call the State Bar of California at (415) 538-2120 or go to their web site at **www.californiaspecialist.org**.

ıs en que Ud. no trabaje, a menos que Ud. sea hospitalizado(a) de che, o no pueda trabajar durante más de 14 días.

Regreso al Trabajo: Para ayudarle a regresar a trabajar lo antes posible, Ud. debe comunicarse de manera activa con el médico que le atienda, el/la administrador(a) de reclamos y el empleador, con respecto a las clases de trabajo que Ud. puede hacer mientras se recupera. Es posible que ellos coordinen esfuerzos para regresarle a un trabajo modificado, o a otro trabajo, que sea apropiado desde el punto de vista médico. Este trabajo modificado, u otro trabajo, podría extenderse o no temporalmente, dependiendo de la índole de su lesión o enfermedad.

Pago por Incapacidad Permanente: Si el doctor dice que su lesión o enfermedad resulta en una incapacidad permanente, es posible que Ud. reciba pagos adicionales. La cantidad dependerá de la clase de lesión, su edad, su ocupación y la fecha de la lesión.

Rehabilitación Vocacional: Si el doctor dice que su lesión o enfermedad no le permite regresar a la misma clase de trabajo, y su empleador no le ofrece trabajo modificado o alterno, es posible que usted reúna los requisitos para rehabilitación vocacional. Si Ud. reúne los requisitos, su administrador(a) de reclamos pagará los costos, hasta un máximo establecido por las leyes estatales. Este es un beneficio para lesiones que ocurrieron antes de 2004.

Beneficio Suplementario por Desplazamiento de Trabajo: Si Ud. No vuelve al trabajo en un plazo de 60 días después que los pagos por incapcidad temporal terminan, y su empleador no ofrece un trabajo modificado o alterno, es posible que usted reúne los requisitos para recibir un vale no-transferible pagadero a una escuela para recibir un Nuevo entrenamiento y/o mejorar su habilidad. Si Ud. reúne los requisitios, el administrador(a) de reclamos pagará los costos hasta un máximo establecido por las leyes estatales basado en su porcentaje del incapicidad permanente. Este es un beneficio para lesiones que ocurren en o después de 1/1/04.

Beneficios por Muerte: Si la lesión o enfermedad causa la muerte, es posible que los pagos se hagan a los parientes o a las personas que vivan en el hogar, que dependían económicamente del/de la trabajador(a) difunto(a).

Es ilegal que su empleador le castigue o despida, por sufrir una lesión o enfermedad en el trabajo, por presentar un reclamo o por atestiguar en el caso de compensación para trabajadores de otra persona. (El Codigo Laboral sección 132a). Si es probado, puede ser que usted reciba pagos por perdida de sueldos, reposición del trabajo, aumento de beneficios, y gastos hasta un límite establecido por el estado. Ud. tiene derecho a estar en desacuerdo con las decisiones que afecten su reclamo. Si Ud. tiene un desacuerdo, primero comuníquese con su administrador(a) de reclamos, para ver si usted puede resolverlo. Si usted no está recibiendo beneficios, es posible que Ud. pueda obtener beneficios de Seguro Estatal de Incapacidad (SDI). Llame al Departamento Estatal del Desarrollo del Empleo (EDD) al (800) 480-3287.

Ud. puede obtener información gratis, de un oficial de información y asistencia, de la División estatal de Compensación al Trabajador *(Division of Workers' Compensation – DWC)*, o puede escuchar información grabada, así como una lista de oficinas locales, llamando al **(800) 736-7401**. Ud. también puede ir al sitio electrónico en el Internet de la DWC en **www.dir.ca.gov.** Enlácese a la sección de Compensación para Trabajadores.

Ud. puede consultar con un(a) abogado(a). La mayoría de los abogados ofrecen una consulta gratis. Si Ud. decide contratar a un(a) abogado(a), sus honorarios se tomarán de sus beneficios. Para obtener nombres de abogados de compensación para trabajadores, llame a la Asociación Estatal de Abogados de California *(State Bar)* al (415) 538-2120, ó vaya a su sitio electrónico en el Internet en **www.californiaspecialist.org**.

State of California — Department of Industrial Relations

28

DIVISION OF WORKERS' COMPENSATION

WORKERS COMPENSATION CLAIM FORM (DWC 1)

Employee: Complete the **"Employee"** section and give the form to your employer. Keep a copy and mark it **"Employee's Temporary Receipt"** until you receive the signed and dated copy from your employer. You may call the Division of Workers' Compensation and hear recorded information at **(800) 736-7401**. An explanation of workers' compensation benefits is included as the cover sheet of this form.

You should also have received a pamphlet from your employer describing workers' compensation benefits and the procedures to obtain them.

Any person who makes or causes to be made any knowingly false or fraudulent material statement or material representation for the purpose of obtaining or denying workers' compensation benefits or payments is guilty of a felony.

Estado de California
Departamento de Relaciones Industriales
DIVISION DE COMPENSACIÓN AL TRABAJADOR
PETITION DEL EMPLEADO PARA DE COMPENSACIÓN DEL TRABAJADOR (DWC 1)

Empleado: *Complete la sección* ***"Empleado"*** *y entregue la forma a su empleador. Quédese con la copia designada* ***"Recibo Temporal del Empleado"*** *hasta que Ud. reciba la copia firmada y fechada de su empleador. Ud. puede llamar a la Division de Compensación al Trabajador al* ***(800) 736-7401*** *para oir información gravada. En la hoja cubierta de esta forma esta la explicatión de los beneficios de compensación al trabjador.*

Ud. también debería haber recibido de su empleador un folleto describiendo lo s benficios de compensación al trabajador lesionado y los procedimientos para obtenerlos.

Toda aquella persona que a propósito haga o cause que se produzca cualquier declaración o representación material falsa o fraudulenta con el fin de obtener o negar beneficios o pagos de compensación a trabajadores lesionados es culpable de un crimen mayor "felonia".

Employee—complete this section and see note above. ***Empleado—complete esta sección y note la notación arriba.***

1. Name. *Nombre.* _____ Today's Date. *Fecha de Hoy.* _____
2. Home Address. *Dirección Residencial.* _____
3. City. *Ciudad.* _____ State. *Estado.* _____ Zip. *Código Postal.* _____
4. Date of Injury. *Fecha de la lesión (accidente).* _____ Time of Injury. *Hora en que ocurrió.* _____ a.m. _____ p.m.
5. Address and description of where injury happened. *Dirección/lugar dónde occurió el accidente.* _____
6. Describe injury and part of body affected. *Describa la lesión y parte del cuerpo afectada.* _____
7. Social Security Number. *Número de Seguro Social del Empleado.* _____
8. Signature of employee. *Firma del empleado.* _____

Employer—complete this section and see note below. ***Empleador—complete esta sección y note la notación abajo.***

9. Name of employer. *Nombre del empleador.* _____
10. Address. *Dirección.* _____
11. Date employer first knew of injury. *Fecha en que el empleador supo por primera vez de la lesión o accidente.* _____
12. Date claim form was provided to employee. *Fecha en que se le entregó al empleado la petición.* _____
13. Date employer received claim form. *Fecha en que el empleado devolvió la petición al empleador.* _____
14. Name and address of insurance carrier or adjusting agency. *Nombre y dirección de la compañía de seguros o agencia adminstradora de seguros.* _____
15. Insurance Policy Number. *El número de la póliza de Seguro.* _____
16. Signature of employer representative. *Firma del representante del empleador.* _____
17. Title. *Título.* _____ 18. Telephone. *Teléfono.* _____

Employer: You are required to date this form and provide copies to your insurer or claims administrator and to the employee, dependent or representative who filed the claim within **one working day** of receipt of the form from the employee.

SIGNING THIS FORM IS NOT AN ADMISSION OF LIABILITY

Empleador: *Se requiere que Ud. feche esta forma y que provéa copias a su compañía de seguros, administrador de reclamos, o dependiente/representante de reclamos y al empleado que hayan presentado esta petición dentro del plazo de* ***un día hábil*** *desde el momento de haber sido recibida la forma del empleado.*

EL FIRMAR ESTA FORMA NO SIGNIFICA ADMISION DE RESPONSABILIDAD

❑ Employer copy
Copia del Empleador

❑ Employee copy
Copia del Empleado

❑ Claims Administrator
Administrador de Reclamos

❑ Temporary Receipt/
Recibo del Empleado

29

8.3 Notice of Occurrence - Accident/Incident Report – General Liability, Pollution, Builder's Risk

SEWUP

Notice of Occurrence

ACCIDENT / INCIDENT REPORT – GENERAL LIABILITY/POLLUTION/BUILDERS RISK

Keenan & Associates 2355
Crenshaw Blvd. Torrance, CA 90501
www.SEWUP.ORG
Licence No. 0451271

Contact:	Project Location Code:	Date of Loss & Time:	☐ AM ☐ PM
Phone:			
Cell:	Carrier:		NAIC Code:
Fax:	Policy No.:		Client ID No.:
Email:			

Date:

School District

Name of Insured:		Insureds Mailing Address:	
Contact Name:	Title:		
Primary Phone: ☐ Bus ☐ Cell	Secondary Phone: ☐ Bus ☐ Cell	Primary Email:	Secondary Email:

Contractor

Name of Insured:		Insureds Mailing Address:	
Contact Name:	Title:		
Primary Phone: ☐ Bus ☐ Cell	Secondary Phone: ☐ Bus ☐ Cell	Primary E-mail:	Secondary E-mail:

Occurrence

Location of Occurrence / Address (Describe Location if No Specific Address):	Police or Fire Dept. Contacted?
	Report No.:
Description of Occurrence:	

Property

Premises: Claimant (1) is: ☐ Owner ☐ Tenant ☐ Insured Party		Premises: Claimant (2) is: ☐ Owner ☐ Tenant ☐ Insured Party	
Type of Damage:		Type of Damage:	
Damaged Party (1) Name & Address (If not insured):		Damaged Party (2) Name & Address (If not insured):	
Primary Phone:	☐ Home ☐ Bus. ☐ Cell	Primary Phone:	☐ Home ☐ Bus. ☐ Cell
Secondary Phone:	☐ Home ☐ Bus. ☐ Cell	Secondary Phone:	☐ Home ☐ Bus. ☐ Cell
Primary Email:		Primary Email:	
Secondary Email:		Secondary Email:	
Location of Property for Inspection:		Location of Property for Inspection:	

SEWUP - Notice of Occurrence Page 1 of 2

29

Injured Party

Damaged Party (1) Name & Address (If not insured):		Damaged Party (2) Name & Address (If not insured):	
Primary Phone:	☐Home ☐Bus ☐Cell	Primary Phone:	☐Home ☐Bus ☐Cell
Secondary Phone:	☐Home ☐Bus ☐Cell	Secondary Phone:	☐Home ☐Bus ☐Cell
Primary E-mail:		Primary E-mail:	
Secondary E-mail:		Secondary E-mail:	
Age: Sex: Occupation:		Age: Sex: Occupation:	
Where Taken:		Where Taken:	
Describe Injury:		Describe Injury:	
What Was Injured Doing:		What Was Injured Doing:	

Witnesses

Damaged Party (1) Name & Address (If not insured):		Damaged Party (2) Name & Address (If not insured):	
Primary Phone:	☐Home ☐Bus ☐Cell	Primary Phone:	☐Home ☐Bus ☐Cell
Secondary Phone:	☐Home ☐Bus ☐Cell	Secondary Phone:	☐Home ☐Bus ☐Cell
Primary E-mail:		Primary E-mail:	
Secondary E-mail:		Secondary E-mail:	

Remarks

Reported By:	Reported To:

SEWUP - Notice of Occurrence Page 2 of 2

30

9.0 Frequency Asked Questions (FAQs)

General

1. **Who is insured under an Owner Controlled Insurance Program?**

   The Owner and all enrolled Contractors and their enrolled Subcontractors of any tier who perform operations at the Project Site described in the Contract Documents are insured under the OCIP.

2. **Who is managing the Owner Controlled Insurance Program?**

   Keenan & Associates is the Program Administrator for this Owner Controlled Insurance Program.

3. **Is Project Site Defined?**

   Yes. Project Site is on file with the insurance company, as described in the applicable Contract Documents.

4. **What insurance is provided to Contractors/Subcontractors under the Owner Controlled Insurance Program (OCIP)?**

   The Owner has agreed to procure the following insurance:

   a. Workers' Compensation and Employer's Liability
   b. General Liability Insurance for Personal Injury, Bodily Injury and Property Damage Liability
   c. Builder's Risk
   d. Contractor's Pollution Liability (course of construction only)

5. **Does the OCIP cover any contractor's equipment?**

   No. Contractors and Subcontractors must maintain this coverage.

6. **Are there other types of insurance normally purchased by Contractors, which are not included?**

   Yes. Examples are:

   a. Bonds, if required by contract
   b. Contractor's Automobile Liability and Physical Damage Insurance
   c. Contractor's Equipment Floater

31

7. **Does the Contractor/Subcontractor insured under the OCIP have to provide evidence of insurance?**

Yes. The contract requires that, prior to commencement of on-site activities; each Contractor/Subcontractor shall furnish a Certificates of Insurance evidencing coverage for:

a. Workers' Compensation
b. General Liability

Certificates of Insurance and Additional Named Insured Endorsements, specifically naming the Owner, are also required for:

a. Automobile Liability
b. Any other required coverages outlined in the Contract and the Project Insurance Manual.

8. **How is the Contractor/Subcontractor's bid to be submitted?**

The Contractor/Subcontractor needs to submit their bid excluding certain insurance costs, as outlined in the Contract. Change Orders also need to be submitted without insurance costs.

9. **When will the Contractor/Subcontractor receive a Certificate of Insurance insuring them under the OCIP?**

Eligible Contractors/Subcontractors awarded a contract will be furnished a Certificate of Insurance upon Program Administrator's review and acceptance of the Contract Enrollment via WrapPortal.

10. **Will all Contractors/Subcontractors receive information concerning their loss experience?**

This information is available, upon request, from the Program Administrator.

11. **How long are the policies kept in-force for the Contractor/Subcontractor?**

The policy periods commence on the date of "Award" and terminate as defined in the Contract Documents. The only extension is for General Liability "Completed Operations" which is for ten (10) years after Notice of Completion filed by the District.

12. **Does the OCIP provide coverage for truckers, vendors and suppliers?**

No. Contractors/Subcontractors, whose sole duties are as truckers, vendors, or suppliers are not included in the program. If contracted with an on-site installer, vendors and/or suppliers should be enrolled in the OCIP for General Liability only, as it pertains to the contractual relationship of the installer's on-site work.

32

13. Are all Contractors/Subcontractors, of any tier, required to complete their own OCIP enrollment before they will be allowed to begin job site activity?

All Contractors/Subcontractors, regardless of tier, must complete a Contract Enrollment via WrapPortal, prior to commencement of on-site activities. Upon acceptance by the OCIP Administrator, each Contractor/Subcontractor will receive an enrollment confirmation packet, which includes a Certificate of Insurance evidencing the OCIP coverages.

14. What document do I use to show my Agent/Broker and Insurer that I'm covered under the OCIP?

All contractors enrolled under the OCIP program receive individual workers' compensation policies and Certificates of Insurance evidencing coverage under the OCIP program.

Workers' Compensation and Employers' Liability Insurance Questions

1. What insurance company writes the Workers' Compensation and Employer's Liability coverage?

Liberty Mutual Insurance Company.

2. What is the coverage term?

The coverage term for each Contractor/Subcontractor will coincide with the Start Date provided at OCIP enrollment. OCIP Workers' Compensation policies are renewed each year until receipt of OCIP Contractor's Completion Notice.

3. How will the Contractor/Subcontractor's payroll be classified?

Insurance Company will classify payrolls in accordance with California law under the Workers' Compensation Insurance Rating Bureau regulations, classifications, rates and rating plans. The Monthly Project Site Payroll Form will be used for Contractors/Subcontractors' monthly payroll submissions.

4. Will Program Administrator inspect the job and make recommendations regarding loss control and safety?

33

Yes. The Program Administrator will conduct periodic loss control surveys on behalf of the Owner. These surveys will focus on evaluating the contractors' efforts to control Workers' Compensation, General Liability, and Builders Risk exposures. These surveys are intended to assist contractors in identifying these exposures and take the appropriate actions to minimize the likelihood of loss.

5. Will there be other people who will make job site inspections?

Yes. The insurance company's Risk Engineer may conduct periodic site inspections to verify compliance with State requirements. State, City and Federal inspectors may also make inspections.

General Liability Insurance for Personal Injury, Bodily Injury and Property Damage Liability Questions

1. What insurance company writes the Personal Injury, Bodily Injury, and Property Damage Liability coverage?

Lloyds of London.

2. Is Completed Operations coverage provided beyond acceptance of the work performed under the Contract?

Yes. The extension for General Liability "completed operations" is for ten (10) years after Notice of Completion is filed by the Owner, or date Occupancy is taken.

10.0 Known Policy Exclusions

Workers' Compensation
Bodily Injury Outside US or Canada
Bodily Injury To Any Member of Flying Crew
Bodily Injury To Person Subject To Federal Workers' Compensation
Bodily Injury To Person Subject To Occupational Disease Laws
Contractual Liability
Employees Knowingly Employed Illegally
Employment Related Practices
Intentional or Aggravated Bodily Injury
Obligations Imposed By Disability Benefits or Any Similar Law
Obligations Imposed By Occupational Disease Laws
Obligations Imposed By Unemployment Compensation Laws
Obligations Imposed By Workers' Compensation Laws
State or Federal Law Violation Fines, Penalties

General Liability
Aircraft, Auto or Watercraft
Asbestos
Medical Payments Coverage
Certain Exclusions to Personal and Advertising Injury Liability
Certified Acts of Terrorism
Communicable Disease
Contractual Liability (Limited Coverage Provided)
Cross Suits – Limited
Cyber and Data
Damage to Your Work
Damage to Property
EIFS Installation
Employers Liability
Employment Related Practices
Expected or Intended Injury
Fungi Or Bacteria
Lead
Certain exclusions for transportation or use of
Mobile Equipment
Nuclear
Personal and Advertising Bodily Injury
Pollution and Hazardous Materials
Prior Continuous, or Progressively Deteriorating Injury or Damage
Professional Liability
Property Damage to the Project During the Course of Construction
Property Damage to Your Product
Punitive Damages
Recall of Products, Work Or Impaired Property

35

Silica or Silica Mixed Dust
Subsidence
Violation of Statutes Governing Collecting, Transmitting Information
Violation of Statutes Governing Email, Fax, Phone Calls
War
Workers Compensation and Similar Laws

Builder's Risk
Asbestos
Certain Offsite Property
Certain Release, Discharge, Escape, or Dispersal of Contaminants or Pollutants
Certified Acts of Terrorism (Optional Coverage)
Cessation of Work
Consequential Loss (except as provided in Delay in Opening Coverage)
Communicable Disease
Contractor's Tools, Machinery, Plans, Equipment
Cost of Making Good (Optional Coverage)
Damage to Existing Property (Optional Coverage)
Damage While Testing Prototype or Used Machinery/Equipment
Damages, Fines, Penalties at Government Agency or Court Order
Disappearance or When Revealed by Inventory Shortage Alone
Earth Movement (Optional Coverage)
Electrical, Magnetic, or Errors Related to Electronic Records
Financial Accounts, Instruments, Stamps, Deeds, Precious Material
Flood (Optional Coverage) (rain and the accumulation of rainwater included in Flood definition)
Foreign Terrorism
Infidelity, Dishonesty, Fraudulent Activity of Insured
Land, Values of Land, Cut, & Fill etc. Prior to Project Commencement
Loss Under Any Manufacturer or Supplier Guarantee/Warranty
Normal Subsidence
Nuclear
Offshore or Barrier Island Property
Property That Stores, Processes, or Handles Radioactive Materials
Rolling Stock, Aircraft, Watercraft
Software Loss, unless results from an Open Peril
Standing Timber, Growing Crops, Animals
Vehicles or Equipment Licensed For Highway Use
War and Military Action

Contractor's Pollution Liability
Auto, Aircraft, Vessel Or Rolling Stock
Claims Between Certain Insureds
Contractual Liability
Damage To Property
Fines, Penalties, and Treble Damages
Employment Related Practices
Owned Hazardous Materials Facility
Nuclear

Other Entities
Pre-Existing Conditions
Products
Terrorism
War
Workers Compensation and Similar Laws

37

COMPTON COMMUNITY COLLEGE DISTRICT
CONTRACTOR INSURANCE COST WORKSHEET
*TO BE SUBMITTED WITHIN 72 HOURS OF RECEIVING THE NOTICE OF INTENT

Project Name: Student Housing **Contractor Name:** _____

Workers' Compensation Section					
Description of Work	**WC Class Code**	**On-Site Man-hours**	**On-Site Straight Time Payroll**	**WC Rate $100/Payroll**	**WC Premium**
Example: Carpenter <$22/hour	5403	160	$3,040	46.26	$1,406
	Totals				

Modified Premium is: Total Premium X Experience Modifier — Experience Modifier: _____ — Modified Premium: **$**

Total: **$**

Total Workers' Compensation Insurance Cost **A. $**

Workers' Compensation Insurance Carrier Name: _____

Policy No: _____ Policy Term: _____ TO _____

Workers' Comp Bureau ID No: _____ Anniversary Rating Date: _____

General Liability Section

General Liability Insurance Carrier Name: _____

Policy No: _____ Policy Term: _____ TO _____ GL Policy Deductible: $ _____

Aggregate Limit: $ _____ Per Occurrence Limit: $ _____ Products & Comp/Ops Limit: $ _____

GL Rate: $ _____ ☐ Per $1000 OR ☐ Per $100 Based On: ☐ Receipts OR ☐ Payroll

Completed Operations Period provided: _____ years

Total General Liability Insurance Cost **B. $**

Umbrella/Excess Liability Section

Provide your current Umbrella/Excess Liability Carrier Name: _____

Policy No: _____ Policy Term: _____ TO _____

Policy Rate: $ _____ Based On: ☐ Receipts OR ☐ Payroll OR ☐ Other

Total Umbrella / Excess Liability Insurance Cost **C. $**

Pollution Limits: _____ Per occ. Aggregate _____ **Contractor's Pollution Liability Cost** **D. $**

Builder's Risk Quote **E. $**

Total Estimated Subcontractor Premiums **F. $**
Calculate 4% of total Subcontracted value.

COMPTON COMMUNITY COLLEGE DISTRICT
CONTRACTOR INSURANCE COST WORKSHEET
*TO BE SUBMITTED WITHIN 72 HOURS OF RECEIVING THE NOTICE OF INTENT

Sub Total Insurance Cost: (A+B+C+D+E+F)=G	**G. $**
Profit Margin Factor (Apply your Mark-Up Against Current Cost)	**H. $**
TOTAL INSURANCE COST: (G+H)=I	**I. $**

☐ **I acknowledge that my company's workers compensation insurance policy rate and declaration pages are attached to this worksheet.**

☐ **I acknowledge that my company's general liability insurance policy rate and declaration pages are attached to this worksheet.**

DECLARE UNDER PENALTY OF PERJURY, UNDER THE LAWS OF THE STATE OF CALIFORNIA, THAT THE INFORMATION CONTAINED IN THIS DOCUMENT IS TRUE AND CORRECT.

Print Name: _____ Title: _____

Signature: _____ Date: _____

Any questions on how to complete this document can be directed to Keenan & Associates.
Your contact person is Dulce Castaneda p: 310.997.8977

Project Name: Student Housing **Contractor Name:** _____

Attach copies of your Workers' Compensation & General Liability Declarations pages, including proof of rates from your current policies.

CERTIFICATION OF CERTIFIED PAYROLL RECORDS SUBMITTAL TO LABOR COMMISSION

I am the _____ for _____ in connection with
(Superintendent/Project Manager) (Contractor)
_____. This Certification is submitted to Compton
(Project Name)
Community College District concurrently with the Contractor's submittal of an Application for Progress Payment to the District, identified as Application For Progress Payment No. _____ ("the Pay Application").

1. The Pay Application requests the District's disbursement of a Progress Payment covering Work performed for the period between _____, 20___ and _____, 20___.
2. The Contractor has submitted Certified Payroll Records ("CPR") to the Labor Commissioner for all employees of the Contractor engaged in performance of Work subject to prevailing wage rate requirements for the period of time covered by the Pay Application.
3. All Subcontractors who are entitled to any portion of payment to be disbursed pursuant to the Pay Application have submitted their CPRs to the Labor Commissioner for all of their employees performing Work subject to prevailing wage rate requirements for the period of time covered by the Pay Application.
4. I have reviewed the Contractor's CPRs submitted to the Labor Commissioner; the CPRs submitted to the Labor Commissioner by the Contractor are complete and accurate for the period of time covered by the Pay Application.
5. I have reviewed the Subcontractors' CPRs submitted to the Labor Commissioner; the CPRs submitted to the Labor Commissioner by the Subcontractors are complete and accurate for the period of time covered by the Pay Application.

I declare under penalty of perjury under California law that the foregoing is true and correct. I executed this Certification on the ____ day of _____, 20___ at
_____.
(City and State)

By: _____

_____
(Typed or Printed Name)

GUARANTEE

Project: STUDENT HOUSING

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) years 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.

Contractor

_____
(Contractor Name)

_____
(Signature of Contractor's Authorized Employee, Officer
Or Representative)

_____
(Printed Name and Title)

_____
(Date)

CONTRACTOR CERTIFICATION OF SUBCONTRACTOR CLAIM

STUDENT HOUSING

Pursuant to Article 16.10.8.2 of the General Conditions, I certify as follows:

1. The portion of the Claim made on behalf of the Subcontractor to which this Certification is attached is made in good faith.
2. I have reviewed the attached Subcontractor Claim and certify that: (i) the Subcontractor Claim incorporate substantiating data which establish District responsibility for Subcontractor Claim; (ii) if any portion of the Subcontractor Claim does not incorporate substantiating data which establish District responsibility, I have removed such portion of the Subcontractor Claim before submitting the Subcontractor Claim to the District; (iii) I have reviewed and confirmed that the amounts asserted in the Subcontractor Claim for costs, expenses and damages as the responsibility of the District are supported by substantiating data that is complete and accurate; and (iii) there are no other costs, expenses or damages that are the responsibility of the District which arise out of or relate to any matter asserted in the Subcontractor Claim, except as asserted in the Subcontractor Claim.
3. The amount requested in the Subcontractor Claim is the responsibility of the District (or an agent/representative of the District) and not any other party.
4. The Subcontractor Claim does not incorporate any request constituting a False Claim under applicable law, including the California False Claim Act (Government Code §12650 et seq).
5. I am duly authorized to certify the Subcontractor Claim on behalf of the Contractor.

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

Executed at _____, on _____, 20___.
(City and State)

_____
(Signature)

_____
(Print Name)

_____
(Title)

_____
(Name of Contractor)

GENERAL CONDITIONS
TABLE OF CONTENTS

[END OF SECTION]

GENERAL CONDITIONS

1. Definitions

1.1. The Work. The "Work" is the construction and services required by the Contract Documents, and includes all labor, materials, equipment, and services to fulfill the Contractor's obligations under the Contract Documents.

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

1.3. Subcontractors. A Subcontractor is a person or entity who has a direct contract with the Contractor for a portion of the Work; Subcontractors include lower tier subcontractors, who are in direct privity of contract with a Subcontractor.

1.4. Material Supplier. A Material Supplier only furnishes materials, equipment or supplies for the Work without fabricating, installing or consuming them in the Work.

1.5. Drawings and Specifications. The Drawings are the graphic and pictorial portions of the Contract Documents, showing generally, the design, location and dimensions of the Work and may include plans, elevations, sections, details, schedules or diagrams. The Specifications are the written requirements for materials, equipment, construction systems, standards, criteria and workmanship.

1.6. Intent and Correlation of Contract Documents. The Contract Documents are complementary and what is required by one portion shall be by all; performance by the Contractor is required to the extent consistent with the Contract Documents and reasonably inferable therefrom as being necessary to produce the intended results. If a portion of the Contract Documents is silent and information appears elsewhere in the Contract Documents, such other portions of the Contract Documents shall control. Words or terms with well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings. Conflicts, inconsistencies or ambiguities in the Contract Documents shall be resolved by the Architect based on 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 parts of the Contract Documents regarding the quality of any product, equipment or materials, the Contractor shall provide the product, equipment or material of the highest or more stringent quality.

1.7. Shop Drawings; Samples; Product Data ("Submittals"). Shop Drawings are diagrams, schedules and other data specially prepared for the Work to illustrate the installation, assembly or similar matters for a portion of the Work. Samples are physical examples of materials, equipment or workmanship to be incorporated into the Work. Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information to illustrate materials or equipment for a portion of the Work. Shop Drawings, Samples and Product Data prepared by the Contractor or any Subcontractors/Material Suppliers are collectively referred to as "Submittals."

1.8. Division of State Architect ("DSA"). DSA is the California Division of the State Architect; references to "DSA" include its offices, 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 the Laws.

1.9. Project Inspector. The Project Inspector is employed by the District in accordance with the requirements of Title 24 of the California Code of Regulations. The Project Inspector is authorized to act on behalf of the District as provided for in the Contract Documents and in Title 24 of the California Code of Regulations.

1.10. 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" means 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 therefrom.

1.11. Record Drawings. The Record Drawings are the Drawings marked by the Contractor during the Work to indicate completely and accurately actual as-built conditions of the Work.

1.12. Construction Manager. The Construction Manager, if any, is designated in the Special Conditions and is authorized to act on behalf of the District in accordance with the Contract Documents. If a Construction Manager is not designated in the Special Conditions, the District may designate a Construction Manager during performance of the Work without adjustment of the Contract Price or the Contract Time or otherwise affect, limit or restrict Contractor's obligations hereunder.

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

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

1.15. 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 Changes, unless a Change Order relating to a Field Clarification is authorized and issued.

1.16. Defective or Non-Conforming Work. Defective or Non-Conforming Work is any Work which is unsatisfactory, faulty or deficient by: (i) not conforming to the requirements of the Contract Documents; (ii) not conforming to the standards of workmanship of the applicable trade; (iii) not in compliance with the requirements of any inspection, reference, standard, test, or approval required by the Contract Documents; or (iv) damage occurring prior to Final Acceptance.

1.17. 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.

1.18. Progress Reports; Verified Reports. Progress Reports are written reports prepared by the Contractor and its Subcontractors on a daily basis. Progress Reports must include: (i) the number of labor and supervising personnel at the Site; (ii) the labor/work classification of each laborer; (iii) a detailed description of the Work in progress and completed; (iv) weather/environmental conditions; and (v) problems encountered with a potential impact to the Contract Time or the Contract Price. 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 Title 24 of the California Code of Regulations.

1.19. Laws. "Laws" refer to all laws, ordinances, codes, rules and/or regulations promulgated by any governmental or quasi-governmental agency with jurisdiction over any portion of the Work and which apply to any portion of the Work, including those in effect as of the execution of the Agreement, amendments thereto and subsequently enacted Laws that take effect during the performance of the Work. No adjustment of the Contract Time or the Contract Price shall be

allowed for the Contractor's compliance with the Laws.

1.20. Construction Change Directive. A Construction Change Directive is a written instrument issued by or on behalf of the District to the Contractor directing a Change to the Work prior to the Contractor and District reaching full agreement on an adjustment of the Contract Time and/or Contract Price on account of such Change. A material obligation of the Contractor is timely performance of Work noted in a Construction Change Directive.

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 is set forth in the Contract Documents. Information not provided by the District but required to complete the Work shall be obtained by Contractor without adjustment to the Contract Price or the Contract Time. The Contractor shall verify all information provided by the District. Variations between conditions or existing improvements depicted in the Contract Documents and those actually encountered in the performance of the Work shall not result in any District liability therefor, nor shall any such variations result in an adjustment of the Contract Time or the Contract Price.

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 of the Work.

2.1.3. Drawings and Specifications. The District shall furnish the Contractor, without cost to the Contractor, electronic files 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 other than the Work of the Project.

2.2. District's Right to Stop the Work. The District may, by written order, direct the Contractor to stop any portion of the Work if the Contractor: (i) fails to correct Defective or Non-Conforming Work; or (ii) fails to carry out the Work in conformity to the Contract Documents. The right of the District to stop the Work hereunder shall not: (i) be deemed a duty of the District to exercise such right for the benefit of the Contractor; (ii) waive or limit the exercise of any other right or remedy of the District under the Contract Documents or the Laws; or (iii) result in adjustment of the Contract Time or the Contract Price.

2.3. Partial Occupancy or Use. The District may occupy or use any completed or partially completed portion of the Work. Immediately prior to such partial occupancy or use of the Work, the District, Project Inspector, Contractor, Construction Manager and Architect shall jointly inspect the portion of Work to be used or occupied by the District to record the condition of the Work. Corrective action noted in such inspection shall be promptly performed and completed by the Contractor so the Work conforms to 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 is not "completion" of the Work pursuant to Public Contract Code §7107 nor constitute the District's acceptance Defective or Non-Conforming Work.

2.4. The Project Inspector.

2.4.1. Authority. All Work shall be performed under the observation of the Project Inspector, whose authority is established by the Laws and the Contract Documents. Duties of the Project Inspector shall not relieve or limit the Contractor's performance of its obligations under the Contract Documents. The Project Inspector does not have authority: (i) to interpret the Contract Documents or to modify the Work

depicted in the Contract Documents; or (ii) relating to the Contractor's safety plan. Upon the Project Inspector's issuance of a report or other similar statement identifying Defective or Non-Conforming Work, the Contractor shall promptly repair, replace or correct the same so that it conforms to requirements of the Contract Documents. If the Contractor fails or refuses to promptly remedy Defective or Non-Conforming Work, the District may remedy such Defective or Non-Conforming Work at the expense of the Contractor.

2.4.2. Facilities and Information for the Project Inspector. The Contractor shall provide to the Project Inspector all information, data and similar materials as necessary or appropriate for the Project Inspector's purposes of fulfilling the Project Inspector's obligations relating to observations and inspections of the Work. The Contractor shall provide, without adjustment of the Contract Price, for use by the Project Inspector, the District 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, at the expense of the Contractor.

2.5. Communications Software. The District reserves the right to implement electronic data and/or communications software (such as Primavera Expedition®) for data and communications relating to the Work ("Communications Software"). The Contractor's use of Communications Software will be as directed by the District without charge or expense to the Contractor and without adjustment of the Contract Price or the Contract Time.

3. Architect; Construction Manager

3.1. Administration of the Contract. The Architect and Construction Manager will provide administration of the Contract and are District 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 and the Project Inspector with respect to the administration of the Contract and the Work. The Architect and the Construction Manager are 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 the Laws, including Title 24 of the California Code of Regulations.

3.2. Architect Periodic Site Inspections. The Architect will visit the Site at intervals appropriate to the stage of construction to: (i) become generally familiar with the progress and quality of the completed Work; and (ii) determine if the Work is being performed so that when completed will be in accordance with the Contract Documents. On the basis of Site observations as an architect, the Architect will keep the District informed of the progress of the Work, and endeavor to guard the District against defects and deficiencies in the Work. The Architect is authorized to reject Defective or Non-Conforming Work. The Architect may require additional inspections or tests, whether or not the Work is fabricated, installed or completed.

3.3. Submittals. The Architect will review and accept or take other appropriate action relating to Submittals for the limited purpose of checking for general conformance with information given and the design concept expressed in the Contract Documents. The Architect's review of Submittals shall not: (i) relieve the Contractor of its obligations under the Contract Documents; (ii) constitute approval of safety measures, programs or precautions; or (iii) constitute the direction of construction means, methods, techniques, sequences or procedures. The Architect's review and return of reviewed Submittals will conform to the time limits set forth in the Specifications, the Construction Schedule or other provisions of the Contract Documents.

If no time limits are established in the foregoing, the Architect shall have fourteen (14) days for review and return of Submittals.

3.4. Changes; 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. The Architect may issue Field Clarifications and Construction Change Directives.

3.5. 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 promptly and within the time limits agreed upon; if agreement establishing the time for the Architect's review and response to requests is not reached, the Architect shall have fifteen (15) days after receipt of such request to 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. The Architect's decisions on matters relating to aesthetic effect are final if consistent with the intent expressed in the Contract Documents.

3.6. Review of Applications for Payment. The Architect, Project Inspector and Construction Manager will each review the Contractor's Applications for Progress Payments and for Final Payment, evaluate the extent of Work performed and certify to the District the amount properly due the Contractor on such Application for Payment.

3.7. Rejection of Work. The Architect and/or Construction Manager are authorized to reject Work which is defective or does not conform to the requirements of the Contract Documents. Whenever the Architect, Project Inspector or the Construction Manager consider it necessary or advisable, for implementation of the intent of the Contract Documents, they shall have authority to require additional inspections or testing of the Work, whether or not such Work is fabricated, installed or completed. The authority of the Architect, Project Inspector or the Construction Manager or a decision made in good faith by the Architect, Project Inspector or Construction Manager to exercise or not to exercise such authority shall not give rise to a duty or responsibility to the Contractor, Subcontractors, Material Suppliers, their agents or employees, or other persons performing portions of the Work.

3.8. Completion. The Architect, Project Inspector and the Construction Manager will conduct observations to determine the date(s) of Substantial Completion and the date(s) of Final Completion. The Construction Manager will receive from the Contractor and forward to the District, for the District's review and records, written warranties and related documents or other items required by the Contract Documents upon close-out of the Work which are assembled by the Contractor. If a Construction Manager is not retained for the Work, the Contractor shall submit such items to the Architect for forwarding to the District. The Architect, Project Inspector and Construction Manager will verify that the Contractor has complied with all requirements of the Contract Documents and is entitled to receipt of Final Payment.

3.9. Interpretation of Contract Documents; Architect as Initial Arbiter of Disputes. 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, the Architect shall be afforded a ten (10) calendar 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. If there is any disagreement, dispute or other matter in controversy between the District and the Contractor, in addition to other requirements established by the Contract Documents or by law, the submission of the same to the Architect for its decision shall be a condition precedent to initiation of dispute resolution procedures.

3.10. Contractor 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"), the Contractor must 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 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 to process, review, evaluate and respond to such request for information, including without limitation, fees of the Architect.

3.11. Contractor Responsibility for Construction Means, Methods and Sequences. Neither the District, Project Inspector, Architect or the Construction Manager will have control over or charge of and 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 District, Architect, Project Inspector or Construction Manager have no control over or charge of and are not responsible for acts or omissions of the Contractor, Subcontractors, or their agents or employees, or of any other persons performing portions of the Work.

3.12. Communications. 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 and the District or the Architect shall be through the Construction Manager, if one is retained for the Work. Communications between the Contractor and the District's separate contractors, if any, shall be through the District. 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.

4. The Contractor

4.1. Contractor Review of Contract Documents.

4.1.1. Examination of Contract Documents. The Contractor shall carefully study Contract Documents and information furnished by the District and shall immediately notify the Architect in writing of 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 Architect, the Contractor shall bear the costs for correction of the same.

4.1.2. Measurements, Layouts and Field Engineering. The Contractor shall take field measurements and verify field conditions at the Site. All field engineering required for laying out the Work and establishing grades for earthwork operations shall be by

an engineer registered under the Laws and without adjustment of the Contract Price. The Contractor shall complete all surveys necessary for performance of the Work and for establishment, location, maintenance and preservation of benchmarks, reference points and stakes for the Work.

4.1.3. Drawings; Dimensions. Unless otherwise expressly provided, dimensions indicated in the Drawings are: (i) intended for reference only; and (ii) diagrammatic and schematic in nature. The Contractor is solely responsible for dimensioning and coordinating the Work of the Contract Documents. No Contract Price adjustment will be allowed on account of differences between actual dimensions and the dimensions indicated on the Drawings.

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 the Laws.

4.2. Site Investigation; Subsurface Conditions.

4.2.1. Subsurface Data. By executing the Agreement, the Contractor acknowledges that it has examined the boring data and other available subsurface data and has 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. 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 District assumes no responsibility for any conclusions or interpretations of the Contractor on the basis of available subsurface data or other information furnished by District under the Contract Documents.

4.2.2. Subsurface Conditions. If the Work involves digging trenches or other excavations that extend deeper than four (4) feet below the surface, the Contractor shall promptly and before the following conditions are disturbed, notify the Project 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 latent physical 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 the District determines that the conditions so materially differ or involve such hazardous materials requiring an adjustment to the Contract Price or the Contract Time, the District shall issue a Change Order in accordance with Article 9 hereof. Pursuant to California Public Contract Code §7104, disputes 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.

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 is responsible to the District for acts and omissions of the employees, agents and representatives of the Contractor and Subcontractors.

4.3.2. Noise and Dust Control. The Contractor shall implement all measures necessary for noise and dust control during Work at the Site, including specific care to avoid deposits of airborne dust or airborne elements.

4.3.3. 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. The Contractor shall maintain the Site in a "rake-clean" standard on a daily basis. The Project Inspector or Construction Manager may 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 at the Contractor's expense.

4.3.4. Cutting and Patching. The Contractor is 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.

4.3.5. 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 shall be obtained by the Contractor without adjustment of the Contract Price. The Contractor shall furnish and install temporary distributions of utilities at the Site as necessary for the Work, including utilities furnished by the District. All temporary distributions shall be removed by the Contractor upon completion of the Work. The costs of utility services obtained by the Contractor and the installation and removal of temporary distributions thereof are included in the Contract Price.

4.3.6. Existing Utilities; Removal, Relocation and Protection. Pursuant to California Government Code §4215, the District assumes responsibility for timely removal, relocation, or protection of existing main or trunkline utility facilities located on the Site which are not identified in the Contract Documents. The 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 Contract Documents with reasonable accuracy and for Construction Equipment on the Site necessarily idled during such work. The 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 utility owner to provide for removal or relocation of such utility facilities. The District is not required to indicate existing service laterals or appurtenances if 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 in the Contract Documents, the Contractor shall immediately notify, in writing, the District, Project Inspector, Architect, Construction Manager and the utility owner. If 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.

4.4. Conferences and Meetings. A material obligation of the Contractor is the attendance by the Contractor's supervisory and/or management personnel (who shall be authorized to act on behalf of the Contractor) at meetings relating to the Work, including weekly progress meetings. The Contractor is responsible for arranging for attendance by Subcontractors, Material Suppliers at meetings and conferences relating to the Work as necessary, appropriate or as requested by the District. All costs, expenses, charges or fees incurred by the Contractor in connection with attendance and participation meetings relating to the Work shall be without

adjustment of the Contract Time or the Contract Price. The Architect or Construction Manager will prepare and distribute minutes reflecting the items addressed and actions taken at a meeting or conference. The Contractor shall have five (5) days after the date of distribution of minutes to notify the Construction Manager and Architect in writing of objections to such minutes. Failure of the Contractor to interpose objections within said five (5) days will result the minutes as distributed constituting the official record of the meeting or conference. Objections of Subcontractors or Material Suppliers to minutes shall be submitted to the Architect or 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 meeting.

4.5. Labor and Materials.

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

4.5.2. Employee Discipline and Competency. The Contractor shall enforce strict discipline and good order among employees of the Contractor, Subcontractors 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 to dismiss from their employment any person deemed by the District to be unfit or incompetent to perform Work.

4.5.3. Contractor's Superintendent. The Contractor's superintendent shall at the Site at all times during the Work. The superintendent shall represent the Contractor and communications given to the superintendent shall be binding as if given to the Contractor. The Contractor shall submit to the District a written statement of the qualifications of the Contractor's proposed Superintendent. Acceptance of the Contractor's proposed Superintendent is subject to establishing the Superintendent's: (i) skills, experience and other capabilities of the proposed Superintendent to supervise, coordinate and manage the Work; (ii) fluent verbal and written English language capabilities; (iii) competency in reading, comprehending and understanding Drawings, Specifications and other technical construction-related materials; and (iv) recent experience in completing construction projects similar to the Work within the budget and time established for such other construction projects. Upon acceptance of the Contractor's Superintendent, the Contractor shall not be change the Superintendent without prior consent of the District, unless the Superintendent: (i) is unsatisfactory to the Contractor; or (ii) is determined by the District to be unfit, incompetent or incapable of performing functions and responsibilities assigned.

4.5.4. Prohibition on Harassment. Any person engaging in a prohibited form of harassment is subject to immediate removal and thereafter excluded from the Site. Upon the District's receipt of any notice or complaint that a person performing Work at the Site has engaged in a prohibited form of harassment ("Worker"), the District will promptly undertake an investigation of such notice or complaint. If the District, after such investigation, reasonably determines that a prohibited form of harassment has occurred, the District will notify the Contractor of the same and direct that the Worker be immediately removed from the Site. Unless the District's determination is grossly negligent or without reasonable cause, District shall have no liability for

directing the removal of any Worker determined to have engaged in a prohibited form of harassment nor shall the Contract Price or the Contract Time be adjusted on account thereof. The Contractor and the Surety shall defend, indemnify and hold harmless the Indemnified Parties 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 Worker that the direction of the District pursuant to the foregoing was improper; or (ii) the assertion by any person that a Worker has engaged in a prohibited form of harassment directed to or affecting such person.

4.5.5. 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. Payment of Permits, Fees. Unless otherwise provided in the Contract Documents, the District shall secure and pay for the building permits, other permits, governmental fees, licenses and inspections necessary or required for the proper execution and completion of the Work. The foregoing notwithstanding: (i) the Contractor shall pay all fees, costs or other expenses associated with or arising in connection with Deferred Approval Items without adjustment of the Contract Price; and (ii) the Contractor shall obtain the following permits/approvals if applicable to the Work without adjustment of the Contract Price: (a) Temporary Fire Department plan check and permits for temporary material handling, storage and/or dispensing facilities for fuel, oil, liquid or gases; (b) industrial waste and AQMD permits relating to temporary facilities used in connection with any portion of the Work; (c) local business license; (d) traffic control, OSHA and offsite improvement permits; and (e) sewer, water, storm drain, gas tie plan check permits; (f) fees related to temporary water and erosion control.

4.6.2. Compliance With Laws. The Contractor shall comply with and give notices required by the Laws and other orders of public authorities bearing on performance of the Work. All Work completed by the Contractor shall be in compliance with the Laws.

4.6.3. 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, the Contractor shall promptly notify the Architect, Construction Manager and the Project Inspector, in writing, of the same. If the Contractor performs Work knowing, or with reasonable diligence should have known, it to be contrary to the Laws without such notice to the Architect, Construction Manager and the Project Inspector, the Contractor shall assume full responsibility for such Work and shall bear the attributable costs arising or associated therefrom, including without limitation, the removal, replacement or correction of the same.

4.6.4. DIR Registration. At all times during the Work, the Contractor shall be a DIR registered contractor. Performance of any Work by the Contractor without the Contractor being a DIR registered contractor at the time Work is performed is the Contractor's default in performance of a material obligation of the Contractor under the Contract Documents.

4.7. Submittals. Submittals are not part of the Contract Documents. Submittals shall demonstrate, for those portions of the Work for which Submittals are required, the manner in which the Contractor proposes to furnish, install or incorporate such Work in conformity with the information given and the design concept expressed in the Contract Documents.

4.7.1. Contractor's Submittals.

4.7.1.1. Prompt Submittals. All Submittals required by the Contract Documents shall be prepared, assembled and submitted by the Contractor to the Architect in a timely manner or within the time indicated in the Submittal Schedule incorporated into the Accepted Construction Schedule.

4.7.1.2. Contractor Approval of Subcontractor Submittals. All Submittals prepared by Subcontractors or Material Suppliers shall bear the written approval of the Contractor prior to submission to the Architect for review, with the approval indicating that the Contractor has verified materials, field measurements, field construction criteria, catalog numbers and similar data related thereto and has verified that the information contained within such Submittals conform to the requirements the Contract Documents. Any Submittal submitted without the Contractor's written approval will be returned to the Contractor for re-submittal in conformity herewith, with the same being deemed to not have been submitted. Submittals shall be numbered consecutively and include the following: (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 of Submittals.

4.7.1.3. Contractor Responsibility for Deviations. The Contractor is not relieved of responsibility for correcting deviations from the Contract Documents by the Architect's review of Submittals unless the Contractor specifically informs the Architect in writing of such deviation at the time of submission of the Submittal and the Architect accepts the specific deviation.

4.7.1.4. 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 accepted the Submittal. The Contractor shall not perform any portion of the Work affected by a related Submittal until the related Submittal is reviewed and accepted by the Architect.

4.7.2. Architect Review of Submittals. If the Architect returns a Submittal as rejected or requiring correction(s) with re-submission, the Contractor shall promptly resubmit a Submittal conforming to 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 may rely on the accuracy and completeness of such calculations and certifications accompanying Submittals. The following notations or notations of a similar nature noted on a reviewed Submittal will require the Contractor action noted below.

Submittal Notation	Required 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 review.
Rejected Re-Submit	Prepare new alternative Submittal and re-submit for review.

4.7.3. Deferred Approval Items. If any portion of the Work is designated in the Contract Documents as a "Deferred Approval" item, Contractor is responsible for preparing Submittals for Deferred Approval Items. Where required by the Laws or the nature of a Deferred Approval, the Deferred Approval Design shall be completed and stamped by a California licensed architect or California registered engineer. The Deferred Approval Design shall: (i) incorporate all requirements of the Deferred Approval as set forth in the Contract Documents; (ii) be coordinated with other portions of the Work; (iii) be completed in a timely manner so as not to delay, disrupt or interfere with completion of the Work within the Contract Time; and (iv) be completed in accordance with the applicable professional standard of care. The Contractor shall submit each completed Deferred Approval Design to the Architect for review and acceptance. Upon the Architect's acceptance of a Deferred Approval Design, the Contractor shall be responsible for: (i) submittal of the Deferred Approval Design to DSA for review and approval; (ii) modifications to the Deferred Approval Design as necessary to obtain DSA approval; and (iii) payment of fees or charges imposed by DSA for review and approval of a Deferred Approval Design without adjustment of the Contract Price. Notwithstanding review and acceptance of a Deferred Approval Design by the Architect or DSA issuance of approval to construct pursuant to the Contractor's Deferred Approval Design, the Contractor remains liable to the District for all losses, damages, costs, or other consequences of the failure of any Contractor's Deferred Approval Design to: (i) conform to the applicable design professional standard of care; (ii) conform to design intent and/or aesthetic requirements established in the Contract Documents; or (iii) perform and function in accordance with requirements established in the Contract Documents.

4.8. Materials and Equipment.

4.8.1. Approval of Substitutions or Alternatives. The Contractor may propose alternatives or substitutes for items specified in the Contract Documents ("Alternative Products"), provided that: (i) the Alternative Products comply with the requirements of the specified item; (ii) the Contractor certifies that the quality, performance capability and functionality (including aesthetics) of the Alternative Products meet or exceed the quality, performance capability and functionality of the specified item; and (iii) use of the Alternative Product will not delay completion of the Work or increase the Contract Price. The Contractor shall submit engineering, construction, dimension, visual, aesthetic and performance data ("Substantiating Data") to the Architect to permit evaluation of the Alternative Products. The Contractor shall not furnish or install any Alternative Products without the Architect's acceptance of the Alternative Products. The Architect's decision evaluating the Contractor's proposed Alternative Products shall be final. Neither the Contract Time nor the Contract Price shall be increased on account of any Alternative Products accepted by the Architect. The Contract Price shall be reduced by the actual cost savings realized by the Contractor's furnishing and/or installation of accepted Alternative Products. The Contractor is solely responsible for all costs and fees incurred by the District to review proposed Alternative Products, including without limitation fees of the Architect, design consultants to the Architect and/or governmental agencies to review and/or approve any proposed substitution or alternative. All requests for the Architect's review and approval of any Alternative Products and all Substantiating Data shall be submitted by Contractor not later than thirty-five (35) days following the date of the District's award of the Contract to Contractor; any request for approval of Alternative Products submitted thereafter may be rejected summarily. The foregoing process and time limits shall apply to any proposed Alternative Products regardless of whether the Alternative Products are furnished or installed

by the Contractor, a Subcontractor or Material Supplier.

4.8.2. District Standard Products; "Sole Source" Products. If any material, equipment, product or other item ("Product") is designated in the Contract Documents as a "District Standard" or by similar words/terms, the District is deemed to have made a finding that such Product is designated and specified to match other Products in use in a completed or to be completed work of improvement and not subject to Alternative Products.

4.8.3. Placement of Material and Equipment Orders. The Contractor and Subcontractors shall promptly place all orders for materials and/or equipment for completion of the Work so that delivery of the same shall be made without delay or interruption to the Work. When requested by or on behalf of the District, the Contractor shall furnish 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.

4.8.4. District's Right to Place Orders for Materials and/or Equipment. If the District determines, in its sole discretion, that orders for materials and/or equipment have not been placed in a manner so Substantial Completion is achieved within the Contract Time, the District shall have the right, but not the obligation, to place such orders on behalf of the Contractor. The Contractor shall reimburse the District for all costs and fees incurred by the District in placing such orders.

4.9. Safety; Security.

4.9.1. Safety. The Contractor is solely responsible for initiating, maintaining and supervising all safety programs required by the Laws or by the type or nature of the Work and for initiating and maintaining reasonable safety precautions 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 or in transit; and (iii) other property or items at the Site, 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. The foregoing includes, without limitation, posting danger signs and other warnings against hazards, promulgating safety regulations and notifying owners and users of adjacent sites and utilities. The Contractor shall implement and enforce personal safety measures required by the Laws for personnel at the Site. The Contract Price and the Contract Time are not subject to adjustment for the Contractor's compliance with personal and site safety requirements required by the Laws, unless personal or site safety requirements are amended during performance of the Work. In such event, the Contract Price may be adjusted for actual direct costs of materials or equipment required to comply with such amended personal or site safety requirements; no adjustment of the Contract Price shall be allowed for any impacts or consequences of any such amended personal or site safety requirements, including without limitation loss of productivity, loss of efficiency, hindrances or delays in completing the Work. If amended personal or site safety requirements directly affect Work on the critical path of the Updated Construction Schedule as of the effective date of any amended personal or site safety requirements, the Contract Time shall be equitably adjusted, provided that any such adjustment of the Contract Time shall not result in adjustment of the Contract Price. Duties of the Contractor's Superintendent include prevention of accidents and the implementation of safety precautions and programs. In an

emergency, the Contractor shall take necessary action to prevent or mitigate threatened damage, injury or loss.

4.9.2. Security. The Contractor is responsible for securing the Site and Work in place or in progress (including materials/equipment/tools situated at the Site) to prevent theft, loss or damage. The District and employees, officers, agents or representatives of the District are not liable to the Contractor, Subcontractors or their respective personnel for the loss, theft, damage or destruction of materials, equipment, tools and other personal property items, whether or not such personal property is used to complete the Work or is incorporated into the Work. The risk of such loss, theft, damage or destruction is solely that of the Contractor or Subcontractors.

4.10. Hazardous Materials; Prohibition on Use of Asbestos Construction Building Materials ("ACBMs"). If the Contractor or any Subcontractor uses, at the Site, or incorporates into the Work, any material or substance deemed to be hazardous or toxic under the Laws (collectively "Hazardous Materials"), the Contractor shall comply with the Laws relating to the use, storage or disposal thereof. It is the intent of the District that ACBMs not be used or incorporated into any portion of the Work. If any product or material forming a part of the Work or incorporated into the Work if found to contain ACBMs, the Contractor shall at its sole cost and expense: (i) remove such product or material in accordance with the Laws; (ii) replace such product or material with non-ACBM products or materials; and (iii) return the affected portion(s) of the Work to the finish condition depicted in the Contract Documents relating to such portion(s) of the Work. The foregoing obligations shall survive the termination of the Contract, the warranty period provided under the Contract Documents, completion of the Work or the District's acceptance of the Work. If the Contractor fails or refuses, 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, the District may thereafter proceed to cause the removal and replacement of such materials or products; all costs, expenses and fees, including without limitation fees and costs of consultants and attorneys, shall be the joint and several responsibility of the Contractor and the Surety.

4.11. Maintenance of Record Drawings. During the Work, the Contractor shall continuously maintain Record Drawings consisting of a set of the Drawings marked to indicate all field changes to adapt the Work depicted in the Drawings to field conditions, Change Orders and all concealed or buried installations, including without limitation, piping, conduit and utility services. 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. If the District reasonably determines that the Contractor has not been, or is not, continuously maintaining the Record Drawings pursuant to the foregoing, the District may take appropriate action to cause the continuous maintenance of complete and accurate Record Drawings, at the Contractor's expense. Prior to receipt of the Final Payment, Contractor shall deliver the Record Drawings to the Architect.

4.12. Use of Site. The Contractor shall confine operations at the Site to areas permitted the Laws and the Contract Documents and shall not unreasonably encumber the Site or adjoining areas with materials or equipment. The Contractor is solely responsible for providing security at the Site with all such costs included in the Contract Price. Except in an emergency, no construction activities shall be permitted at or about the Site except during the hours and days set forth in the Special Conditions; Work performed at hours or on days not noted in the Special Conditions will not result in adjustment of the Contract Time or the Contract Price.

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

4.14. 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.

4.15. Wage Rates; Employment of Labor.

4.15.1. Payment of Prevailing Rates. There shall be paid each worker of the Contractor and Subcontractors 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 and such worker. During the Work and pursuant to Labor Code §1771.4(a)(4), the Department of Industrial Relations will monitor and enforce the obligation of the Contractor and Subcontractors to pay laborers at least the Prevailing Wage Rate established for the classification of work/labor performed.

4.15.2. Prevailing Rate Penalty. If a worker of the Contractor or a Subcontractor is paid less than the prevailing wage rate for the work or craft provided by the worker, the Contractor and/or Subcontractor shall be subject all penalties and assessments established by the Laws.

4.15.3. Certified Payroll Records. The Contractor and all Subcontractors shall prepare and submit Certified Payroll Records to the Labor Commissioner in compliance with requirements established in Labor Code §1771.4. The form and content of Certified Payroll Records shall be as established by the Labor Commissioner and the frequency of Certified Payroll Records submittal to the Labor Commissioner shall be pursuant to Labor Code §1771.4. Pursuant to California Labor Code §1776, the Contractor and each Subcontractor shall keep accurate payroll records, 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 in accordance with the Laws. If the Contractor and/or Subcontractor fail or refuse to produce payroll records as required by the Laws, the Contractor and/or Subcontractor shall be subject to all penalties and assessments under the Laws as a result of such failure or refusal.

4.15.4. Hours of Work. The Contractor and Subcontractors shall limit the hours of work by their respective workers to those permitted by the Laws. Hours of work exceeding those permitted by the Laws shall be subject to additional premium wage payments as required by the Laws. Failure of the Contractor or Subcontractors to comply with the foregoing will subject the Contractor and/or Subcontractor to all penalties and assessments under the Laws.

4.16. Apprentices. Apprentices for the Work shall be in strict conformity with the Laws, including without limitation, Labor Code §§1777.5 through 1777.7, the provisions of which are incorporated herein by this reference. The responsibility for compliance with apprenticeship requirements is solely and exclusively that of the Contractor. If the Contractor willfully fails to comply with these provisions and California Labor Code §1777.5, pursuant to California Labor Code §1777.7, the Contractor shall be subject to all penalties and assessments established by the Laws.

4.17. 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 services for the Work where the services provided or to be provided requires the person to hold a valid California Contractors' license and such person does not meet the burden of proof of his/her independent contractor status pursuant to California Labor Code §2750.5. Employment of any person in violation of the foregoing, will subject the Contractor to the civil penalties under California Labor Code §1021.5 and any other penalty provided by the Laws. All Subcontractors shall comply with the foregoing.

4.18. Assignment of Antitrust Claims. The Contractor and all Subcontractors 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.) pursuant to California Government Code §4551. 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.

4.19. DSA Construction Oversight. All of the Work is subject to DSA Construction Oversight processes and procedures; a material obligation of the Contractor hereunder is the Contractor's compliance with the processes and procedures established by DSA for the Work. As applicable, the foregoing shall include without limitation, the processes and procedures established under DSA PR 13-01 in effect at the time of performing the Work hereunder. The foregoing shall include:

4.19.1. DSA Approved Documents. The Contractor shall carefully study the DSA approved documents and shall plan a schedule of operations well ahead of time.

4.19.2. Correction of Non-Conforming Work. If at any time it is discovered that Work is not in accordance with the DSA approved construction documents, the Contractor shall correct the Work immediately.

4.19.3. Verification of DSA 152 Forms. The Contractor shall verify that DSA 152 forms were issued for prior to the commencement of construction.

4.19.4. Test/Inspection Communications. The Contractor shall meet with the Architect, Construction Manager, the Laboratory of Record retained by the District for special tests/inspections and the Project Inspector to mutually communicate and understand the testing and inspection program, and the methods of communication appropriate for the Work.

4.19.5. DSA Form 156 Notifications to Project Inspector. The Contractor shall notify the Project Inspector, in writing, of the commencement of construction of each and every aspect of the Work at least 48 hours in advance by submitting Commencement/Completion of Work Notification (form DSA 156), or other agreed upon written documents, to the Project Inspector. The Contractor shall notify the Project Inspector of the completion of construction of each and every aspect of the Work by submitting form DSA 156 (or other agreed upon written documents) to the Project Inspector.

4.19.6. Limitations on Contractor Work. Until the Project Inspector has signed off applicable blocks and sections of the form DSA 152, the Contractor may be prohibited from proceeding with subsequent construction activities that cover up the unapproved Work. Any subsequent construction activities, that cover up the unapproved Work, will be subject to a "Stop Work Order" from DSA or the District, and are subject to removal and remediation if found to be in non-compliance with the DSA approved construction documents.

4.19.7. Final Verified Report. The Contractor shall submit the final Contractor Verified Report. (form DSA 6-C) to DSA and the Project Inspector. The DSA 6-C reports are required to be submitted by the Contractor upon occurrence of any of the following events: (i) the Work is substantially complete (DSA considers the Work to be complete when the construction is sufficiently complete in accordance with the DSA approved construction documents so that the owner can occupy or utilize the Work); (ii) Work is suspended for a period of more than one (1) month; (iii) services of the Contractor are terminated for any reason prior to the completion of the Work; or (iv) DSA requests a verified report.

4.19.8. Failure to Submit Final Verified Report. Should Contractor fail or refuse to submit the final Contractor Verified Report (form DSA 6-C) to DSA and the Project Inspector, the Final Payment due the Contractor shall be reduced by Twenty-Five Thousand Dollars ($25,000.00) until such time as the Contractor submits the final Contractor Verified Report (form DSA 6-C) to DSA and the Project Inspector.

4.20. DSA Verified Reports.

4.20.1.1. Contractor Actions. The Contractor acknowledges and agrees that a material obligation of the Contractor under the Contract Documents is the completion by the Contractor of all actions and activities which by the Contract Documents or by the Laws are the responsibility of the Contractor relating to DSA reporting requirements pursuant to Education Code §81141 (including amendments thereto) and issuance of DSA's Certificate of Compliance for the Project pursuant to Education Code §81147 (including amendments thereto) upon completion of the Work. The foregoing shall include without limitation, the timely preparation, completion and filing of Verified Reports during Project construction and the filing of the Final Verified Report with DSA within thirty (30) days of the determination of Final Completion. The Contractor shall provide the District, the Project Inspector, Architect, Construction Manager with copies of all Verified Reports completed by the Contractor and submitted to DSA; such copies shall be provided to the Project Inspector, Architect, the Construction Manager and the District concurrently with the Contractor's submission thereof to DSA.

4.20.1.2. District Withholdings From Final Payment. Notwithstanding any provision of the Contract Documents to the contrary, the completion and filing of the Final Verified Report with DSA by the Contractor is an express condition precedent to the District's disbursement of the Final Payment. If the Contractor fails to prepare and file the Final Verified Report with DSA within thirty (30) days of the determination of Final Completion, the District may in the sole and exclusive discretion of the District retain and withhold ten percent (10%) of the Final Payment from disbursement to the Contractor as damages for the failure of the Contractor to have timely and completely discharged its obligations hereunder. The Contractor acknowledges and agrees that the foregoing withholdings by the District is a reasonable estimate of the damages and other losses the District will sustain due to the failure of the Contractor to have timely and fully discharged its obligations hereunder.

5. Subcontractors.

5.1. Subcontracts. Work performed by Subcontractors shall be pursuant to a written agreement between the Contractor and each 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 and Architect all the obligations and responsibilities of the Contractor which the Contractor assumes toward the District and the Architect. No contractual relationship shall exist, or 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 shall provide that such Subcontract may be assigned to the District if the Contract is terminated by the District pursuant to these General Conditions, subject to the prior rights, if any, of the Surety.

5.2. Subcontractor DIR Contractor Registration.

5.2.1. No Subcontractor Performance of Work Without DIR Registration. No portion of the Work is permitted to be performed by a Subcontractor unless the Subcontractor is a DIR Registered contractor. The foregoing DIR contractor registration requirement is applicable for all Subcontractors, including without limitation, lower tier Subcontractors and Subcontractors who are not identified in the Contractor's Subcontractors List.

5.2.2. Contractor Obligation to Verify Subcontractor DIR Registration Status. An affirmative and on-going obligation of the Contractor under the Contract Documents is the Contractor's verification that all Subcontractors are at all times during performance of the Work in full and strict compliance with DIR contractor registration requirements. The Contractor shall not permit or allow any Subcontractor to perform any Work without the Contractor's verification that the Subcontractor is in full and strict compliance with DIR contractor registration requirements.

5.2.3. Contractor Obligation to Request Substitution of Listed Subcontractor Who Is Not DIR Registered Contractor. If any Subcontractor identified in the Contractor's Subcontractors List submitted with the Contractor's proposal for the Work is not a DIR registered contractor at the time of opening of proposals for the Work or if a Subcontractor's DIR contractor registration lapses prior to or during a Subcontractor's performance of Work, the Contractor shall request the District's consent to substitute the Subcontractor who is not a DIR registered contractor pursuant to Labor Code §1771.1(c)(3) and/or Labor Code §1771.1(d).

5.3. Substitution of Listed Subcontractor.

5.3.1. Substitution Process. Any request of the Contractor to substitute a listed Subcontractor must be in strict conformity with this Article 5.2 and California Public Contract Code §4107. All costs, fees or expenses incurred by the District, including, those of the Project Inspector, Architect and/or Construction Manager or attorneys in review, evaluation or hearing relating to a request to substitute a listed Subcontractor shall be borne by the Contractor.

5.3.2. Responsibilities of Contractor Upon Substitution of Subcontractor. The District's consent to Contractor's substitution of a listed Subcontractor shall not result in any increase of the Contract Price or the Contract Time.

5.4. 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: (i) coordinate its Work with the dependent Work; (ii) provide necessary dependent data and requirements; (iii) supply and/or install items to built into the dependent Work of others; (iv) make appropriate provisions for dependent Work of others; (v) carefully examine and understand the portions of the Contract Documents (including Drawings, Specifications and Field Clarifications) and Submittals relating to the dependent Work; and (vi) examine the

existing dependent Work and verify that the dependent Work is in proper condition for the Subcontractor's Work.

6. Insurance; Bonds; Indemnification

6.1. Owner Controlled Insurance Program ("OCIP"). The District has elected, at its sole discretion, to implement an Owner Controlled Insurance Program ("OCIP"). The District will provide the OCIP requirements for enrollment in the OCIP, OCIP forms, OCIP coverages and other OCIP requirements are set forth in the OCIP Program description incorporated as Attachment G to the Special Conditions.

6.2. Contractor OCIP Obligations.

6.2.1. Compliance With OCIP Requirements. Contractor agrees to comply with any and all terms and conditions of the policies of insurance provided by the District and to comply with any and all claims handling procedures, loss prevention programs and other programs required by or related to the District's OCIP as set forth herein. Contractor shall require Subcontractors and Sub-Subcontractor and all others covered by the District's OCIP insurance policies to so comply.

6.2.2. Contractor Furnishing of Information. Contractor, its Subcontractor and Sub-Subcontractors shall furnish to the District, the Architect, the OCIP Administrator, its designees or the insurers under the OCIP policies, all information and documentation that such entity may require from time to time in connection with the issuance of policies under this Contract or the administration of the OCIP in such form and substance as such entity may prescribe and promptly comply with the recommendations of the OCIP insurers.

6.2.3. No Violation of OCIP Insurance Policy Conditions. Contractor shall not violate, or knowingly permit to be violated; any conditions of the policies of insurance provided by the District hereunder and shall at all times satisfy the requirements of the insurers issuing them. Contractor shall assure that all OCIP requirements imposed upon, assumed and performed by each Subcontractor and Sub-Subcontractor.

6.2.4. District Rights. If the Contractor, Subcontractors, Sub-Subcontractors, or Excluded Parties should fail to comply with the Non-OCIP Insurance requirements, the District may withhold payment due to the Contractor or suspend the Work at the Contractors' sole expense and without adjustment of the Contract Price or Contract Time until such time as the Contractor, its Subcontractor, Sub-Subcontractors, and/or Excluded Parties have performed such obligations to the reasonable satisfaction of the District.

6.2.5. Withholding of Progress Payments/Final Payment. In addition to the rights of the District to withhold all or portions of Progress Payments or the Final Payment set forth elsewhere in the Contract Documents, the District may withhold Progress Payments or the Final Payment for the failure or refusal of the Contractor to comply with OCIP requirements, including without limitation, the reporting requirements set forth in the OCIP Program description or the OCIP insurance policies. Amounts withheld by the District pursuant to the preceding will be released only after the Contractor and/or Subcontractors' compliance with OCIP requirements, less costs and expenses incurred by the District in securing such compliance.

6.3. Contractor/Subcontractor Provided Insurance Requirements. The Contractor and Subcontractors shall obtain and maintain for the duration of the Work each of the Contractor/Subcontractor Provided insurance policies as set forth in the OCIP Program

description.

6.4. Payment Bond; Performance Bond. Prior to commencing the Work, the Contractor shall obtain and deliver to the District a Performance Bond and a Labor and Material Payment Bond each in a penal sum equal to one hundred percent (100%) of the Contract Price and in the form and content set forth in the Contract Documents. The Surety issuing bonds shall be an Admitted Surety Insurer as defined in California Code of Civil Procedure §995.120 and A.M. Best rated at least A-/VII. Obligations of the Surety under the Performance Bond include without limitation, the Contractor's post-construction obligations, including timely and complete performance of warranty/guarantee obligations.

6.5. Contractor Indemnity. To the maximum extent possible permitted by the Laws, Contractor shall indemnify, defend and hold harmless the Indemnified Parties who are: (i) the District, its Board of Trustees and each individual member thereof, and the officers, employees, agents and representatives of the District; (ii) the Architect and its consultants for the Work and their respective agents and employees; (iii) the Project Inspector; and (iv) the Construction Manager and its agents and employees. The Contractor shall indemnify, defend and hold harmless 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 attorneys' fees and costs which arise, in whole or in part, from the Work, the Contract Documents or the acts, omissions or other conduct of the Contractor, 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; (iii) theft, loss or destruction of property; (iv) Stop Payment Notice claims asserted in connection with the Work; and (v) other losses, liabilities, damages or costs resulting from, in whole or part, the negligent, grossly negligent or willful 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, representatives, officers or employees. If any action or proceeding is commenced on account of any claim, demand or liability subject to Contractor's obligations hereunder, and any of the Indemnified Parties are a party thereto, the Contractor shall, at its sole cost and expense, defend the Indemnified Parties in such action or proceeding with counsel reasonably satisfactory to the named Indemnified Parties. If there is 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, the 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, until barred by the applicable Statute of Limitations.

7. Contract Time

7.1. Substantial Completion of the Work Within Contract Time. The Contract Time is the period of time, including authorized adjustments thereto, for achieving Substantial Completion of the Work. The date for commencement of the Work is the date established in 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 which the Contractor is responsible. The date of Substantial Completion is the date certified by the Architect, Construction Manager and Project Inspector.

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. 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 when the Work is complete in accordance with the Contract Documents so the District can occupy or use the Work for its intended purpose. Substantial Completion shall be determined by the Architect, Construction Manager and Project Inspector upon request by the Contractor. The good faith and reasonable determination of Substantial Completion by the Project Inspector, Construction Manager and the Architect shall be controlling and final.

7.2.3. Correction or Completion of the Work After Substantial Completion.

7.2.3.1. Punchlist. Upon achieving Substantial Completion of the Work, the District, The Project Inspector, Construction Manager, Architect and 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 Punchlist"). The exclusion of an item on the Punchlist shall not limit the Contractor's obligation to complete or correct any portion of the Work in accordance with the Contract Documents.

7.2.3.2. Time for Completing Punchlist Items. The Construction Manager, Contractor and Architect shall, establish a reasonable time for Contractor's completion of the Punchlist. If mutual agreement is not reached, the Architect shall determine such time, which is 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 complete all Punchlist items within the time established. If the Contractor fails to complete the Punchlist within the time established, the Contractor shall be subject to assessment of Liquidated Damages and the District may in its sole and exclusive discretion, without further notice to Contractor, elect to cause the completion of all remaining Punchlist 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 the Laws, including assessment of Liquidated Damages. If the District elects to complete Punchlist items of the Work, pursuant to the foregoing, the Contractor shall be responsible for all costs incurred by the District in connection herewith. If these costs exceed the remaining Contract Price due to the Contractor, the Contractor and the Performance Bond Surety are jointly and severally liable to District for any such excess costs.

7.2.3.3. Final Completion. Final Completion is when all Work has been completed in accordance with the Contract Documents, including without limitation, completion of the Punchlist, the Contractor's close-out responsibilities under the Contract Documents have been fully performed. Final Completion shall be determined by the Architect, Construction Manager and Project Inspector upon request of the Contractor. The good faith and reasonable determination of Final Completion by the Project Inspector, Construction Manager and Architect shall be controlling and final.

7.2.3.4. Contractor Responsibility for Multiple Inspections. If the Contractor requests determination of Substantial Completion or Final Completion and the Project Inspector, Construction Manager or Architect determine 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, Construction Manager and Project Inspector.

7.2.4. Final Acceptance. Final Acceptance of the Work shall occur upon acceptance of the Work by the District's Board of Trustees; such acceptance shall be submitted for consideration at a 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 the date of Final Acceptance.

7.3. Construction Schedule.

7.3.1. Submittal of Preliminary Construction Schedule. Within five (5) days following execution of the Agreement, the Contractor shall prepare and submit to the District, Construction Manager and Architect a Preliminary Construction Schedule indicating, in graphic form, the estimated rate of progress and sequence of all Work required under the Contract Documents. As required by the District or Construction Manager, the Construction Schedules 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 major items, materials or equipment; (iii) identify 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. Any "float" time (the time between earliest finish date and the latest finish date of an activity shown on the Construction Schedule) incorporated into the Construction Schedules is jointly owned by the District and the Contractor.

7.3.2. Review of Preliminary Construction Schedule. The District and Construction Manager will review the Preliminary Construction Schedule for conformity with the requirements of the Contract Documents. Comments of the District will be returned to the Contractor with the reviewed Preliminary Construction Schedule.

7.3.3. Accepted Construction Schedule. Within ten (10) days of the District's return of the Preliminary Construction Schedule to the Contractor, the Contractor shall prepare and submit to the District and Construction Manger a revised Construction Schedule incorporating therein the comments to the Preliminary Construction Schedule and submit the same to the District and the Construction Manager for review and acceptance. The review and revision of the Preliminary Construction Schedule shall continue until the District has accepted the entirety of the Construction Schedule, referred to herein as the "Accepted Construction Schedule."

7.3.4. Revisions to Accepted Construction Schedule. If the progress of the Work or the sequencing of the activities of the Work materially differs from that indicated in the Accepted Construction Schedule, as determined by the District in its reasonable discretion and judgment, the District may direct the Contractor to revise the Accepted Construction Schedule; within fifteen (15) days of the District's direction, the Contractor shall prepare and submit to the District and Construction Manager a revised Accepted Construction Schedule for review and acceptance by the District. If a Revised Accepted Construction Scheduled is accepted by the District, the Contractor's performance of Work shall conform to such Revised Accepted Construction Schedule.

7.3.5. Updates to Accepted Construction Schedule. The Contractor shall update the Accepted Construction Schedule on a monthly basis, or more frequently as required by the conditions or progress of the Work, or as requested by the District. On or before the fifth (5^{th}) day of each month, the Contractor shall deliver to the District and Construction Manager an updated Accepted Construction Schedule indicating progress achieved and activities commenced or completed in the prior updated

Accepted Construction Schedule. If requested by the District, the Contractor shall also submit, with its updated Accepted Construction Schedules a narrative statement describing current and anticipated problem areas of the Work, delaying factors and their impact, and an explanation of corrective action taken or proposed by the Contractor. If the progress of the Work is behind that indicated in the Accepted Construction Schedule, the Contractor's narrative statement shall indicate what measures will be taken to place the Work back on schedule. The Contractor's preparation and submittal of the narrative described above is a material obligation of the Contractor.

7.3.6. Contractor Responsibility for Construction Schedule. The Contractor is responsible for preparation, submittal and maintenance of the Construction Schedules required by the Contract Documents. Failure of the Contractor to do so is the Contractor's default in the performance of a material obligation of the Contractor under Contract Documents. All costs or expenses incurred relating to Construction Schedules shall be solely that of the Contractor without adjustment of the Contract Price.

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. Force Majeure and Excusable Delays. Excusable Delays are delays caused by Force Majeure events which are unforeseeable and unavoidable casualties or other unforeseen causes, circumstances or events beyond the control, and without fault or neglect, of the Contractor or the District. Force Majeure events include without limitation, unanticipated and unusual and unanticipated transportation delays, unanticipated unusually severe weather conditions, acts of God, public health crisis (including without limitation, epidemics and pandemics), acts of a public enemy, war/insurrection, earthquakes and floods. 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 Excusable Delay occurs, the Contract Time shall be subject to adjustment only if the Contractor notifies the District in writing within ten (10) days of an Excusable Delay event and the Contractor establishes that the event(s) forming the basis for Contractor's request to adjust the Contract Time are: (i) 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) directly and adversely impacted the completion of the Work. Excusable Delays shall not result in adjustment of the Contract Price; the sole and exclusive remedy for an Excusable Delay is adjustment of the Contract Time. 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 the actual number of Rain Days during performance of the Work exceeds those noted in the Special Conditions and such additional Rain Days shall have directly and adversely impacted the progress of the Work on the critical path of the then current Accepted Construction Schedule relative to the date(s) of such additional Rain Days.

7.4.2. Compensable Delays. If Substantial Completion of the Work is delayed by the acts or omissions of the District, the Construction Manager, 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 for such reasonable period of time as determined by the Construction Manager and District. Pursuant to 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 therefrom, 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, equipment 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.

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.

7.5. Liquidated Damages. If the Contractor fails to: (i) submit Submittals in accordance with the Accepted Construction Schedule or in a timely manner; (ii) achieve Substantial Completion of the Work within the Contract Time, (subject to adjustments authorized under the Contract Documents); or (iii) complete Punchlist items within the time established, the Contractor shall be liable to the District for per diem Liquidated Damages set forth in the Special Conditions, not as a penalty but as Liquidated Damages which are agreed upon because of the difficulty of fixing the District's actual damages. The Contractor and the District agree that said amounts are reasonable estimates of the District's damages in such event, and that such amounts do not constitute a penalty. The Contractor and the Surety shall be jointly and severally liable to the District for any Liquidated Damages liability of the Contractor exceeding the Contract Price then held or retained by the District. 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.

8. Contract Price

8.1. Cost Breakdown of Contract Price. 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 acceptance of the content thereof. If the District objects to any portion of the Cost Breakdown, within five (5) days of the Contractor's receipt of the District's written objection(s), Contractor shall submit a revised Cost Breakdown to the District for review and acceptance. The foregoing procedure shall continue until the District has accepted of the entirety of the Cost Breakdown. The Cost Breakdown accepted by the District shall not be modified by the Contractor without the prior consent of the District, which may be granted, conditioned or denied in the sole discretion of the District.

8.2. Progress Payments.

8.2.1. Applications for Progress Payments ("Payment Applications"). During performance of the Work, the Contractor shall submit monthly Payment Applications, on the first (1st) working day of each month, to the Construction Manager, Project Inspector and Architect, 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 Payment Applications shall be based

upon the District accepted Cost Breakdown.

8.2.2. District's Review of Payment Applications. In accordance with Public Contract Code §20104.50, upon receipt of a Payment Application, the District shall cause the same to be reviewed by the Project Inspector, Construction Manager and Architect, as soon as is practicable, for the purpose of determining that the Payment Application is a proper Payment Application. A Payment Application is "proper" only if it is submitted on the form approved by the District, with all of the information completely and accurately provided and such completed Payment Application is accompanied by: (i) the form of Verification of Certified Payroll Records Submittal to Labor Commissioner, executed under penalty of perjury by the Contractor's Superintendent and/or the Contractor PM; which verifies that all Certified Payroll Records for the Contractor and all Subcontractors for the period of time covered by the Application for Progress Payment have been completed and submitted in strict conformity with Labor Code §1771.4; (ii) a breakdown identifying each Subcontractor/Material Supplier to be disbursed a portion of the requested Progress Payment and the amount of the Progress Payment to be disbursed to each Subcontractor/Material Supplier so identified; (iii) duly completed and executed forms of Conditional Waiver and Release of Rights Upon Progress Payment in accordance with California Civil Code §8132 of the Contractor, all Subcontractors 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 §8134 of the Contractor, Subcontractors and Material Suppliers covering the Progress Payment received by the Contractor under the prior Payment Application; and (v) a certification by the Contractor that it has continuously maintained the Record Drawings. Submittal of all of the foregoing is an express condition precedent to the District's obligation to disburse any Progress Payment. If a Payment Application is determined by the District not to be a "proper" Payment Application, the Payment Application will be returned by the District to the Contractor (along with a written document setting forth the reason(s) why the Payment Application is not proper) 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.

8.2.3. Review of Payment Applications. Upon receipt of Payment Application, the Architect, Construction Manager and Project 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 Payment Application which is properly due to the Contractor under the terms of the Contract Documents.

8.3. District's Disbursement of Progress Payments.

8.3.1. 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 Payment Application, the District will pay the Contractor ninety five percent (95%) of the value of the Work indicated in the Payment Application which is actually in place as of the date of the Payment Application and as verified and approved by the Project Inspector, Construction Manager and Architect, along with 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 Contractor's submission of a "proper" Payment Application as defined hereinabove. If a Payment Application is not "proper" due to the failure or refusal of the Contractor to comply with conditions precedent to the District's obligation to disburse a Progress Payment, or

incompleteness or inaccuracies in any such documents submitted, the thirty (30) day period for the District's timely disbursement of a Progress Payment shall commence on the date that the District is actually in receipt of documents not submitted with the Payment Application, or corrections to documents with the Payment Application so as to render them complete and accurate.

8.3.2. Untimely Disbursement of Progress Payments. Pursuant to Public Contract Code §20104.50, if the District fails to make any Progress Payment within thirty (30) days after receipt of an undisputed and proper Payment Application, the District shall pay the Contractor interest on the undisputed amount of such Payment Application equal to the legal rate of interest set forth in California Code of Civil Procedure §685.010(a).

8.3.3. District's Right to Disburse Progress Payments by Joint Checks. The District may in its sole discretion issue joint checks to the Contractor and Subcontractors or Material Suppliers in satisfaction of its obligation to make Progress Payments or the Final Payment due hereunder. The Contractor shall cooperate with the District and subcontractors/Material Suppliers in the issuance or processing of joint checks.

8.3.4. No Waiver of Defective or Non-Conforming Work. The approval of any Payment Application or the disbursement of any Progress Payment to the Contractor shall not be deemed nor constitute acceptance of Defective or Non-Conforming Work.

8.3.5. Progress Payments for Changed Work. The Contractor's Payment Applications may include requests for payment for Changes which have been authorized and approved by the District, Construction Manager, Project Inspector, Architect and all other governmental agencies with jurisdiction over such Change. Except as provided for herein, no other payment shall be made by the District for Changes.

8.3.6. Materials or Equipment Not Incorporated Into the Work. No Progress Payments will be made for materials or equipment not incorporated into the Work at the time a Payment Application is submitted.

8.3.7. Title to Work. The Contractor warrants that title to all Work covered by a Payment Application will pass to the District no later than the time of payment.

8.4. Substitute Security for Retention. Eligible and equivalent securities may be substituted for Retention at the request and expense of the Contractor pursuant to California Public Contract Code §22300. The foregoing and the provisions of California Public Contract Code §22300 notwithstanding, failure of the Contractor to request substitution of eligible and equivalent securities for Retention prior to the Contractor's submission of the first Payment Application is the Contractor's waiver of rights under Public Contract Code §22300.

8.5. Final Payment.

8.5.1. 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, Construction Manager and Project Inspector will promptly make a final inspection of the Work and when the Architect, Construction Manager and Project Inspector find the Work acceptable under the Contract Documents and that the Contractor has completed all other obligations of the Contractor, the Architect, Construction Manager and Project Inspector will 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 Contract Documents and that the Contractor is entitled to receipt of Final Payment. The Final Payment shall include the remaining balance of the Contract

Price and Retention previously withheld by the District, less offsets and deductions thereto.

8.5.2. Conditions Precedent to Disbursement of Final Payment. Submittal of the following are express conditions precedent to the District's obligation to disburse the Final Payment: (i) 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 §§8136 or 8138, with each of the same stating that there are, or will be, no claims for additional compensation after disbursement of the Final Payment; (ii) Operations and Maintenance manuals and separate warranties provided by any manufacturer or distributor of any materials or equipment incorporated into the Work; (iii) the Record Drawings; (iv) the form of Guarantee included in the Contract Documents duly executed by an authorized representative of the Contractor; (v) all other items or documents required by the Contract Documents to be delivered to the District upon completion of the Work; and (vi) written evidence of the Contractor's filing of the DSA Final Verified Report.

8.5.3. Disbursement of Final Payment. Provided that the District is then in receipt of all materials set forth in Article 8.5.2 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 fifty percent (150%) of the amount in dispute. If the Contractor complies with all of the conditions precedent to the District's disbursement of the Final Payment, except for written evidence of the Contractor's filing of the DSA Final Verified Report, the District may withhold and retain ten percent (10%) of the Final Payment in accordance with Article 4.19.9.2 of these General Conditions. In such event, provided that the Contractor has fully complied with and satisfied all other conditions precedent set forth in Article 8.5.2, the District will disburse the remaining balance of the Final Payment to the Contractor; such disbursement shall constitute the District's full and complete performance of payment obligations to the Contractor hereunder.

8.5.4. 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.

8.5.5. Claims Asserted After Final Payment. Any stop payment notice or other claim filed or asserted after the Contractor's acceptance of the Final Payment by any Subcontractor, Material Supplier or others in connection with or for Work is the sole and exclusive responsibility of the Contractor who shall indemnify, defend and hold harmless the Indemnified Parties from and against any claims, demands or judgments arising or associated therewith, including without limitation attorneys' fees.

8.6. Withholding of Payments. The District may withhold and retain the Contract Price, in whole or in part, on account of: (i) uncorrected Defective or Non-Conforming Work; (ii) failure of the Contractor to make payments when due laborers, Subcontractors or Material Suppliers; (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; (iv) 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, including any amounts due from the Contractor to the District under the Contract Documents; or (vii) the Contractor's failure to perform any of its obligations under the Contract Documents, 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 Construction Manager, Project Inspector, 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. The foregoing notwithstanding, if the District withholds: (i) ten percent (10%) of the Final Payment pursuant to Articles 4.19.9.2 and 8.5.3 of these General Conditions; or (ii) any amount incurred to complete an obligation of the Contractor hereunder, the Contractor shall not be entitled to receipt or payment of any portion of such withholdings.

8.7. Payments to Subcontractors. The Contractor shall pay all Subcontractors on account of Work performed by Subcontractors in accordance with the terms of their respective subcontracts and pursuant to Business & Professions Code §7108.5 and Public Contract Code §7201.

9. Changes

9.1. Changes to the Work. The District, at any time, by written order, may make Changes within the general scope of the Work or issue additional instructions, require additional Work or direct deletion of Work. The Contractor shall not proceed with any Change without prior written authorization from the District. The Contractor shall promptly commence and diligently complete any District authorized Change; the Contractor shall not be relieved or excused from its prompt commencement and diligent completion of any Change authorized by the District due to the inability of the Contractor and the District to agree upon the adjustment to the Contract Time or the Contract Price on account of such Change. The issuance of a Change Order in connection with any Change authorized by the District is not a condition precedent to Contractor's obligation to promptly commence and diligently complete any Change authorized by the District hereunder. The District's right to make Changes shall not invalidate the Contract nor relieve the Contractor of its obligations under the Contract Documents. Any requirement of notice of Changes to the Surety shall be the responsibility of the Contractor. Changes shall be subject to DSA approval.

9.2. Contractor Notice of Oral Order of Change in the Work. Any oral order, direction, instruction, interpretation, or determination (collectively "Instruction Order") from the District, Construction Manager, Project Inspector or Architect which Contractor believes is a change to the Work, or requires an adjustment to the Contract Price or the Contract Time, shall be treated as a Change only if the Contractor gives the Architect, Construction Manager and Project Inspector written notice within ten (10) days of the Instruction Order and prior to acting in accordance therewith. Time is of the essence in Contractor's written notice pursuant to the preceding sentence and the Contractor acknowledges that its failure to give written notice within ten (10) days of the date of an Instruction Order is deemed Contractor's waiver of any right to adjustment of the Contract Time or the Contract Price on account of such Instruction Order. 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 Instruction Order that the Contractor regards as a Change. Unless the Contractor acts in strict accordance with this procedure, no Instruction

Order shall not be treated as a Change and the Contractor waives any adjustment to the Contract Price or the Contract Time on account thereof.

9.3. Contractor Submittal of Data. Within thirty (30) days after receipt of a written order directing a Change or furnishing the written notice regarding any Instruction Order, the Contractor shall submit to the Architect, Project Inspector, Construction Manager and District a detailed written statement setting forth the general nature of the Change, the amount of any adjustment to the Contract Price on account thereof, properly itemized and supported by sufficient substantiating data to permit evaluation of the same, and the extent of adjustment of the Contract Time, if any, required by such Change. No claim or adjustment to the Contract Price or the Contract Time shall be allowed if not asserted by the Contractor in strict conformity herewith or if asserted after Final Payment is made.

9.4. Adjustment to Contract Price on Account of Changes to the Work. Adjustments to the Contract Price due to Changes in the Work shall be determined by application of one of the following methods, in the following order of priority:

9.4.1. Mutual Agreement. By negotiation and mutual agreement, on a lump sum basis, between the District and the Contractor on the basis of the estimate of the actual and direct increase or decrease in costs on account of the Change. Upon request of the District or the Architect, the Contractor shall provide a detailed estimate of increase or decrease in costs directly associated with performance of the Change along with cost breakdowns of the components of the Change and supporting data and documentation.

9.4.2. Determination by the District. By the District, whether or not negotiations are initiated pursuant to Article 9.4.1 above, based upon actual and necessary costs incurred by the Contractor as determined by the District. If the procedure set forth in this Article 9.4.2 is utilized to determine the extent of adjustment to the Contract Price on account of Changes to the Work, promptly upon determining the extent of adjustment to the Contract Price, the District shall notify the Contractor in writing of the same; the Contractor shall be deemed to have accepted the District's determination of the amount of adjustment to the Contract Price on account of a Change to the Work unless Contractor shall notify the District, Architect and Construction Manager, in writing, not more than fifteen (15) days from the date of the District's written notice, of any objection to the District's determination. Failure of the Contractor to timely notify the District, Architect and Construction Manager of Contractor's objections to the District's determination of the Contract Price adjustment is deemed Contractor's acceptance of the District's determination and a waiver of any right of the Contractor to thereafter protest or otherwise object to the District's determination. Notwithstanding any objection of the Contractor to the District's determination of the adjustment to the Contract Price pursuant to this Article 9.4.2, Contractor shall promptly commence and diligently complete any such Change.

9.4.3. Basis for Adjustment of Contract Price. If Changes in the Work require an adjustment of the Contract Price pursuant to Articles 9.4.1or 9.4.2 above, the basis for adjustment of the Contract Price shall be as follows:

9.4.3.1. Labor. The Contractor shall be compensated for the costs of field labor actually and directly utilized in the performance of the Change. Labor costs shall be limited to field labor for labor classification(s) necessary to perform the Change. Use of a labor classification which increases labor costs associated with any Change shall not be permitted. Labor costs shall exclude costs incurred by the Contractor in preparing estimate(s) of the costs of the Change, in the maintenance of records

relating to the costs of the Change, coordination and assembly of materials and information relating to the Change or performance thereof, or the supervision and other overhead and general conditions costs associated with the Change or performance thereof.

9.4.3.2. Materials and Equipment. Contractor shall be compensated for the costs of materials and equipment necessarily and actually used or consumed in connection with the performance of Changes. Costs shall be the then lowest wholesale price at which identical or similar materials/equipment are available in the quantities required to perform the Change. The District may furnish materials and/or equipment for Changes, in which event the Contractor shall not be compensated for any mark-up thereon.

9.4.3.3. Construction Equipment. The Contractor shall be compensated for the actual cost of the necessary and direct use of Construction Equipment in the performance of Changes in increments of fifteen (15) minutes. No costs or compensation shall be allowed for time while Construction Equipment is inoperative, idle or on standby, for any reason. The Contractor shall not be entitled to compensation for Construction Equipment or tools used for Changes with a replacement value of $500.00 or less. Construction Equipment costs shall not exceed rental rates established by construction equipment rental agencies in the locality of the Site. The allowable rate for Construction Equipment includes compensation for rental costs, fuel, power, oil, lubrication, supplies, necessary attachments, repairs or maintenance of any kind, depreciation, storage, insurance, labor (exclusive of labor costs of the Construction Equipment operator), and any all other costs incidental to the use of such Construction Equipment.

9.4.4. Mark-up on Costs of Changes to the Work. The allowance for mark-ups on the costs of the Change for all overhead (including home office, supervision and field overhead costs, including personnel costs; labor burdens on personnel costs; insurance premiums), general conditions costs and profit associated with the Change shall not exceed the percentage set forth in the Special Conditions, regardless of the number of Subcontractors performing any portion of any Change. If a Change reduces the Contract Price, no profit, general conditions or overhead costs shall be paid by the District to the Contractor for the reduced or deleted Work; the Contract Price shall be reduced by the actual cost for the reduced or deleted Work multiplied by the percentage set forth in the Special Conditions for mark-ups on the cost of a Change adding to the scope of the Work.

9.4.5. Contractor Maintenance of Records. If the Contractor is directed to perform any Change pursuant to Article 9.1 or 9.2, the Contractor shall maintain detailed separate records on a daily basis for each separate Change. Such records shall include without limitation hourly records for labor and Construction Equipment and itemized records of materials and equipment used that day in connection with any Change to the Work. Subcontractors shall maintain records in accordance with this Article. Each daily record maintained hereunder shall be signed by Contractor's Superintendent/Subcontractor's Superintendent and shall incorporate a statement that all information contained therein is true, accurate, complete and relates only to the Change referenced therein. All records maintained hereunder shall be subject to inspection, review and/or reproduction by the District, Architect, Construction Manager or Project Inspector upon request. If the Contractor fails or refuses, for any reason, to maintain or make available for inspection, review and/or reproduction such records and the adjustment to the Contract Price on account of any Change to the Work is determined by the District, the District's reasonable good faith

determination of the adjustment to the Contract Price on account of such Change shall be final, conclusive and binding upon the Contractor. The Contractor's obligation to maintain records hereunder is in addition to, and not in lieu of, other Contractor obligations relating to Changes to the Work.

9.5. Adjustment to Contract Time. If any Change(s) are authorized by the District, the Contract Time shall be extended or reduced by Change Order for a period of time commensurate with the time reasonably necessary to perform such Change

9.6. Addition or Deletion of Alternate Bid Item(s). If the Bid for the Work includes proposal(s) for Alternate Bid Item(s), during performance of the Work, the District may elect, 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 they 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 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.

9.7. 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: (i) be deemed 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; (ii) incorporate adjustments to the Contract Time; and (iii) constitute the Contractor's waiver of rights of rights under Civil Code §1542. 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. The Contractor shall not modify or amend the form or content of such Change Order, or any portion thereof; attempted or purported modifications or amendments are not binding upon the District and are null, void and unenforceable. Change Orders shall be binding upon the District only upon action of the District's Board of Trustees approving and ratifying such Change Order.

9.8. Unilateral Change Order. A Unilateral Change Order is a written Change Order issued by or on behalf of the District before the Contractor and District have agreed on the extent of adjustment of the Contract Time or the Contract Price relating to the Change reflected in a Unilateral Change Order. A Unilateral Change Order shall describe the scope and nature of the Change and set forth the adjustment to the Contract Time and Contract Price, if any. Any Unilateral Change Order issued hereunder shall be binding upon the District and Contractor upon action of the District's Board of Trustees to ratify or approve such Unilateral Change Order. The objections, if any, of the Contractor to the extent of adjustment of the Contract Time or the Contract Price on account of the Change(s) incorporated into a Unilateral Change Order shall be submitted in writing by the Contractor to the District, Construction Manager and Architect not more than five (5) days after the date of the District's Board of Trustees action to approve or ratify a Unilateral Change Order. If the Contractor does not submit written objections to a Unilateral Change Order within five (5) days after the District's Board of Trustees approval/ratification of the Unilateral Change Order shall be deemed the Contractor's acceptance of the Contract Time and/or Contract Price adjustment set forth in a Unilateral Change Order for the Changes described therein and the Contractor shall be deemed to have knowingly waived any right to seek additional adjustments of the Contract Time or the Contract

Price on account of Change(s) incorporated into such a Unilateral Change Order.

9.9. Construction Change Directive. A Construction Change Directive is a written instrument issued by or on behalf of the District directing a Change to the Work prior to the Contractor and District reaching full agreement on an adjustment of the Contract Time and/or Contract Price on account of such Change. The Contractor shall promptly commence and diligently complete any Change to the Work subject to a Construction Change Directive issued hereunder. The issuance of a Change Order in connection with any Construction Change Directive is not a condition precedent to Contractor's obligation to promptly commence and diligently complete a Construction Change Directive. Upon completion of a Construction Change Directive, if the Contractor and District have not agreed on the adjustment of Contract Time and/or Contract Price, the District shall issue a Unilateral Change Order for such Construction Change Directive.

9.10. Contractor Notice of Changes. If the Contractor claims 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 ("Potential Changes"), the Contractor shall notify the Project Inspector, Construction Manager and 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 Potential Changes. 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, Project Inspector and Architect. Time is of the essence in Contractor's written notice pursuant to the preceding so that the District can promptly investigate and consider alternative measures to the address such Potential Changes. 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 Potential Changes 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 Potential Changes.

9.11. Disputed Changes. If any dispute or disagreement between the Contractor and the District or the Architect regarding the characterization of any item as a Change 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, subject to a subsequent resolution of such dispute or disagreement in accordance with the terms of the Contract Documents.

9.12. 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 not inconsistent with the intent of the Contract Documents. Such Changes shall be effected by written order and shall be binding on the District and the Contractor.

9.13. 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 in strict conformity with the Contract Documents 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.

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 Work 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 in strict conformity with the Contract Documents shall be deemed a waiver of the same.

10.2. District's Coordination of Separate Contractors. The District shall coordinate the activities of the District's own forces and separate contractor(s) 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 Accepted Construction Schedule 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 of the District with a reasonable opportunity for storage of their materials and equipment and performance of their activities at the Site.

10.4. Discrepancies or Defects. If any part of the Work depends for proper execution or results upon construction or operations by the District or a separate contractor to the District, the Contractor shall, prior to proceeding with that portion of the Work, promptly report to the Architect, Construction Manager and Project Inspector any discrepancies or defects in such other construction that renders it unsuitable for such proper execution and results.

11. Tests; Inspections; Observations

11.1. Contractor's Notice. If the Contract Documents, Laws or any public authority with jurisdiction over the Work require the Work, or any portion thereof, to be specially tested, inspected or approved, the Contractor shall give the Architect, Construction Manager and Project 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 any portion of the Work subject to tests, inspection or approval is 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.

11.2. Cost of Tests and Inspections. The District will pay for fees, costs and expenses for the initial tests/inspections of materials/equipment which are conducted at the Site or locations within a one hundred (100) mile radius of the Site or at the pre-fab modular facility. All fees, costs or expenses for subsequent tests/inspections or for tests/inspections conducted at a location more than a one hundred (100) mile radius from the Site (including without limitation, travel and travel-related expenses) shall be borne solely and exclusively by the Contractor.

11.3. 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 or the Laws. Tests and inspections required of the Work shall be as set forth in the Contract Documents and as required by the Laws, including without limitation, Title 24 of the California Code of Regulations. Test/inspection standards shall be as set forth in the Contract Documents or established by the Laws. 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 Project Inspector, Construction Manager or Architect and not by the Contractor.

11.4. Additional Tests, Inspections and Approvals. If the Architect, Construction Manager, Project Inspector or public authorities having jurisdiction over any portion of the Work require additional

testing, inspection or approval, the Architect, Project Inspector or Construction Manager will 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, Construction Manager and Project Inspector of when and where tests and inspections are to be made so the Construction Manager, Project Inspector and 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 services, the Architect or its consultants, the Construction Manager and Project Inspector in connection therewith.

11.5. 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, Project Inspector and Construction Manager.

11.6. 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. The Contractor shall be liable for delays to completion of the Work if the Contractor fails coordinate and timely schedule required tests, inspections or observations of the Work.

12. Uncovering and Correction of Work

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

12.2. Rejection of Work. Defective or Non-Conforming Work may be rejected by the District, Construction Manager, Architect or Project Inspector. The Contractor shall correct such rejected Work without 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 Project Inspector or even if they failed to observe the Defective or Non-conforming Work.

12.3. Correction of Work. The Contractor shall promptly correct any portion of the Work rejected by the District, Construction Manager, Architect or Project Inspector as Defective or Non-Conforming Work, 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 Work, whether completed or partially completed.

12.4. 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.

12.5. Failure of Contractor to Correct Work. If the Contractor fails to commence to correct Defective or Non-Conforming Work within three (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 and at the expense of the Contractor.

12.6. Acceptance of Defective or Non-Conforming Work. The District may, in its sole and exclusive discretion, elect to accept Defective or Non-Conforming Work instead of requiring its removal and correction, in which case the Contract Price shall be equitably reduced.

13. Warranties

13.1. Workmanship and Materials. The Contractor warrants to the District that: (i) all materials and equipment furnished under the Contract Documents are new, of good quality and of the most suitable grade and quality for the purpose intended, unless otherwise specified in the Contract Documents; and (ii) all Work and workmanship is 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 or Non-Conforming Work and subject to repair, replacement or other remedial action by the Contractor to render such work in accordance the Contract Documents. The Contractor expressly warrants the merchantability, the fitness for use, and quality of all Work; such warranty of the Contractor in addition, and not in lieu of, any warranty given by the manufacturer or supplier of such item.

13.2. Warranty Work. If, within one (1) year after the date of Final Acceptance, or such other time frame set forth elsewhere in the Contract Documents, any Work is Defective, Non-Conforming, 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 within seven (7) days after receipt of a written notice from the District to do so, and to thereafter diligently complete the same. If the Contractor fails or refuses 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, the District may, in the sole discretion of the District: (i) cause such corrective Work to be performed and completed; or (ii) upon notice and demand to the Performance Bond Surety, require the Surety to complete corrective work. If the District elects to complete corrective work under (i) above, the Contractor and the 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. The obligations of the Contractor hereunder are 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 incorporated into the Work, or otherwise recognized, prescribed or imposed by the Laws. Neither the District's Final Acceptance, the making of Final Payment, nor the use or occupancy of the Work, in whole or in part, by District shall 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 Contractor' warranty and guaranty obligations hereunder shall survive the Contractor's completion of Work under the Contract Documents, the District's Final Acceptance or the termination of the Contract.

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. If the District directs 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; or (ii) that an equitable adjustment is made or denied under another provision of the Contract Documents. The term "direct cost of performance of the Work" as used in the preceding sentence shall be limited to: (i) increased costs of materials or equipment incorporated into the Work or required to complete the Work; and (ii) the costs of general conditions items/services (excluding project management/supervision) during the period of District directed suspension of the Work which are proximately caused by the District directed suspension of Work. The term "direct cost of performance of the Work" shall exclude costs (including home office costs) arising out of or related to delay, hindrance, disruption of Work, loss of productively, inefficiencies or other similar consequences of District directed suspension. Adjustment of the Contract Price for District directed suspension of work 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. If the District directs suspension of the Work, the Contract Time shall be equitably adjusted to reflect the duration of the District's suspension of the Work.

15. Termination

15.1. Termination for Cause.

15.1.1. District's Right to Terminate. The District may terminate the Contract by written notice to the Contractor and the Surety upon the occurrence of any one or more of the following events of the Contractor's default: (i) the Contractor refuses or fails to prosecute the Work with diligence to achieve Substantial Completion of the Work within the Contract Time; (ii) the Contractor fails to achieve Substantial Completion of the Work within the Contract Time; (iii) 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; (iv) the Contractor repeatedly fails to supply sufficient skilled workmen or sufficient quantities of suitable materials or equipment; (v) the Contractor repeatedly fails to make payments to any Subcontractor, Material Suppliers or others for labor, materials or equipment furnished in connection with the Work; (vi) the Contractor disregards the Laws or other requirements of any public entity having jurisdiction over the Work; (vii) the Contractor disregards proper directives of the Architect, Construction Manager, Project Inspector or District; (viii) the Contractor performs Work which deviates from requirements of the Contract Documents and fails or refuses to correct such Work; or (ix) the Contractor otherwise violates in any material way any provisions or requirements of the Contract Documents. 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 the Laws.

15.1.2. District's Rights Upon Termination. If 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 other items at or about the Site, and use the same to the full extent they could be used by the Contractor without liability to the Contractor. The District shall have the sole discretion as to the manner, methods, and reasonableness of the costs of completing the Work; the District shall not be required to obtain the lowest price for completion of the Work. If the District takes bids for completion of the Work, the Contractor is not eligible for award of such contract(s).

15.1.3. Completion by the Surety. If the Contract is terminated pursuant to this Article 15.1, the District may demand that the Surety take over and complete the Work, in which case the rights and obligations of the District and the Surety shall be as set forth in the Performance Bond. The Contractor shall not be retained, designated or contracted by the Surety to complete 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 therefor, the District may take over the Work and prosecute it to completion as provided for above, provided that such action of the District shall not operate to modify, diminish or otherwise affect the liability of the Surety or Contractor to the District under the Contract Documents, Performance Bond or the Laws.

15.1.4. Assignment and Assumption of Subcontracts. Upon termination pursuant to the foregoing, 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/or assign the Subcontract or Purchase Order to the District or such other person or entity designated by the District.

15.1.5. Costs of Completion. In the event of termination under this Article 15.1, the Contractor shall not 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 the Surety shall be jointly and severally liable for payment of the difference to the District.

15.1.6. Conversion to Termination for Convenience. If 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.

15.1.7. District's Rights Cumulative. If 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 the Laws or under the Contract Documents.

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 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.

16. Miscellaneous

16.1. Governing Law; Interpretation. This Contract shall be governed by and interpreted pursuant to the laws of the State of California. The titles used in the Contract Documents are for convenience of reference only shall have no effect upon the 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. 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. 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.

16.2. Successors and Assigns. Unless 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.

16.3. Cumulative Rights and Remedies; No Waiver. Duties and obligations imposed by the Contract Documents and rights or 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 the Laws. 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 the Laws nor shall such an action or failure to act constitute approval of or acquiescence in a breach hereunder.

16.4. Severability. If any provision of the Contract Documents is 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.

16.5. No Assignment by Contractor. The Contractor shall not assign the Contract or any obligation of the Contractor thereunder, in whole or in part, without the express prior written consent and approval of the District, which may be granted, conditioned or withheld in the sole and exclusive discretion of the District.

16.6. Time of Essence. Time is of the essence in the Contractor's performance of its obligations under the Contract Documents.

16.7. Independent Contractor Status. The Contractor is an independent contractor to the District and not an agent or employee of the District.

16.8. Notices. Notices under the Contract Documents shall be delivered by United States Mail, Certified, Return Receipt Requested with postage fully prepaid or by email. Notices delivered by United States Mail shall be deemed effective the third (3rd) working day after the postmark date. Notices delivered by email before 12:00 PM on District workdays shall be deemed effective four (4) hours after delivery to the recipient's email server. Emails delivered to the recipient's email server after 12:00 PM on a District work day or on District holiday days shall be deemed effective as of 12:00 PM the ensuing workday. The recipients and addresses for notices may be modified by the Parties by notice to the other. Notices shall be addressed as set forth in the Agreement.

16.9. 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 or the Work, 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.

16.10. Dispute/Claims Resolution.

16.10.1. Public Contract Code §9204 Claims Resolution Procedures. Claims of the Contractor are subject to the non-binding dispute resolution procedures set forth in Public Contract Code §9204 ("Section 9204") provided, however, that the Contractor's initiation of Section 9204 procedures is expressly subject to the Contractor's prior full and timely compliance with requirements and procedures of the Contract Documents relating to procedures for resolution of claims, change orders, disputes and other matters in controversy under the Contract Documents.

16.10.2. Claim Defined. The term "Claim" shall be as defined in Section 9204.

16.10.3. Claim Documentation. The Contractor shall furnish reasonable documentation to support each Claim. "Reasonable documentation" includes, without limitation: (i) contractual and legal basis establishing Claim entitlement or merit; (ii) factual basis establishing District liability for the Claim; (iii) detailed breakdown of labor, materials, equipment and other costs included in the Claim; and (iv) detailed basis, including Construction Schedule analysis and fragnets supporting any Contract Time adjustment or Liquidated Damages relief included in the scope of a Claim.

16.10.4. District Claim Review Statement. Within forty five (45) days (or such other time mutually agreed to by the District and the Contractor) after receipt of a properly submitted and properly documented Claim, the District will conduct a reasonable review of the Claim and provide the Contractor with a written statement identifying the disputed and undisputed portions of the Claim ("Claim Review Statement"). If the District does not provide the Contractor with the Claim Review Statement for any Claim within forty five (45) days (or other time mutually agreed to by the District and the Contractor) after receipt of a properly submitted and properly documented Claim, the Claim is deemed rejected in its entirety and thereupon, the Contractor may initiate the Meet and Confer process described below. A Claim deemed rejected pursuant to the foregoing does not constitute an adverse finding of Claim merit or the Contractor's responsibility or qualifications. If the Claim Review Statement identifies any undisputed portion of a Claim ("Undisputed Claim") and payment is due from the

District on the Undisputed Claim, the District shall process and make payment on the Undisputed Claim within sixty (60) days after the issuance date of the Claim Review Statement.

16.10.5. Meet and Confer.

16.10.5.1. Meet and Confer Demand. If the Contractor disputes any portion of the Claim Review Statement, or if a Claim is deemed rejected by the District, the Contractor may demand an informal meet and confer with the District for settlement of the issues in dispute ("Meet and Confer"). The Contractor's Meet and Confer request must be submitted to the District: (i) in writing; (ii) by registered mail or certified mail, return receipt requested; and (iii) within ten (10) days after the Claim Review Statement is submitted to the Contractor or within ten (10) days after the date the Claim is deemed rejected, as applicable. Failure of the Contractor to strictly comply with the foregoing is deemed a waiver of the Contractor's right to request the Meet and Confer and the Non-Binding Mediation procedures under Section 9204. If the Contractor strictly complies with the foregoing, the District will schedule the Meet and Confer conference within thirty (30) days of the Contractor's Meet and Confer request.

16.10.5.2. Meet and Confer Statement. Within ten (10) business days after conclusion of the Meet and Confer conference, if any portion of a Claim remains disputed, the District shall provide the Contractor a written statement identifying the disputed and undisputed portions of the Claim ("Meet and Confer Statement"). If the Meet and Confer Statement identifies any Undisputed Claim and payment is due from the District on the Undisputed Claim, the District shall process and make payment on the Undisputed Claim within sixty (60) days after date the Meet and Confer Statement is issued.

16.10.6. Non-Binding Mediation.

16.10.6.1. Contractor Initiation. The Contractor may request nonbinding mediation ("Mediation") of disputed portions of a Claim identified in the Meet and Confer Statement. The Contractor's Mediation demand must be submitted to the District: (i) in writing; (ii) by registered mail or certified mail, return receipt requested; (iii) within ten (10) days after the Meet and Confer Statement is submitted to the Contractor; and (iv) with specific identification of the disputed Claims issues subject to Mediation. Failure of the Contractor to strictly comply with the foregoing is deemed a waiver of the Contractor's right to demand Mediation procedures under Section 9204.

16.10.6.2. Mediator Selection. The District and Contractor shall mutually agree to a mediator within ten (10) business days after the date of the Contractor's demand for Mediation. If the District and Contractor do not mutually agree to a mediator, the District and Contractor shall each select a mediator and the District/Contractor selected mediators shall select a qualified neutral third party to mediate the disputed portion of the Claim.

16.10.6.3. Mediation Procedures. Mediation includes any nonbinding process, including, but not limited to, neutral evaluation or a dispute review board, in which an independent third party or board assists the District and Contractor in dispute resolution through negotiation or by issuance of an evaluation.

16.10.6.4. Mediation Costs. All costs, fees and expenses of the mediator(s) and mediation administration shall be shared equally by the District and Contractor. The foregoing notwithstanding, the Contractor and District shall each bear the costs,

fees and expenses of their own attorneys, experts and consultants.

16.10.6.5. Post-Mediation Disputed Claims. Any Claims issues in dispute after Mediation shall be resolved in accordance with the applicable provisions of the Contract Documents.

16.10.6.6. Waiver. The District and Contractor may mutually agree to waive, in writing, Mediation under Section 9204 and subject to the Contractor's compliance with Government Code Claim requirements, proceed directly to commencement of a civil action or binding arbitration.

16.10.7. Payments of Undisputed Claims. If a payment due from the District for Undisputed Claims identified in the Claim Review Statement or the Meet and Confer Statement is not made within the time established under Section 9204 the overdue portion of such payment shall bear interest at the rate of seven percent (7%) per annum from the date due. The District's credit application of any amount due for an Undisputed Claim against amounts due from the Contractor under the Contract Documents shall be deemed payment of the Undisputed Claim.

16.10.8. Subcontractor Claims.

16.10.8.1. Subcontractor Claim Submittal. If a Subcontractor, of any tier (collectively "Subcontractor") lacks legal standing to assert a Claim against the District because privity of contract does not exist, the Contractor may present the District a Claim on behalf of the Subcontractor ("Subcontractor Claim"). Each Subcontractor requesting submittal of a Subcontractor Claim to the District shall furnish reasonable documentation to support the Subcontractor Claim. Within forty-five (45) days of receipt of a Subcontractor's written request to submit a Subcontractor Claim, the Contractor shall notify the Subcontractor in writing as to whether the Contractor presented the Subcontractor Claim to the District. If the Contractor did not present the Subcontractor Claim, the Contractor shall provide the Subcontractor with a statement of the reasons for not having done so.

16.10.8.2. Contractor Certification of Subcontractor Claim. The District's review of Subcontractor Claims is expressly subject to the Contractor's submittal of a duly completed and executed form of Contractor Certification of Subcontractor Claim certifying that the Contractor has thoroughly reviewed the Subcontractor Claim and based on the Contractor's review, certify that: (i) the Subcontractor Claim is made by the Subcontractor in good faith; (ii) the Subcontractor Claim is supported by reasonable documentation establishing entitlement to the relief requested and District liability therefor; and (iii) the Subcontractor Claim does not incorporate any request constituting a False Claim under applicable law, including the California False Claim Act (Government Code §12650 et seq). The form of Contractor Certification of Subcontractor Claim is included in the Contract Documents.

16.10.8.3. District Review of Subcontractor Claim. Subcontractor Claims presented by the Contractor to the District are subject to the Section 9204 non-binding dispute resolution procedures set forth above, as modified herein. Requests for the District to conduct Meet and Confer and/or non-binding mediation procedures must be submitted jointly by the Contractor and the Subcontractor submitting the Subcontractor Claim. If Mediation proceedings are initiated in connection with a Subcontractor Claim, mediator and mediation administration fees and costs shall be borne equally by the District, Contractor and Subcontractor.

16.10.8.4. Disputed Subcontractor Claims. Subcontractor Claims which are not fully resolved by the Section 9204 non-binding dispute resolution procedures shall be resolved

by Section 20104.4 Dispute Resolution Procedures or binding arbitration, as applicable. Commencement of Section 20104.4 Dispute Resolution Procedures or binding arbitration proceedings in connection with any Subcontractor Claim is subject to compliance with Government Code Claims requirements.

16.11. Government Code Claim Requirements. Pursuant to Government Code §930.6, any claim, demand, dispute, disagreement or other matter in controversy asserted by the Contractor, whether on behalf of itself or a Subcontractor, against the District for money or damages, including without limitation Claims or portions thereof remaining in dispute after completion of the Section 9204 non-binding dispute resolution procedures described above are deemed a "suit for money or damages" and shall be subject to the provisions of Government Code §§945.4, 945.6 and 946 ("Government Code Claims Process"). An express condition precedent to the Contractor's initiation of Section 20104.4 Dispute Resolution Procedures or binding arbitration proceedings pursuant to the following is the Contractor's compliance with the Government Code Clams Process, including without limitation, presentation of the claim, demand, dispute, disagreement or other matter in controversy between the Contractor and the District seeking money or damages to the District and acted upon or deemed rejected by the District in accordance with Government Code §900, et seq.

16.12. Section 20104.4 Dispute Resolution Procedures; Claims Less Than $375,000. Any Claim, or portion thereof, in dispute after completion of the Section 9204 non-binding dispute resolution procedures and the Government Code Claims Process which is equal to or less $375,000 shall be resolved in accordance with the civil action procedures established in Public Contract Code §20104.4. Unless otherwise agreed to by the District and the Contractor in writing, the mediation conducted pursuant to Section 9204 procedures shall excuse any further obligation under Section 20104.4 to mediate after litigation has been commenced.

16.13. Binding Arbitration of Claims Exceeding $375,000.

16.13.1. AAA Arbitration. Any Claim, or portion thereof in dispute after completion of the Section 9204 procedures and the Government Code Claims Process which exceeds $375,000 and 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 binding arbitration conducted before a retired judge 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 JAMS closest to the Site.

16.13.2. Demand for Arbitration. 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. If more than one Demand for Arbitration is filed by either the District or the Contractor relating to the Work or the Contract Documents, all Demands for Arbitration 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).

16.13.3. Discovery. 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.

16.13.4. Arbitration Award. The award rendered by the Arbitrator(s) ("Arbitration Award") shall be final and binding upon the District and the Contractor only if the Arbitration Award is: (i) supported by substantial evidence; (ii) based on applicable legal standards in effect that the time the Arbitration Award is issued; and (iii) supported by written findings of fact and conclusions of law in conformity with California Code of Civil Procedure §1296. Any Arbitration Award that does not conform to the foregoing is invalid and unenforceable. The District and Contractor hereby expressly agree that the Court shall, subject to California Code of Civil Procedure §§1286.4 and 1296, vacate the Arbitration Award if, after review, the Court determines either that the Arbitration Award does not fully conform to the foregoing. The confirmation, enforcement, vacation or correction of an arbitration award rendered hereunder shall be made by 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.

16.13.5. Arbitration Fees and Expenses. The expenses and fees of the Arbitrator(s) shall be divided equally among all of 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 costs or expenses 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. By this arbitration provision, the District and the Contractor acknowledge and agree that neither shall recover from the other any attorney's fees 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. The limited exceptions in the Contract Documents that provide attorney's fees for specific issues shall neither be construed as applying to this arbitration provision under California Civil Code § 1717(a) nor be deemed to be "authorized by the Laws."

16.13.6. Limitation on Arbitrator. The Superior Court for the State of California for the County in which the Project Site is situated has the sole and exclusive jurisdiction, and an arbitrator has no authority, to hear and/or determine a challenge to the commencement or maintenance of an arbitration proceeding on the grounds that: (i) the subject matter of the arbitration proceeding is barred by the applicable statute of limitations; (ii) the subject matter of the arbitration proceeding is barred by a provision of the California Government Claims Act; (iii) the subject matter of the arbitration proceeding is outside the scope of the arbitration clause; (iv) the Contractor has failed to satisfy all conditions precedent to commencement or maintenance of ab arbitration proceeding; (v) waiver of the right to compel arbitration; (vi) grounds exist for the revocation of the arbitration agreement; and/or, (vii) there is the prospect that a ruling in arbitration would conflict or potentially with a ruling in a pending proceeding regarding the Project on a common issue of law or fact.

16.13.7. Inapplicability to Bid Bond. The arbitration proceedings described above are not 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.

16.14. Attorneys' Fees. Except as expressly provided for in the Contract Documents, or authorized by the Laws, neither the District nor the Contractor shall recover from the other any attorneys' 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.

16.15. Provisions Required by the Laws Deemed Inserted. Each and every provision of the Laws and clause required by the Laws 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.

16.16. Days. Unless otherwise expressly stated, references to "days" in the Contract Documents are calendar days.

16.17. 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.

[END OF SECTION]

SPECIAL CONDITIONS

1. Application of Special Conditions. These Special Conditions form a part of the Contract Documents for the Work generally described as: **STUDENT HOUSING**

2. Liquidated Damages. The per diem rate of Liquidated Damages for delayed Substantial Completion, delayed submission of Submittals and delayed completion of Punchlist shall be as set forth herein.

   2.1. Delayed Substantial Completion. If Substantial Completion is not achieved within 735 days after commencement date of contact time established in the NTP, the Contractor shall be liable to the District for Liquidated Damages from the date of expiration of the Contract Time to the date that the Contractor achieves Substantial Completion of the Work at the per diem rate of Five Thousand Dollars ($ 5,000.00).

   2.2. Delayed Submission of Submittals. If the Contractor fails to submit a Submittal in accordance with the Submittal Schedule, the Contractor shall be liable to the District for Liquidated Damages for each delayed Submittal at the per diem rate of Five Hundred Dollars ($ 500.00).from the date that such Submittal was due to be submitted pursuant to the Submittal Schedule and the date that the Contractor actually submits the Submittal to the Architect.

   2.3. Delayed Punchlist Completion. If the Contractor fails to complete Punchlist within the time established pursuant to the Contract Documents, the Contractor shall be liable to the District for Liquidated Damages from the date established for completion of Punchlist until the date that all Punchlist is actually completed at the per diem rate of Five Thousand Dollars ($ 5,000.00).

   2.4. Surety Liability. Subject only to limitations established by the penal sum of the Performance Bond, the Surety issuing the Performance Bond shall be liable to the District for Liquidated Damages due from the Contractor.

3. Construction Manager. The Construction Manager is Gafcon, Inc. / Volz Company

4. District Furnished Drawings and Specifications. Pursuant to Article 2.1.3 of the General Conditions, the District will furnish to the Contractor for use solely and exclusively in connection with performance of the Work zero (-0-) printed copies of the Drawings and Specifications. Additional copies of the Drawings and Specifications may be reproduced by the Contractor at its cost and expense

5. Hours and Days of Work at the Site.

   5.1. Work Hours/Days. Subject to limitations set forth elsewhere in the Contract Documents and below, the hours/days of Work at the Site are: 7am – 5pm Mondays through Fridays, 8:00am – 5:00pm on Saturday. No work on holidays and Sundays without approval from the District with a minimum of 72 hour notice.

   5.2. Limitations on Work Hours/Days. Work activities at the Site will be limited or prohibited on days: (i) devoted to student testing or when testing of students may be adversely affected by Work activities at the Site; or (ii) when other special events or functions are scheduled. The Contractor shall familiarize itself with District activities at the Site to avoid Work activity interferences or disturbances to such District activities. The Contractor's Construction Schedule shall take into account the District activities which limit or preclude Work activities at the Site.

6. Contractor Personnel Parking. Personnel of the Contractor, Subcontractors and others performing Work at the Site will be allowed to park, 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 engaged in activities and functions in and about the Site. 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.

7. Site Perimeter Fencing. The Contractor shall install a chain link fence with fabric privacy screen around the entire perimeter of the Site to prevent dust and debris being blown from the Site to adjacent areas, including without limitation, adjacent streets and residential areas. Without adjustment of the Contract Time or the Contract Price the Contractor shall maintain all fencing in good condition and clear of any graffiti or damage. The Contractor shall remove or relocate such fencing as directed by the District or the Construction Manager.

8. Facilities/Services for Project Inspector and CM. Pursuant to Article 4.14 of the General Conditions, during the Work, the Contractor shall provide/furnish the following facilities/services or other items for use by the Project Inspector for the entire duration of the Work at the Site, until Final Completion is achieved. All costs, fees, expenses or other charges for the following are included within the Contract Price.

Site Office Facility	Lockable office minimum size of 12 x 60 with at least two (2) separate offices, and two doors.
Site Office Furnishings – Project Inspector	Three (3) height adjustable standing desk, Three (3) Herman Miller Aeron Chairs, one 3 x 5 plan table, one 12" x 8' shelf for spec books, one four drawer filing cabinet, plan rack with hangars capable of holding 8 sets minimum of 30 x 42 drawings.
Site Office Furnishings – Project As-Built plan room	Eight (8) chairs, two 3 x 8 plan tables, two 12" x 8' minimum shelves, plan rack with hangars capable of holding 10 sets minimum of 30 x 42 drawings.
Site Office Equipment	Xerox printer/scanner/copier with 8.5 x 11 and 11 x 17 capability and cables required for laptop connection, six (6) 27" Dell Monitors model S2721DS or similar, Ten (10) working walkie talkies including two for the CM.
Site Office Services	Power, air conditioning, high speed wireless internet service
Site Office Consumable Materials	Ink or laser cartridges, copy paper as necessary for printer
Other Items/Services	One lockable toilet facility for Architect, CM & PI use only. Bathroom to include one (1) sink and one (1) toilet and be ADA accessible and built into the trailer, sufficient lighting, Two (2) temporary parking stalls adjacent to the trailer, weekly custodial services, clean and like new carpet and ceiling tiles, freshly painted walls and doors, cleaning supplies, One (1) new minimum 55" Dell touch Monitor mounted to the wall, One (1) standing desk.

9. District Provided Temporary Utilities. Pursuant to Article 4.3.5 of the General Conditions, during the Contractor's performance of the Work, the District will not provide the Contractor with utility services. Meters will be required to be installed by the contractor for monitoring of water, electricity, high speed internet and any other utility connected to the District systems. The Contractor will be responsible to pay the District for all utility usage based on meter reads on a quarterly basis. If the District provides any utility services for use by the Contractor: (i) the District may discontinue, limit

or condition use of such services by a Contractor if the District reasonably determines that the Contractor has wasted such utilities, and (ii) the District shall not be liable to the Contractor, nor shall the Contract Time or the Contract Price be increased if any District provided temporary utility service is discontinued or disrupted for any reason other than the District's non-payment of undisputed utility charges. If provided by the District, the Contractor may use the temporary electrical power and domestic potable water service in connection with the Work provided that: (i) the District may discontinue, limit or condition use of such services by a Contractor if the District reasonably determines that the Contractor has wasted such utilities, and (ii) the District shall not be liable to the Contractor, nor shall the Contract Time or the Contract Price be increased if any District provided temporary utility service is discontinued or disrupted for any reason other than the District's non-payment of undisputed utility charges. Notwithstanding any provision of the Contract Documents to the contrary, the Contractor shall not use District provided water supply in connection with any earthwork or grading operations; water supply for earthwork or grading operations shall be obtained by the Contractor, without adjustment of the Contract Time or the Contract Price, from an offsite source or mobile water delivery service. Further, notwithstanding the District providing a point of connection for the Contractor's telephone/data service at the Site, the Contractor is solely responsible for the payment of utility service charges therefor.

10. Mark-Ups on Changes to the Work. In the event of Changes to the Work, pursuant to Article 9 of the General Conditions, 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.

    10.1. Subcontractor Performed Changes. 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 all Subcontractors of any tier shall be Fifteen Percent (15%). In addition, 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; the foregoing mark-up shall not be applied to the Subcontractor mark-up.

    10.2. Contractor Performed Changes. 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%).

    10.3. Bond Premium Costs. In addition to the foregoing mark-ups on the direct costs of labor and materials, a bond premium expense in an amount equal to the lesser of the Contractor's actual bond premium rate of One Percent (1%) of the total actual direct costs of labor and materials (before Subcontractor and Contractor mark-ups) will be allowed.

    10.4. Exclusions From Mark-Up of Actual Costs. Mark-ups on the actual cost of materials/equipment incorporated into a Change or for purchase/rental of Construction Equipment shall not be applied to any portion of such costs which are for sales, use or other taxes arising out of the purchase of materials/equipment and/or for purchase/rental of Construction Equipment.

11. Use of Project Allowance. If the Contract Price incorporates an Allowance, use of the Allowance shall be subject to the following.

    11.1. District Authorization. The Allowance is used only as authorized by the District. If the use of the Allowance is designated in the Contract Documents for specific purposes, use of any portion of the Allowance shall be limited to the specific purposes set forth in the Contract Documents.

    11.2. Allowance Costs. If use of the Allowance is authorized by the District, the Contractor shall prepare a detailed breakdown of all costs associated with the work defined for the

Allowance. These amounts will be charged against the Allowance by Change Order, based on final detailed payment receipts and back-up as required by Architect, and will include all costs of Work performed under the defined Work scope. If required by the District, Contractor shall obtain quotes for equipment from three separate vendors and present such quotes to District for consideration and selection.

11.3. Allowance Cost Limitations. The Contract Price is inclusive of all cost of coordination, supervision, bond costs, overhead and profit, supervision, installation and all indirect costs associated with performing the Work of each Allowance. Contractor shall be permitted to charge only its direct costs to perform the Allowance Work, as indicated through documentation approved by the District.

11.4. Deductive Change Order. At project closeout, any unused Allowance shall be credited to the District by deductive Change Order. Contractor shall not deduct costs such as bond costs, overhead and profit or other indirect costs when crediting any unused Allowance.

11.5. Costs Exceeding Allowance. If the costs to complete specific Work subject to an Allowance exceeds the Allowance, costs to complete the Work exceeding the Allowance shall be incorporated into a Change Order issued in accordance with the terms of the Contract Documents.

12. Rain Days. The Contractor's Construction Schedules prepared pursuant to Article 7 of the General Conditions shall incorporate the Rain Days set forth below; there shall be no adjustment to the Contract Time on account of unusually severe weather conditions resulting from rainfall until the actual number of Rain Days exceeds the number of Rain Days set forth below. The Contractor's Construction Schedule shall incorporate the following number of Rain Days for each Calendar Month of the Contract Time:

Month	Rain Days
January	four (4)
February	four (4)
March	three (3)
April	two (2)
May	two (2)
June	none
July	none
August	none
September	none
October	two (2)
November	three (3)
December	four (4)

13. Deferred Approval Items. The following Deferred Approval Items are incorporated into and made a part of the Work: Soil Improvement final sign off by CGS, Elevator Guide Rails and Support Bracket Anchorage, Aluminum Curtainwall System and Exterior Sun Control Devices connected to the Curtainwall System, photovoltaic system support frames and connection details to the stanchions or steel frames. The Contractor is responsible for preparing all materials necessary for DSA review and approval of Deferred Approval Items without adjustment of the Contract Time or the Contract Price.

14. Contractor/Subcontractor Insurance.

14.1. OCIP. *CONTRACTOR/SUBCONTRACTOR SHOULD REFER TO THE ACTUAL POLICIES FOR DETAILS CONCERNING COVERAGE, EXCLUSIONS, AND*

LIMITATIONS. IN THE EVENT OF ANY CLAIM OR QUESTION WITH REGARD TO COVERAGE PROVIDED BY THE OCIP, THE ORIGINAL POLICIES WILL PREVAIL AS THE SOLE BINDING AGREEMENT. OCIP POLICIES AND PROJECT INSURANCE MANUAL ARE AVAILABLE UPON WRITTEN REQUEST TO THE PROGRAM ADMINISTRATOR.

14.2. Off-Site Operations and Automobile Liability. The OCIP is for the benefit of the Owner and all Enrolled Contractors/Subcontractors who have on-site employees. OCIP coverage applies only to Work performed under the contract at the Project (see Section 1.1, B for definition). All Contractors must provide their own insurance for Automobile Liability and off-site locations, labor, and operations.

Policy of Insurance	Minimum Coverage Amount
Automotive Liability	One Million Dollars ($1,000,000) per occurrence/Two Million Dollars ($2,000,000) aggregate

14.3. Excluded Parties Insurance Requirements. Each Excluded Party to the OCIP policy shall obtain and maintain the following insurance coverages with at least the minimum coverage amounts noted below. No Excluded Party or any person employed by or affiliated with an Excluded Party shall be permitted on the Site or to perform any Work at the Site until the District is in receipt of Certificates of Insurance evidencing each of the following insurance coverages in the minimum coverage amounts set forth below. The Contract Price shall not be subject to adjustment for the costs or premium charges relating to insurance policies obtained by an Excluded Party.

Policy of Insurance	Minimum Coverage Amount
Commercial General Liability Insurance	Per Occurrence: One Million Dollars ($1,000,000)
	Aggregate: Two Million Dollars ($2,000,000)
Automotive Liability	One Million Dollars ($1,000,000) per occurrence/Two Million Dollars ($2,000,000) aggregate
Workers Compensation	In accordance with the Laws
Employers Liability	One Million Dollars ($1,000,000)
Contractor's Pollution Liability (As applicable, if Subcontractor's work involves SWPPP, the removal of asbestos, the removal/replacement of underground tanks or the removal of toxic chemicals and substances)	Per Occurrence: One Million Dollars ($1,000,000)
	Aggregate: Two Million Dollars ($2,000,000)

15. Off-Road Diesel Engine Vehicles. The Contractor shall comply with California Air Resource Board regulations "ARB Regulations") governing the use of off-road vehicles with diesel fueled engines ("Regulated Vehicles") if the Work or Project involves the use of any Regulated Vehicle by the Contractor or Subcontractor of any tier.

15.1. Certificate of Reported Compliance ("CRC"). The Contractor shall verify that every Regulated Vehicle used at the Site has a current and valid Air Resources Issued CRC. Subcontracts of the Contractor must require: (i) Subcontractor use of Regulated Vehicles at the Site with valid CRCs; and (ii) any Sub-Subcontracts of the Subcontractor must require Sub-Subcontractors to use Regulated Vehicles at the Site with valid CRCs. The Contractor

is responsible to obtaining and maintaining copies of CRCs for all Regulated Vehicles used at the Site. The Contractor shall maintain copies of CRCs for all Regulated Vehicles used at the Site for three (3) years after completion of the Work. Upon request of the District, the Contractor shall provide evidence of compliance with CRC requirements for Regulated Vehicles.

15.2. Prohibit Use of Regulated Vehicle Without CRC. The Contractor shall not use, and the Contractor shall not permit any Subcontractor of any tier to use, any Regulated Vehicle at the Site that does not have a current and valid CRC. The Contractor is responsible for implementing all measures and submitting such reports required by law, rule or regulation if a Regulated Vehicle without current and valid CRC is used at the Site.

15.3. Signage Notice. If Regulated Vehicles are used at the Site for eight (8) or more calendar days, the Contractor shall post signage at such location(s) and with such content as required by 13 California Code of Regulations §2449(j)(5). The Contractor shall prepare, install and maintain such signage without adjustment of the Contract Price.

15.4. Contractor Compliance. The Contractor's compliance with ARB Regulations is a material obligation of the Contractor under the Contract Documents. The Contractor shall be solely responsible for any penalty, fine or other assessment imposed for violation of any regulation or requirement relating to use of Regulated Vehicles at the Site.

[END OF SECTION]

COMPTON COMMUNITY COLLEGE DISTRICT

STUDENT HOUSING PROJECT RE-BID

PRE-QUALIFIED BIDDERS ONLY

DIVISION 01 - GENERAL REQUIREMENTS

END OF SECTION

SECTION 010100 SUMMARY OF WORK
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 the following:
   1. Work covered by the Contract Documents.
   2. Type of the Contract.
   3. Work phases.
   4. Use of premises.
   5. Owner's occupancy requirements.
   6. Work restrictions.
   7. Specification formats and conventions.
   8. Deferred Approvals.
   9. Pollution Control.
   10. Storm Water Pollution Prevention Plan.
   11. Additional DSA requirements.

1.3 WORK COVERED BY CONTRACT DOCUMENTS

A. Project Identification: Student Housing at Compton College.

B. Project Location: 1111 E. Artesia Blvd, Compton, CA 90221

C. Owner: Compton College

D. Architect: HPI Architecture.

E. The Work consists of the following:
   1. The Work includes construction of Student Housing and as indicated on Drawings.
   2. The Work consists of two increments not withstanding increment 1 & 2, all drawings constitute the project, and it will be treated as a single project:
      1 Increment 01 Scope of Work: Demolition of existing structures and site improvements, Soil Mitigation (Deep Soil Mixing), Underground Utilities and Above Ground Utilities and Rough Grading.
      2 Increment 02: Three Story Student Housing Building which includes pre-fabricated modular residential units and site-built support spaces.

Site improvements include an accessible paths of travel, fire department access, hardscape, landscape, (5) five parking stalls for loading unloading and (1) one van accessible parking stall.

3. The intent of these drawings and specifications is that the alteration, construction, rehabilitation or reconstruction is to be in accordance with Title 24, California Code of Regulations. Should any existing conditions such as deterioration or non-complying construction be discovered which is not covered by the contract documents wherein the finished work will not comply with Title 24, California Code of Regulations, a change order, or a separate set of plans and specifications, detailing and specifying the required repair work shall be submitted to and approved by Division of the State Architect before proceeding with the repair work.

1.4 TYPE OF CONTRACT

A. Project will be constructed under a single prime lump sum contract with a schedule of values identifying all scope of work.

1.5 WORK PHASES

A. The Work shall be conducted in single phase.

1.6 USE OF PREMISES

A. General: Contractor shall have limited use of premises for construction operations as indicated on Drawings by the Contract limits.

B. Use of Site: Limit use of premises to work in areas indicated. Do not disturb portions of Project site beyond areas in which the Work is indicated.
   1. Owner Occupancy: Allow for Owner occupancy of Project site and use by the public.
   2. Driveways and Entrances: Keep driveways loading areas, and entrances serving premises clear and available to Owner, Owner employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials.
      a. Schedule deliveries to minimize use of driveways and entrances.
      b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.
      c. Obtain and pay for the use of additional storage or work areas needed for operations.

1.7 OWNER'S OCCUPANCY REQUIREMENTS

A. Owner Occupancy of Completed Areas of Construction: Owner reserves the right to occupy and to place and install equipment in completed areas of building, before Substantial Completion, provided such occupancy does not interfere with completion of the Work. Such placement of equipment and partial occupancy shall not constitute acceptance of the total Work.
   1. Architect will prepare a Certificate of Substantial Completion for each specific portion of the Work to be occupied before Owner occupancy.
   2. Obtain DSA authorization from authorities having jurisdiction before Owner occupancy.
   3. Before partial Owner occupancy, mechanical and electrical systems shall be fully operational, and required tests and inspections shall be successfully completed. On occupancy, Owner will operate and maintain mechanical and electrical systems serving occupied portions of building.
   4. On occupancy, Owner will assume responsibility for maintenance and custodial service for occupied portions of building.

1.8 WORK RESTRICTIONS

A. On-Site Work Hours:
   1. Work shall be generally performed inside the job site during normal business working hours of 7 a.m. to 5 p.m., Monday through Friday, except otherwise indicated.
   2. Weekend working hours per City of Compton.

B. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
   1. Notify Architect not less than two days in advance of proposed utility interruptions.
   2. Do not proceed with utility interruptions without Architect's written permission.

C. Contractor to ensure all site and street lighting remain operational during all phases of construction to ensure campus safety. All required rerouting of electrical necessary for site lighting operation is included in the base bid of this contract.

D. Contractor will ensure that the parking adjacent to the site remains operational for the District.

1.9 SPECIFICATION FORMATS AND CONVENTIONS

A. Specification Format: The Specifications are organized into Divisions and Sections using the 49- division format and CSI's MasterFormat 2004 numbering system.
   1. Section Identification: The Specifications use Section numbers and titles to help cross- referencing in the Contract Documents. Sections in the Project

Manual are in numeric sequence; however, the sequence is incomplete because all available Section numbers are not used. Consult the table of contents at the beginning of the Project Manual to determine numbers and names of Sections in the Contract Documents.

2. Division 1: Sections in Division 1 govern the execution of the Work of all Sections in the Specifications.

B. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:

1. Abbreviated Language: Language used in the Specifications and other Contract Documents is abbreviated. Words and meanings shall be interpreted as appropriate. Words implied, but not stated, shall be inferred as the sense requires. Singular words shall be interpreted as plural, and plural words shall be interpreted as singular where applicable as the context of the Contract Documents indicates.
2. Imperative mood and streamlined language are generally used in the Specifications. Requirements expressed in the imperative mood are to be performed by Contractor. Occasionally, the indicative or subjunctive mood may be used in the Section Text for clarity to describe responsibilities that must be fulfilled indirectly by Contractor or by others when so noted.

a. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.

1.10 DEFERRED APPROVALS

A. Deferred approval items are listed on Drawings.

B. Contractor is solely responsible for obtaining all necessary approvals and all costs associated with obtaining the approval of DSA including all Architectural and Engineering fees for coordinating with DSA beyond review and shipping of two separate Contractor provided submittals. Do not commence installation of any deferred approval item until all approvals have been obtained.

C. Deferred Approvals. Only where a portion of the construction cannot be adequately detailed on the approved plans because of variations in product design and/or manufacturer, the approval of plans for such portion, when specifically accepted by DSA, may be deferred until the material suppliers are selected provided the following conditions are met:

1. The project plans clearly indicate that a deferred approval by DSA is required for the indicated portions of the work prior to fabrication and installation.
2. The project plans and specifications adequately describe the performance and loading criteria for such work.
3. An architect or registered engineer stamps and signs the plans and specifications for the deferred approval item. The architect or engineer in

general responsible charge of the design of the project shall submit the plans and specifications for the deferred approval item to the enforcement agency, with notation indicating that the deferred approval documents have been found to be in general conformance with the design of the building.

4. Fabrication of deferred approval items shall not begin with out first obtaining the approval of plans and specifications by DSA.

D. Deferred Approval Submittals, General:
   1. Submit initial deferred approval submittal to Architect within 35 calendar days from the date of issuance of Notice to Proceed, and before any materials are delivered to the job site. Contractor is solely responsible for obtaining all necessary approvals. Do not commence installation of any deferred approval item until all approvals have been obtained.
   2. Product Data: Submit manufacturer's specifications and certified test reports made by an independent testing organization for each type and class of material to show compliance with code requirements and gain approval of DSA.
   3. Shop Drawings: Submit complete shop drawings including dimensioned plans, elevations, and all details of typical sections and connections. Shop drawings shall show design loads and all details of the installation. Title sheet of shop drawings shall list testing requirements and shall state that licensed engineer shall review and certify the completed installation is in accordance with the approved shop drawings. Shop drawings shall be stamped, dated and signed by professional engineer licensed in the State of California as evidence of his or her responsibility for the work.
   4. Shop drawings:
      a. Format: 30' x 42" sheet format with border and title block identifying, at a minimum, the project name, project number, project location, date, contractor and structural engineer of record.
      b. 1 set of reproducible shop drawings each submittal review.
      c. 1 set of shop drawings in electronic format as required by the AOR
      d. 1 set of reproducible shop drawings for each plan check review.
      e. 1 set of reproducible shop drawings approved by DSA.
   5. Calculations: Submit calculations prepared by a professional engineer licensed in the State of California. Engineer shall sign, date and stamp calculations as evidence of his or her responsibility for the work.
   6. Submittals shall be approved first by the Architect, then by DSA.

1.11 POLLUTION CONTROL

A. Provide positive methods, means and facilities required to prevent contamination of the soil, water or atmosphere by the discharge of noxious substances from the construction operations.

1.12 STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

A. Comply with Storm Water Pollution Prevention Plan (SWPPP). Reference specifications and drawings by Civil consultant.
B. Contractor is responsible for all dust control for the entire duration of the construction project, any fines and or fees occurring during construction are the responsibility of the General Contractor.

1.13 MISCELLANEOUS PROVISIONS

A. General: Comply with the Project Conditions of Approval for both noise and dust control. If there is any conflict between drawings and specifications and the Project Conditions of Approval regarding noise and dust control, the Project Conditions of Approval shall govern.
B. Noise Control:
    1. The General Contractor (GC) shall install noise reducing devices on construction equipment. Contractor shall comply with the requirements of the City and County having jurisdiction with regard to noise ordinances governing construction sites and activities. Construction Equipment noise at the Site shall be limited and only as permitted by applicable law, rule or regulation.
    2. If noise from any Work disrupts or disturbs the students or faculty or the normal operation of the District, at the District's or Construction Managers (CM) request, the Contractor shall schedule the performance of all such Work outside of class hours or make other arrangements so that the Work does not cause such disruption or disturbance. In no event shall such arrangements result in adjustment of the Contract Price or the Contract Time.
C. Dust Control.
    1. The Contractor shall be fully and solely responsible for maintaining and upkeeping all areas of the Site and adjoining areas, outdoors and indoors, free from flying debris, debris, trash, grinding powder, sawdust, dirt, and dust as well as any other product, product waste or work waste, that by becoming airborne may cause respiratory inconveniences to persons and Owner's personnel.
    2. Additionally, the Contractor shall take specific care to avoid deposits of airborne dust or airborne elements. Such protection devices, systems or methods shall be in accordance with the regulations set forth by the EPA and OSHA, and other applicable law, rule or regulation.
    3. Additionally, the Contractor shall be the sole party responsible to regularly and routinely clean up and remove any and all deposits of dust and other elements. Damage and/or any liability derived from the Contractor's failure to comply with these requirements shall be exclusively at the cost of the Contractor, including, without limitation, any and all penalties that may be

incurred for violations of applicable law, rule or regulation, and any amounts expended by the Owner to pay such damages shall be due and payable to the Owner on demand.

4. Contractor shall replace any damages property or part thereof and professionally clean any and all items that become covered or partially covered to any degree by dust or other airborne elements.
5. If classes are in session at any point during the progress of Work, and, in the Owner's reasonable discretion, flying debris, grinding powder, sawdust, dirt or dust from any Work disrupts or disturbs the students or faculty or the normal operation of the college, at the Owner's request, the Contractor shall schedule the performance of all such Work around normal college hours and make other arrangements so that the Work does not cause such disruption or disturbance. In no event shall such arrangements result in adjustment of the Contract Price or the Contract Time.
6. GC to procure and provide for the entire duration of project a temporary water meter to connect to an existing fire hydrant. GC is responsible for all water uses for the project including during pre-watering, grading, dust control, deep soil mixing, water testing, and any other project related to activity requiring water. GC responsible for any fines and or fees related to the temp water meter and water usage as it relates to this project.
7. GC will provide onsite/offsite dust control and street sweeping services as it relates to the project for the duration of the project as requested by the District or authorized representative.

D. Provide a certified survey by a California Licensed Certified Surveyor for all layouts, benchmarks, height confirmations, modular placement confirmations, prior to actual performance of the work shown in the plans for this project and for As-Built drawings of this project. All heights and dimensions as shown in the drawings to be confirmed by GC prior to any inspection request.
E. From time to time throughout the project, the contractor may be required to install and relocate the temporary fencing and erosion control to accommodate access to the site for construction or District access.
F. GC to provide an approved and illuminated path of travel that will be required for students, staff, ADA access, and parking around the site. Contractor responsible for all conduit wiring lighting, and related equipment for the site, contractor will work with the District and the construction manager to guarantee that an illuminated path of travel is always provided for students and staff utilizing the surrounding sidewalks and parking lot.
G. This Contractor will have sole responsibility for providing all required temporary services of toilets, water, safety, barricades, dumpsters, staging areas, trucking from staging areas to crane foot, trucking from manufacturer to staging area, additional mobilizations as required, temporary signage for way finding, protections, locks, gates, windscreens, k-rail, construction access, rumble plates, and temporary fencing for this contract. These temporary facilities include but are not limited to self-contained toilet units / sanitary facilities,

temporary roads and paved areas, maintaining fire lane access at all times during construction, facilities for dewatering (from any source of water) and drains, project identification and temporary construction signage, trash disposal facilities, environmental protection, storm water control, tree and plant protection, pest control, barricades, traffic control flagmen with radio, (daily at all points of delivery and/or exiting of materials, waste etc. as required), security, warning signs and lights, temporary enclosures, temporary partitions, temporary fire protection and fire extinguishers. This Contractor is also responsible for providing daily cleanup, street cleaning, and dust control surrounding the area of work affected by the construction activities for this project. Maintain and/or rework fencing, barricades, and paths of travel on a daily basis and/or as described in Division 01, Section 01 50 00, Temporary Facilities and Controls or as directed by the Construction Manager.

H. GC is responsible for obtaining and providing an offsite staging area for the modulars and paying all related rents, clearings and grubbing, grading, erosion control, temporary paving, demo, fees, security, insurance, transportation, permits, and temp fencing.

I. All security required for this project will be provided by GC and will be coordinated with the Campus Police. Contractor has sole responsibility to provide security within the construction fence area as well as any offsite areas related to the project.

J. This contractor will hire an underground utility locating company to ensure that all underground utilities are properly identified. See the Construction Manager for the existing map for reference only.
    1. This contractor will identify all utilities in the demolition areas and ensure that all utilities are properly capped and safe-off.
    2. Any and all utilities that are found within the work area must be properly identified, confirmed operational and capped or rerouted if the utility is needed for the buildings that are to remain occupied.
    3. Contractor to repair any damage to deep soil mixing columns as required to the satisfaction of the Geotech of Record (GOR) and Inspector of Record (IOR), for example damage occurring during utility installation. GC to cover all costs associated with repairs as it relates to the project.
    4. Install connection of MEP fire sprinklers and low voltage lines and any other interior communication and utility lines. All interior/exterior utility connections in the modular/site-built buildings are the responsibility of the GC to the satisfaction of the DSA inspector and the District.

K. Contractor will ensure that all construction traffic does not impede into the student/staff parking areas. All construction traffic must have flagmen to ensure that there are no disturbances to the campus operations. Early morning deliveries are preferred and/or Friday and Saturdays are better days for delivery and trucks. GC responsible for traffic control/flagman for the duration of construction.

L. This contractor understands that this contract and construction will be conducted under the Occupied Site Protocol. All activities outside of the work

area: i.e. Deliveries, Parking, Staging, outside of the designated work area must be scheduled and approved by the District two weeks prior. This will allow the District ample time to provide a notification to the Students and Staff. Any damage to the District's property outside of the work area will be the contractor's responsibility to repair or replace immediately.

M. This contractor will be responsible and has included within their base bid the site clearing, grubbing, demolition of: existing concrete, existing structures, plants, irrigation, footings, and piles, utilities, vegetation, underground roots, signs, benches, lights, pergolas, poles, pads, bollards, walls, fences, stubs, trees, and other misc. landscaping, flatwork, and work within the over-excavation area for the new buildings. GC to confirm prior to commencement of work that all elements of the existing buildings have been removed including any footings and our underground utilities, wires, irrigation, etc. GC to coordinate with the District prior to removal of any trees.

N. Ensure that all Irrigated areas to remain are tested to provide proper coverage. This contractor will have the sole responsibility to ensure that the areas are re-established and properly irrigated utilizing the existing controls and timers. This contractor will be responsible for ensuring that all irrigation systems are properly protected in place. Any damage to these irrigation systems will be the sole responsibility of this contractor to re-establish in proper working order. All repairs to the irrigation lines will be with schedule 40 pipe and schedule 80 couplers unless otherwise noted. This contractor will maintain watering to all trees and grass along the perimeter of construction site until final completion. New landscaping to be water for a minimum of 90 days or until established.

O. This contractor will provide all underground utilities to include but not be limited to: Electrical Underground Boxes, Pull Boxes, Electrical Service, Trenching, conduits, 6" Red Slurry Mix, Fire water pipe, plumbing, Domestic water pipe, and irrigation Water and Water connections. Irrigation lines to include Capping, Realign Irrigation, and irrigation controls. Include gas line, sewer line, storm drain, pre-insulated chilled water supply and return lines if applicable, communication, UG pathways and any other UG Utility lines.

P. All displaced soils will be coordinated with the Construction Manager for remaining on site and stockpiled in the proper location. GC responsible for all import and export of dirt, excavation, removal, dirt spoils from ventilated space under modules, elevator pits, coordination of deep soil mixing locations, utility coordination with deep soil mixing locations, and will be responsible to confirm guarantee that the soil is suitable for the site and does not contain any contaminants. GC responsible for exporting contaminated soil to a proper facility. All imported soil to be approved by GOR+IOR prior to placement.

Q. This contractor will conduct weekly meeting with the onsite contractors and any contractors that need to be involved with coordination of upcoming events and/or installations. This contractor will invite the District and Construction Managers to each and every construction weekly meeting. This will also include all special coordination meetings: i.e. Original Lay Out coordination meeting for grading, concrete, utilities, and structural, Rough Opening and

backing meetings, an erecting plan and meeting, imbed coordination meeting, Low Voltage coordination meeting, MEP coordination meeting with the Structural Engineer-Architect-Steel contractor, Attic Spac coordination meeting, pre-roofing conference with the Roofing Manufacturer representative, all metal cladding backing and installation coordination meetings, etc..

R. This Contractor is to adhere to the following submittal schedule shown as Calendar Days.
   1. Executed contract. Five (5) Days from the District's issuance of a Notice of Intent.
   2. Submittal Schedule Twenty Five (25) Days from the District's issuance of a Notice to Proceed.
   3. Shop Drawing Schedule Sixty (60) Days from the District's issuance of a Notice to Proceed.
   4. Procurement schedule with all copies of purchase orders and subcontractor agreements. Twenty Five (25) Days from the District's issuance of a Notice to Proceed
   5. Manufacturing schedule with all long lead and special inspection requirements. Forty Five (45) Days from the District's issuance of a Notice to Proceed
   6. Delivery schedule. Forty Five (45) Days from the District's issuance of a Notice to Proceed
   7. Detailed construction schedule. Five (5) Days from the District's issuance of a Notice to Proceed

S. This Contractor is to inspect all materials delivered to the site for damage. Store materials on site in enclosures or under protective covering out of direct sunlight. Do not store materials directly on ground. Keep pipes inside and fittings free of dirt and debris.

T. Provide adequate cribbing, sheathing, and shoring as necessary to safely retain the earth sides of excavations and trenches from caving and other damage resulting from excavating, together with suitable forms of protection against property damage and bodily injury to personnel employed on the work and the general public. Contractor is responsible for the design, installation, and maintenance of required cribbing and shoring, and shall meet the approval of the Cal/OSHA and local governing agency requirements. The contractor to hand dig adjacent to high-pressure water line any removals to avoid damaging the line. GC to coordinate with the District, CM, and dig alert prior to work to confirm locations where hand digging might be necessary.

U. GC to submit a Crane plan to the District for approval prior to working onsite. Crane/Halo/Rigging/spreader bars to be adequate size for the project, GC responsible for all requirements associated with crane and halo rigging. Crane location and delivery to be coordinated with the District to limit interruption. Crane placement and maneuvering will not hinder students path of travel during school hours. Crane sizing, access review to be the responsibility of the GC. Contractor to pay for permits, setup/ tear down, parking, transportation, and any other approvals and fees required related to the crane. Mobile crane

and operator/crew as needed for the duration of the project. Provide and maintain all equipment and fuel for equipment (crane, forklifts, man-lifts, etc.) to complete crane set and structural connections. GC responsible for any crew housing and per diem, crew and equipment transportation, modular box weather protection, rigging and packaging requirements, modular box setting, removal of temporary framing and corridor ceilings and stair boxes, sill plate installation, setting of boxes, installation of wood sleepers at marriage lines and perimeter between levels of boxes, interior corridor floor substrate installation at mate lines, rough stair installation, any required specialty equipment like boom lifts etcetera including fuel cost, nails and fasteners, crane and operator, cribbing, welding as required, ropes, chains, etc…

V. Continuous site cleanup, which includes street cleaning of perimeter road, parking lot and sidewalks, sweeping, litter removal, and housekeeping and daily cleanup of site is mandatory, sandbag/silk fences/straw waddle replacement when necessary, weekly cleanup of the site perimeter. This Contractor shall put debris in its own debris boxes and/or remove debris from site at this contractor's own expense prior to the end of the work day or as directed by the Construction Manager. All debris boxes and containers shall be kept free of graffiti at all times. If this Contractor fails to perform daily clean up, the Construction Manager upon written notice to the Contractor shall order that clean up done at this Contractor's expense and adjust Contractors contract Accordingly.
W. This Contractor is to provide all white glove clean up scope of work for the surrounding site for the entire project, including but not necessarily limited to removal of all residual trash created during this contractor’s scope of work. Cleaning up must have the Districts final approval through the Construction Manager. GC is responsible for modular interior cleaning at plant prior to delivery, final interior cleaning prior to District acceptance and student move-in, power wash exterior as needed, and clean all windows/storefronts/doors to a like new finish.
X. Contractor Personnel - The District has complete authority to review and approve selection of this Contractor's field and office personnel for this project. The District has authority to request replacement of any Contractor personnel for reasons determined by the District. This Contractor shall maintain the same approved personnel throughout the entire duration of the project at the District's discretion. This Contractor will, at the time of award of work, furnish a list of persons assigned to the Project showing their titles and telephone numbers. Emergency telephone numbers shall also be provided for the after hour use by the District.
Y. All mandrel testing to take place prior to DSA inspection of conduit, so cal Edison approved method of mandreling to be completed prior to backfilling
Z. GC responsible for looking at weather forecast that might affect modular transport and/or installation. The District is not responsible for contractor’s lack of due diligence when it comes to scheduling during weather events that might

include rain/snow/lightning/tornadoes/wind/ hail etc… Weather forecasting to be included in the GC's three week schedule look ahead.

AA. All windows and weather resistant barriers for modular units to be Installed prior to leaving the factory. Secure and seal weather resistant roof material (EPDM or other material) on all levels, mate lines, and parapet walls to prevent moisture penetration using flaps of EPDM or other material provided by GC. Protect Modular Units at all times during installation from weather damage including afterhours risks such as high winds or heavy rains, snow, etc. Provide adequate staging areas with suitable all-weather surface and maintain acceptable access throughout duration of delivery of Modular Units, the shuttle of Modular Units from site staging area to crane site, and crane set services on site (mud, sand or other soft soil compaction, grading, application of traction enhancing material as needed, etc.) Storage area should be capable of storing 75% of the Modular Unit count at any given time. Maintain and repair Building wrap, skins, temporary roof weatherproofing and any other temporary Building weatherproofing after set crew has completed their scope of work and prior to/during on-site (OSBO) siding and roof completion. GC is responsible for damage to the Modular Units or Building and any damage resulting from failure to maintain or repair Building wrap or roof weather proofing. GC responsible for removal of any temporary water proofing.

BB. Contractor responsible to perform their own GPR (Ground Penetrating Radar) investigation, and pothole investigation prior to demo and grading/DSM.

CC. Flag and caution tape with barriers as needed for above ground and underground items to be protected in place.

DD. GC responsible for all temp power including temp power poles and generators as needed for the duration of the project until permanent power is achieved. The general contractor will bear all cost related to temp power including temporary generator cost. At all times, the GC provided construction trailer for the CM must have functional power for lighting/internet/and AC.

EE. Provide scaffolding as required. Scaffolding will need to be coordinated with site built and modular construction. As the modules are placed, scaffold can be coordinated to be placed consecutively. Contractor to provide scaffold plan which will need to be reviewed and approved by the District. Daily safety inspection and signoff of the scaffold is required by the GC.

FF. Provide an offsite staging area for the modular units.

GG. GC to provide temporary roofing material as required. Provide temporary roofing to protect from water damage as needed contractor is responsible for all damage to the modular and site build structures. GC responsible for removing any temporary waterproofing prior to placement of the modules.

HH. GC to provide temporary sewer bypass when the GC is installing the new sewer line and sewage lift station. This bypass will remain operational until the final sewer pump and associated materials are accepted by the IOR and functioning to full capacity.

II. GC will Water test the roof to confirm no leaks prior to interior drywall and finishes being placed. Manufacturer to certify the roof prior to scaffold being removed.

JJ. GC responsible for delivery of modules, flaggers, escort cars, patrol cars, GC must obtain necessary local state federal approvals required for transport.

KK. GC will not be allowed to utilize any of the existing parking stalls without purchasing a District parking permit. Contractor will need to coordinate with the District parking. Contractor will be responsible for any repairs needed in he parking lot to its original form. GC will be responsible for installing any required ADA signage at parking stalls.

LL. Provide diagrammatic map of location of construction trailers, generators, covered break stations, entry, wash stations, dumpsters, storage binds, parking, and porta potties to be submitted and approved by the district. All items must be contained within the site.

MM. Smoking is prohibited anywhere on the jobsite including in-doors and outdoors. Failure to comply will result in the immediate removal of the offender from the jobsite at the expense of the General Contractor.

NN. No pets are allowed at anytime in the jobsite or staging areas without the written approval from the District.

OO. Provide closeout material including warranties and as-builts and added stock. As builts to districts satisfaction shall be submitted at the end of the project in hard copy and digital format. Include five copies of closeout documents including electronic copies. As-built plans to be given electronically and hardcopy at closeout and legible. Attic stock to include minimum 5% of material installed unless otherwise noted.

PP. Provide job site signage including project description and project safety as required by the District. Sign to include a visual graphic of the building and include the names is a visual fashion of the District/ Architect/ CM/ Contractor/ Board Members/ Grant information. Sign to be protected with anti graffiti coating and size of color graphics sign to be 20 square feet mounted on plywood on 15 foot tall post embedded in the ground able to withstand wind loads. District to approve graphic on signage prior to placement, sign will need to be installed prior to any grading operations unless otherwise directed by the CM or District.

QQ. CM job trailer to have like new ceiling tiles with no tears scratches or cracks, CM trailer to have a water cooler with water for the duration of the project. Provide bookshelves, Internet, and electricity and running water in the CM job trailer. For the duration of the project, the CM job trailer will be supplied with soap, paper towels, hand towels, silverware, microwave, paper plates, paper cups, post Its, tape, paper, tape dispensers ,staplers, copier Xerox scanner, 11 by 17 paper an 8 1/2 by 11 paper, a minimum of three parking stalls for the CM trailer, door lock, air conditioning, sewer connection, carpet tiles ,flooring in like new condition, window blinds, 3 flashlights, 100 n95 masks, three new hard hats, pens, notepads, 20 new safety goggles. In the CM trailer GC to provide

4 new 27 inch HP or Dell monitors with hookups, and one minimum 42” smart board.

RR. Mateline detailing and completion to be completed to the architects satisfaction.

SS. Over excavation, staging, off site storage, shuttle coordination, foundation review, and site access review to be the responsibility of the General Contractor.

TT. Contractor scope to include setup and coordination of ground breaking/topping off/ and grand opening ceremonies as they pertain to the General contractor .

UU. Contractor responsible for layout where to place modulars and how to sequence them and how to code a number the actual modulars to know where they are placed in the building.

VV. Contractor responsible for any on site repairs due to transit damage including: cracks, paint, doors, tile, shelves, casework, windows, etc…

WW. DSA inspector to be present at the factory building the modular units to inspect each one. The inspector must be given access where is required for them to inspect. It is the GC’s responsibly to ensure the DSA inspector signs off and approves each modular unit before it leaves the factory.

XX. Provide temp ramp walkway if required by the district to meet ADA compliance

YY. Mockup to be provided at the factory manufacturing the modular units, mockup to be of a lower unit with the most structural framing and to include a kitchen and the bathroom component. Mockup to also include communal bathroom that shows shower, toilet, and sink component.

ZZ. Contractor is responsible for any hall route documentation and or approvals from the District, local jurisdiction, State, Federal, and any other approvals required for delivery of material/equipment, including modulars. .

AAA. General contractor responsible for any insurance requirements to protect their own material and the material of their subcontractors and equipment for the duration of the project.

BBB. Contractor responsible for printing and all reprographics required by them and the subcontractors without reimbursement.

CCC. Modular Transportation and On-Site Staging

1. GC to Coordinate and transport Modular Units from Factory to designated Project staging area.
2. Provide and pay for any related costs to receive the Modular Units at the storage site including but not limited to, storage location leases, labor, materials, insurance, safety, and security.
3. Provide cribs for temporary storage of Modular Units at storage site and Project Site, and provide labor to assist driver to unload Modular Units onto the cribs (typically 10 cribs per full length Modular Unit).
4. Shuttle any Modular Units from offsite staging areas to Project Site. Provide permitting, traffic control, flagging and pilot cars as required.

1.14 ADDITIONAL DSA REQUIREMENTS

A. Comply with the following:
   1. Compliance with Title 24, for Parts 1-6 and 9.
   2. Title 24, Parts 1-5 shall be kept on site during construction.
   3. All addenda must be signed by Architect and approved by DSA. (Section 4-338, Part 1)
   4. All substitutions affecting DSA regulated items shall be considered as a Change Order or Addenda, and shall be approved by DSA prior to fabrication and installation. (IR-A6) (Section 4-338(c), Part 1)
   5. Change Order and Field Change Directives (Preliminary Change Orders) (Section 4-338 (c), Part 1) must be signed by all the following:
      a. A/E of Record.
      b. Owner (change order only).
      c. SEOR (when applicable).
      d. Delegated Professional Engineer (when applicable).
      e. DSA.
   6. Project Inspector and testing lab must be employed by the school district and approved by all of the following:
      a. A/E of Record.
      b. SEOR (when applicable).
      c. DSA.

B. Tests and Inspections - Chapter 17A:
   1. All tests shall be performed by a testing facility acceptable to the architect and DSA. The testing facility shall be directly employed by the school district and no other entity or individual. Section Title 24, Part 1, Section 4-335(b).
   2. Test reports shall be addressed to, and sent to, the school district by the testing facility. Copies of all test reports shall be sent to DSA, the architect, the structural engineer, and the project inspector by the testing facility. All reports shall be sent within 14 days of the date of the test. See Title 24, Part 1, Section 4-335(d).
   3. A Verified Report, sighed by the California licensed civil engineer in charge of the testing facility which conducted the tests, shall be submitted to DSA upon completion of the project. The verified report shall state that all tests and inspections were made as required by the DSA approved documents. If the tests or inspections indicate that materials or workmanship did not meet the requirements of the DSA approved documents, the Verified Report shall list all noncompliant work. A copy of all test reports involving unresolved noncompliant work shall be attached to the Verified Report. In the event that not all required tests or inspections were made by the testing facility making this verified report, those tests and inspections not made shall be listed on the Verified Report. See Title 24, Part 1, Section 4-335(e).

PART 2 - PRODUCTS (Not Used)
PART 3 - EXECUTION (Not Used)
END OF SECTION 011000

COMPTON COMMUNITY COLLEGE DISTRICT

ALLOWANCES

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Allowances which the Contractor shall provide for designated construction activities in the Work and in this bid.

B. The provisions in this Section only apply if the Owner includes Allowances in the Contract.

1.2 RELATED DOCUMENTS

A. The Conditions of the Contract and other section of Division 01 apply to this section as fully as if repeated herein, including Section 01 01 00 – Scope of Work.

1.3 DESCRIPTION OF REQUIREMENTS

A. Definitions and Explanations: Certain requirements of the construction related to each allowance are indicated and specified. The Allowance has been established by the Owner and represents selection by the Owner of selected Sub-Contractors for designated portions of the work specified and shown.

B. Types of allowance scheduled herein for the Work include lump sum cash allowances. Include all allowances in Contract sum, and identify all allowances in Schedule of Values as separate line items.

C. Selection and Purchase: At earliest feasible date after award of contract, advise the Architect/Engineer of scheduled date when final selection and purchase of each product or system described by each allowance must be accomplished in order to avoid delays in performance of the Work.

1. Establish date by which Prime Contractor must enter into contract and coordinate with sub-contractor responsible for work defined by allowance.

2. Establish date by which final list of products must be established for purchase of products and systems as specifically selected by the District.

1.4 DEFINITIONS AND DESCRIPTION OF REQUIREMENTS

A. Cash Allowance Criteria

1. The Allowance is used only as directed by the Owner.

2. The Allowance is used exclusively for the Owner's purposes and for scope(s) of work as directed by Owner.

3. The sub-contractor will prepare detailed breakdown of all costs associated with the work defined for the Allowance. These amounts will be charged against the Allowance by Change Order, based on final detailed payment receipts and back-up as required by Architect/Engineer, and will include all costs of work performed under the defined work scope.

    a. If required by Owner, Contractor shall obtain quotes for equipment from three separate vendors and present to District for consideration and selection.

4. Contractor shall include in the base bid contract amount all cost of coordination, supervision, bond costs, overhead and profit, supervision, installation and all indirect project costs associated with performing the work of each Allowance. Contractor shall be permitted to charge only its direct costs to perform the work, as indicated through documentation approved by the District.

    a. At project closeout, any unused Cash Allowance amounts shall be credited to the Owner by Change Order. Contractor shall not deduct costs such as bond costs, overhead and profit or other indirect costs when returning any unused Cash Allowance amounts.

    b. Changes that exceed the scope of work or amount of each Allowance covered by each allowance will be processed as a Change Order per Contract Documents.

PART 2 – PRODUCTS - (Not Applicable)

PART 3 – EXECUTION

3.1 SCHEDULE OF CASH ALLOWANCES

COMPTON COMMUNITY COLLEGE DISTRICT

1. **The Contract Price includes an Allowance in the amount of $1,500,000.00. This Allowance is to be used at the District's discretion for unforeseen conditions and/or District authorized scope modifications. The unused portion of the Allowance will be deducted from the Contract Price by a deductive change order.**

COMPTON COMMUNITY COLLEGE DISTRICT

ALTERNATES

PART 1 - GENERAL

1.1 SUMMARY

A. This Section specifies administrative and procedural requirements for Alternates.

B. Definition: An Alternate or Alternate Bid is an amount proposed by Bidders and stated on the Bid Form for certain construction activities defined in the Bidding Requirements that may be added to or deducted from Base Bid amount if the College District decides to accept a corresponding change in either the amount of construction to be completed, or in the products, materials, equipment, systems or installation methods described in Contract Documents.

C. Coordination: Coordinate related Work and modify or adjust adjacent Work as necessary to ensure that Work affected by each accepted Alternate is complete and fully integrated into the project.

D. Notification: Immediately following the award of the Contract, prepare and distribute to each party involved, notification of the status of each Alternate. Indicate whether Alternates have been accepted, rejected or deferred for consideration at a later date. Include a complete description of negotiated modifications to Alternates.

E. A "Schedule of Alternates" is included as an attachment at the end of this section.

1. Include as part of each Alternate, miscellaneous devices, accessory objects and similar items incidental to or required for a complete installation whether or not mentioned as part of the Alternate.

1.2 RELATED DOCUMENTS

A. Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division-1 Specification Sections, apply to this Section.

B. Bid Form

PART 2 – PRODUCTS - (Not Applicable)

COMPTON COMMUNITY COLLEGE DISTRICT

PART 3 - EXECUTION

3.1 SCHEDULE OF ALTERNATES

1. Alternate Bid Item No.1
2. Deductive Bid Alternate Item No. 2
3. Deductive Bid Alternate Item No. 3
4. Deductive Bid Alternate Item No. 4
5. Deductive Bid Alternate Item No. 5
6. Deductive Bid Alternate Item No. 6
7. Deductive Bid Alternate Item No. 7
8. Deductive Bid Alternate Item No. 8
9. Deductive Bid Alternate Item No. 9

END OF SECTION

COMPTON COMMUNITY COLLEGE DISTRICT

CONTRACT MODIFICATION PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

A. This Section specifies administrative and procedural requirements for making modifications to the contract including:

1. Change Orders/Allowance Usage

2. Construction Change Documents (see General Conditions)

3. Contract Credits

4. Contract Additions

5. Construction Change Directives

6. Emergency Change Directives (see General Conditions)

7. Instructions

B. Modifications:

1. Provide full written data required to evaluate contract modifications, including breakdown of labor, material, equipment and description of work with unit costs for each category.

2. Maintain detailed records of work done on a time-and-material basis.

3. Provide full documentation for all proposed Change Orders to the Architect for his review.

C. Designate in writing the member of Contractor's organization:

1. Who is authorized to accept changes in the Work.

2. Who is responsible for informing others in the Contractor's employ of the authorization of changes in the Work.

1.2 RELATED SECTIONS

A. Addenda: All issued Addendums

B. Agreement: The amounts of unit prices if any as established in the Contract.

C. General Conditions Article 9, Changes in the Work.

D. Section 01 33 00 - Submittals

E. Section 01 63 00 - Product Substitution Procedures

1.3 REFERENCES

A. Change Order Requirements per Title 24 Part 1 CCR.

1. Changes in the plans and specifications are to be made by addenda or Change Orders or construction change documents approved by the Division of the State Architect, Title 24 Part 1 Section 4-338.

2. Change Orders: Changes or alterations of the approved plans or specifications after a contract for the work has been awarded are to be made by means of Change Orders. State the reason for the change and provide supplementary drawings where necessary. Change Orders must be manually signed by the Architect or Engineer in general responsible charge of observation of the work or by the Architect or Engineer delegated responsibility for observation of the portion of the work affected by the Change Order.

3. Change Orders are required to bear the approval of the School Board or their authorized representative upon delegated authority.

4. One original signed copy by all parties of each Change Order is required for the files of the Division of the State Architect.

1.4 PRELIMINARY PROCEDURES

A. The Architect or College District may initiate changes by submitting a Request For Quotation. The request will include:

1. Detailed description of the Change, Products, and location of the change in the Project. Changes may include additions and deletions from the Contract.

2. Supplementary or revised Drawings and Specifications.

3. The projected time span for making the change and a specific statement as to whether overtime work is, or is not, authorized.

4. A specific period of time during which the requested price will be considered valid.

5. Such request is for information only, and is not an instruction to execute the changes, nor to stop Work in progress.

B. Contractor may initiate changes by submitting a written Allowance Usage Request or Proposed Change Order Request to the Architect or College District containing:

1. Description of the proposed change.

2. Statement of the reason for making the changes.

3. Statement of the effect on the Contract Sum/ Contract Price and the Contract Time.

4. Statement of the effect on the Work of separate contractors with breakdown of costs for labor, materials and equipment.

5. Documentation supporting any change in Contract Sum/ Contract Price or Contract Time, as appropriate.

1.5 CONSTRUCTION CHANGE DIRECTIVES

A. In lieu of Proposal Request, the College District through the Construction Manager may issue, a Construction Change Directive (also referred to as an Immediate Change Directive in the General Conditions) for Contractor to proceed with a change which shall state a basis for adjustment, if any, in the Contract Sum/ Contract Price or Contract Time, or both.

B. Authorization will describe changes in the Work, both additions and deletions, with attachments of revised Contract Documents to define details of the change, and will designate the method of

determining any change in the Contract Sum/ Contract Price and any change in Contract Time.

C. The College District and Architect will sign and date the Construction Change Directive as authorization for the Contractor to proceed with the changes.

D. Contractor may sign and date the Construction Change Directive to indicate agreement with the terms therein.

1.6 DOCUMENTATION OF PROPOSALS AND CLAIMS

A. Support each quotation for a lump-sum proposal, and for each unit price which has not previously been established, with sufficient substantiating data to allow the Architect/Engineer and College District to evaluate the quotation.

B. On request provide additional data to support time and cost computations:

1. Labor required in hours with unit costs.

2. Equipment required.

3. Products required in units.

a. Recommended source of purchase and unit cost.

b. Quantities required.

4. Taxes, insurance and bonds.

5. Credit for Work deleted from Contract, similarly documented.

6. Overhead and profit.

7. Justification for any change in Contract Time.

C. Support each claim for additional costs, and for work done on a time and material basis, with documentation as required for a lump-sum proposal, plus additional information:

1. Name of the College District's authorized agent who ordered the work, and date of the order.

2. Dates and times work was performed, and by whom.

3. Time record, summary of hours worked, and hourly rates paid.

4. Receipts and invoices for:

   a. Equipment used, listing dates and times of use.

   b. Products used, listing of quantities.

   c. Subcontracts.

D. Document requests for Substitution of Products as specified in Section 01 63 00.

1.7 CONSTRUCTION CREDITS

A. Work deleted and no work has been completed by the Contractor: Work deleted from the contract is to be credited back to the District and subtracted from the contract amount. Credits are to be included in Change Orders.

1. Contractor shall credit back to the District total value for the work deleted from the contract. Cost of credits shall be determined by the amount stated in the Contractor's Schedule of Values.

2. Where the value of credits cannot be determined from the Contractor's Schedule of values, total value of the credit is to be determined by the cost of materials, labor, overhead and profit, insurance, bonds, etc. All General Contractor, Subcontractor and Material Supplier levels of the Contract are to be included in the total value of credits back.

3. No amount at any level of the contract shall be withheld from credits for overhead and profit, insurance, bonds, time delays, construction schedule changes and administrative expenses.

B. Work deleted and a portion of the work has been completed by the Contractor: Work deleted from the contract is to be credited back to the District and subtracted from the contract amount. Credits are to be included in Change Orders.

1. Contractor shall credit back to the District the total value of the work deleted from the contract less any work already

completed on the credit item. Cost of credits shall be determined by the amount stated in the Contractor's Schedule of Values less any work already completed. Completed work may include cost of shop drawings, submittals, site preparation, partially completed work on the credit item or other expenses related to the item.

2. Where the value of credits cannot be determined from the Contractor's Schedule of values, total value of the credit is to be determined by the cost of materials, labor, overhead and profit, insurance, bonds, etc. All General Contractor, Subcontractor and Material Supplier levels of the Contract are to be included in the total value of credits back.

3. An amount equal to the percentage of work already completed on the deleted item may be withheld from credits back for overhead and profit, insurance, bonds, construction schedule adjustments and administrative expenses, as indicated in the General Conditions (Section 00700).

1.8 PREPARATION OF CHANGE ORDERS

A. The Architect or Construction Manager will prepare each Change Order.

B. Change Order will describe changes in the Work, both additions and deletions, with attachments of revised Contract Documents to define details of the change.

C. Change Order will provide an accounting of the adjustment in the Contract Sum/ Contract Price and in the Contract Time.

1.9 LUMP-SUM/FIXED PRICE CHANGE ORDER

A. Content of Change Orders will be based on either:

1. The College District's Proposal Request and Contractor's responsive Proposal as mutually agreed with the College District.

2. Contractor's Proposal for a change, as recommended by the College District or their authorized agent.

B. The College District, Division of the State Architect and Architect or Engineer in responsible charge will sign and date the Change

Order as an authorization for the Contractor to proceed with the changes.

C. The Contractor will sign and date the Change Order to indicate agreement with the terms therein.

1.10 UNIT PRICE CHANGE ORDER

A. Content of Change Orders will be based on either:

1. The College District's definition of the scope of the required changes.

2. Contractor's Proposal for a change, as recommended by the College District or Authorized Agent.

3. Survey of completed work.

B. The amounts of the unit prices to be:

1. Those stated in the Agreement.

2. Those mutually agreed upon between College District and Contractor.

C. When quantities of each of the items affected by the Change Order can be determined prior to start of the work:

1. The College District and Architect or Engineer in responsible charge will sign and date the Change Order as authorization for Contractor to proceed with the changes.

2. Contractor is to sign and date the Change Order to indicate agreement with the terms therein.

D. When quantities of the items cannot be determined prior to start of the work:

1. The College District through the Architect will issue a Construction Change Directive directing the Contractor to proceed with the change on the basis of unit prices, and will cite the applicable unit prices.

2. At completion of the change, the College District or its authorized agent will determine the cost of such work based on the unit prices and quantities used.

3. The Contractor shall submit documentation to establish the number of units of each item and any claims for a change in Contract Time.

4. The College District, Division of the State Architect and Architect or Engineer in responsible charge will sign and date the Change Order as authorization for the Contractor to proceed with the Changes.

5. The Contractor will sign and date the Change Order to indicate agreement with the terms therein.

1.11 TIME AND MATERIALS CHANGE ORDER/CONSTRUCTION CHANGE DIRECTIVE:

A. The College District through the Architect will issue a Construction Change Directive directing Contractor to proceed with the changes

B. At completion of the change, Contractor shall submit itemized accounting and supporting data as provided in the Article 1.6, "Documentation of Proposals and Claims," of this Section.

C. The College District or its authorized representative will determine the allowable cost of such work, as provided in General Conditions and Supplementary Conditions.

D. The College District, Division of the State Architect and Architect or Engineer in general responsible charge will sign and date the Change Order to authorize the change in Contract Sum/ Contract Price and in Contract Time.

E. The Contractor will sign and date the Change Order to indicate agreement with the terms therewith.

1.12 INSTRUCTIONS

A. Architect's Supplemental Instructions:

1. Minor changes in the work shall be carried out in accordance with supplemental instructions issued in accordance with the Contract Documents without change in Contract Sum/ Contract Price or Contract Time.

2. The Architect will issue, sign, and date Supplemental Instructions.

3. The Contractor will sign and date Supplemental Instructions to indicate acceptance of minor changes consistent with the Contract Documents and return signed copy to Architect.

1.13 CORRELATION WITH CONTRACTOR'S SUBMITTALS

A. Periodically revise Schedule of Values and Request for Payment forms to record each change as a separate item of Work and to record the adjusted contract amounts.

B. Periodically revise the Construction Schedule to reflect each change in Contract Time.

C. Revise sub-schedules to show changes for other items of work affected by the changes.

D. Upon completion of work under a Change Order, enter pertinent changes in Record Documents.

1.14 FORMS

A. Submit Proposal Request typed on AIA Document G709. A Copy of this form may be obtained from the local American Institute of Architects, Chapter Office

B. Submit Change Orders typed on the Change Order Form included in this Project Manual. Form is included in General Conditions and at the end of this Section.

C. Submit Potential Change Order on the Potential Change Order Form included in this Project Manual. Form is included in General Conditions and at the end of this Section

D. Submit Supplemental Instructions typed on the form included in this Project Manual on 01 30 50-24, Requests For Information (RFI's).

E. Immediate Change Directive Form is included in the Supplementary General Conditions.

PART 2 – PRODUCTS - (Not Applicable)

PART 3 – EXECUTION - (Not Applicable)

END OF SECTION

COMPTON COMMUNITY COLLEGE DISTRICT

PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

A. This Section specifies administrative and procedural requirements governing the Contractor's Applications for Payment.

B. Submit applications for payment to Construction Manager in accordance with the schedule established by the conditions of the Contract and Agreement between Owner and Contractor.

C. The Contractor's Construction Schedule and Submittal Schedule are included in Section "Submittals".

D. The Contractor agrees to provide an updated certified “As-Built” with every pay application both “Hard Copy” and electronic copy that is approved by the Architect/ Engineer, Inspector of Record, and the Construction Manager.

1.2 SCHEDULE OF VALUES

A. Coordinate preparation of the Schedule of Values with preparation of the Contractor's Construction Schedule.

1. Submit the Schedule of Values to the Construction Manager at the earliest feasible date, but in no case later than 10 days before the date scheduled for submittal of the initial Application for Payment.

B. Format and Content: Use the Project Manual Table of Contents as a guide to establish the format for the Schedule of Values.

1. Identification: Include the following Project identification on the Schedule of Values:

a. Project name and location.

b. Name of the Architect/ Engineer.

c. Project number.

d. Contractor's name and address.

e. Date of submittal.

2. Arrange the Schedule of Values in a tabular form with separate columns to indicate the following for each item listed:

a. Generic name.

b. Related Specification Section.

c. Name of subcontractor.

d. Dollar value.

e. Percentage of Contract Sum/ Contract Price to the nearest one-hundredth percent, adjusted to total 100 percent.

3. Provide a breakdown of the Contract Sum/ Contract Price in sufficient detail to facilitate continued evaluation of Applications for Payment and progress reports. Break principal subcontract amounts down into specific line items.

4. Round amounts off to the nearest whole dollar; the total shall equal the Contract Sum/ Contract Price.

5. For each part of the Work where an Application for Payment may include materials or equipment, purchased or fabricated and stored, but not yet installed, provide separate line items on the Schedule of Values for initial cost of the materials, for each subsequent stage of completion, and for total installed value of that part of the Work.

6. Schedule Updating: Update and resubmit the Schedule of Values when Change Orders or Construction Change Directives result in a change in the Contract Sum/ Contract Price.

1.3 APPLICATIONS FOR PAYMENT:

A. Each Application for Payment shall be consistent with previous applications and payments as certified by the Architect/ Engineer and paid for by the College District.

B. Payment Application Times: Each progress payment date is as indicated in the Agreement. The period of construction Work

covered by each Application or Payment is the period indicated in the Agreement.

C. Payment Application Forms: Use AIA Document G702 and Continuation Sheets G 703 as the form for Application for Payment.

D. Application Preparation: Complete every entry on the form, including notarization and execution by person authorized to sign legal documents on behalf of the College District. Incomplete applications will be returned without action.

1. Entries shall match data on the Schedule of Values and Contractor's Construction Schedule. Use updated schedules if revisions have been made.

2. Include amounts of Change Orders and Construction Change Directives issued prior to the last day of the construction period covered by the application.

3. Transmit each copy with a transmittal form listing attachments, and recording appropriate information related to the application in a manner acceptable to the Engineer and Construction Manager.

4. When the Architect/ Engineer finds the application completed and correct will transmit a certificate for payment to Owner with a copy to the Contractor.

E. Lien Releases: With each Application for Payment submit Lien Releases from subcontractors or sub- subcontractors and suppliers for the construction period covered by the previous application.

1. Submit partial Lien Releases on each item for the amount requested, prior to deduction for retainage, on each item.

2. When an application shows completion of an item, submit final or full Lien Releases.

a. Submit final Application for Payment with or preceded by final Releases from every entity involved with performance of Work covered by the application that could lawfully be entitled to a lien.

3. Waiver Forms: Submit waivers of lien on forms, and executed in a manner, acceptable to the College District.

F. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of the first Application for Payment include, without limitation, the following (see also General Conditions):

1. List of subcontractors.

2. Schedule of Values.

3. Contractor's Construction Schedule (preliminary if not final).

4. Copies of authorizations and licenses from governing authorities for performance of the Work.

5. Certificates of insurance and insurance policies.

6. Performance and payment bonds (if required).

G. Application for Payment at Substantial Completion: Upon Substantial Completion, submit an Application for Payment.

1. Administrative actions and submittals that shall proceed or coincide with this application include, without limitation, the following (see also General Conditions):

a. Project inspector's status of completion report.

b. Warranties (guarantees) and maintenance agreements.

c. Test/adjust/balance records.

d. Maintenance instructions.

e. Meter readings.

f. Start-up performance reports.

g. Change-over information related to Owner's occupancy, use, operation and maintenance.

h. Final cleaning.

i. List of incomplete Work, recognized as exceptions to the Certificate of Substantial Completion.

H. Final Payment Application: Administrative actions and submittals that must precede or coincide with submittal of the final payment Application for Payment include, without limitation, the following (see also General Conditions):

1. Completion of Project closeout requirements.

2. Completion of items specified for completion after Substantial Completion.

3. Assurance that unsettled claims will be settled.

4. Assurance that Work not complete and accepted will be completed without undue delay.

5. Transmittal of required Project construction records to Owner.

6. Removal of temporary facilities and services.

7. Removal of surplus materials, rubbish and similar elements.

8. Submit the final complete “As-builts” both hard copy and electronic copies with proper electronic titles for each page.

PART 2 – PRODUCTS - (Not Applicable)

PART 3 – EXECUTION - (Not Applicable)

END OF SECTION

CONSTRUCTION PROCEDURE MANUAL

COMPTON COMMUNITY COLLEGE DISTRICT

COMPTON COMMUNITY COLLEGE DISTRICT
Construction Procedures Manual

I. INTRODUCTION

This Construction Procedures Manual has been developed for the Compton Community College District.

The purpose of this Manual is to provide the Owner, the Architect, Engineer, Inspector and Contractors detailed information concerning the specific project requirements and procedures.

This manual delineates lines of authority and responsibility of the team members associated with this Project.

Questions or suggested changes to this manual may be addressed to the Construction Manager, at 1111 E. Artesia Blvd., Compton, CA 90221

SHOULD INCONSISTENCIES OR DISCREPANCIES EXIST BETWEEN THIS MANUAL AND THE CONTRACT DOCUMENTS (INCLUDING THE GENERAL CONDITIONS); THE CONTRACT DOCUMENTS (INCLUDING THE GENERAL CONDITIONS) WILL TAKE PRECEDENCE.

II. PROJECT PROCEDURES

A. COMMUNICATIONS

1. In carrying out the terms of the Contract, the Owner and the Architects/Engineer will interact with the Contractors through the Construction Manager.

2. All correspondence, shop drawings, submittals, RFIs etc. are to be processed and submitted through the Construction Manager.

3. All correspondence, shop drawings, submittals, RFIs etc. shall reference the Project by name and Contract number.

4. The Construction Manager is the point of contact for all Project communications.

B. MEETINGS

1. Pre-Construction Meeting - (Section 01 31 00)*

After award of the Contract, the Construction Manager will schedule a "Pre-Construction Meeting" to be held at a time and location designated by the Construction Manager. **An authorized representative of Contractor MUST attend the "Pre-Construction" meeting**. Minutes of the meeting will be prepared and distributed by the Construction Manager

2. Weekly Project Meeting - (Section 01 31 00)*

a. The Construction Manager will conduct a weekly Project meeting in the on site office.

b. Contractor with crews on site and upcoming work must attend weekly meetings.

c. Persons required to attend the weekly Project meetings include Contractor's supervisory personnel, subcontractor personnel, (as appropriate), the Construction Manager, A/E, and others as requested by the Construction Manager. The Owner or User personnel may attend at any time.

d. The Contractor(s) shall bring any documentation as may be required in order to accomplish a joint review and status of the Project activities.

e. Contractor(s) shall prepare a three week "look ahead" schedule for review at each meeting. The schedule shall be prepared in accordance with the scheduling section of this manual and will be reviewed with the contract schedule at each weekly meeting.

f. Contractor to submit the following 5 construction schedules per specification section 01 01 00 and 01 43 80
    1. Execution of all Sub-Contractor Agreements
    2. Submittal
    3. Material Procurement
    4. Manufacturing
    5. Delivery

3. Special Project Meetings

The Construction Manager may call a Special Project Meeting at any time during the course of the Project. Special Project Meetings, if deemed necessary, shall include representatives of the Contractor(s) and subcontractors as requested in order to provide an adequate line of communication to discuss problems and/or solutions that are common to the Project.

C. SITE RULES

1. The Compton Community College District Campus is Non-Smoking and Drug Free.

2. The Compton Community College District Campus is alcohol free.

3. All personnel are required to wear appropriate protective clothing, work shoes, and safety equipment at all times.

4. All personnel shall restrict their behavior, their language and their demeanor so as to avoid harassment to students and faculty.

5. Violations of Site Rules may result in permanent banning from the Project.

6. Compton Community College District in an occupied facility and occupied site protocol is mandatory.

D. PROJECT DOCUMENTS All Construction Manager Document Control will be administered utilizing Trimble Project Site software.

1. SUBMITTALS - (Specification Section 01 33 00) *

a. Contractor shall submit all shop drawings, samples and product data through the Construction Manager within the time requirements set forth in Specification Section 01 01 00.

b. Every Submittal shall be made to the Construction Manager at the Project site, using the enclosed submittal form. A separate form must be filled out for each submittal. Each separate specification section requires a separate and complete submittal that is project specific. At a minimum, every submittal shall contain the following information and any other information required by the General Conditions:

1. Project Name
2. Contractors Name & Address
3. DSA Application Number _____ and File Number _____ for each project
4. Submittal Number according to the Construction Managers Submittal Log
5. Submittal Date
6. Specification and/or Drawing Reference.
7. Contractor Name and Address
8. Attach List of Items Submitted
9. Contractor to submit 1 hard copy and 1 electronic copy per each specification section.

Each submittal will be complete per each specification section. Incomplete and partial submittals will not be accepted.

* References are to Specification Sections; refer to section for more detailed requirements.

c. **CONTRACTOR WILL STAMP AND SIGN SUBMITTALS, SHOP DRAWINGS, ETC. THAT HE HAS REVIEWED THE ITEMS SUBMITTED, AND CERTIFIES THE ITEMS ARE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, AND THAT EACH HAS BEEN CHECKED FOR DIMENSIONS AND RELATIONSHIPS WITH WORK OF ALL OTHER CONTRACTORS AND TRADES INVOLVED.**

d. Upon receipt, the Construction Manager will log each submittal. The Construction Manager may reject any submittal if it is, in his or her judgment, incomplete or inadequate. In such case, a copy of the rejected submittal will be returned by the Construction Manager to the Contractor with the reason for rejection cited.

e. All Submittals shall be numbered by the Construction Manager.

f. Upon completion of review of the complete submittal, the Construction Manager will transmit acceptable submittals to the A/E for review and comment.

E. A/E REVIEW COMMENTS

1. All submittals must conform to the approved contract documents.

2. The A/E will review all submittals and, where appropriate, make written commentary. The A/E's comments will be similar to the following:

   a. "NO EXCEPTIONS TAKEN" - the Contractor may proceed with work covered by the submittal if in compliance with the contract documents.

   b. "MAKE CORRECTIONS NOTED" - The Contractor may proceed with the work, provided the Contractor proceeds in accordance with the notes and comments on the submittal.

   c. "REVISE and RESUBMIT" - the Contractor shall NOT begin any work covered by the submittal until a revision or correction to the submittal has been re-submitted, reviewed and returned to the Contractor.

d. "REJECTED" - the Contractor shall not begin any work covered by the submittal until a new submittal has been prepared, submitted and reviewed.

F. SUBMITTAL & SHOP DRAWING QUANTITIES

1. Submittals, Shop Drawings and Product Data shall be submitted in the following minimum quantities:

a.	SAMPLES:	Three or more samples.
b.	SHOP DRAWINGS:	One (1) electronic and one (1) hard copy.
c.	PRODUCT DATA:	One (1) electronic and one (1) hard copy.

G. DISTRIBUTION OF REVIEWED SUBMITTALS

1. SHOP DRAWINGS –
   Construction Manager will provide reviewed shop drawings to the Contractor and to the DSA Project Inspector.

2. PRODUCT DATA –
   Construction Manager will provide reviewed submittals to the Contractor and to the DSA Project Inspector

Fabrication or other work performed in advance of receipt of reviewed drawings, samples or test certifications will be entirely at the Contractor's risk.

H. REQUEST FOR INFORMATION (RFI)

Should the Contractor(s) require clarification or additional information of the plans or specifications, he will direct the request to the Construction Manager on the RFI form as provided by the Construction Manager. Sample forms are in the appendix.

Each RFI will be numbered sequentially. Contractor shall be responsible for maintaining his own "log". The Construction Manager will maintain the Construction Manager's RFI log, and each week, the Construction Manager RFI Log will be distributed & discussed at the weekly meeting.

The RFI shall describe thoroughly, the problem or clarification being requested and a suggested solution. The description provided should be adequate and complete to permit a written response without additional communication with the Contractor. The Contractor shall attach related sketches, information or correspondence which may have been received from subcontractors or vendors on the subject. Each attachment to the RFI shall have the RFI # marked plainly on the attachment pages are to be numbered "Page __of __".

No RFI will be accepted without proper reference to Plan Drawings, Shop Drawings and / or Specification Sections, and all areas completely filled out.

The contractor shall list potential solutions to expedite resolution by the Architect and Owner and the contractor shall insure that all line items in the RFI Form are completely filled out before submitting to the Construction Manager. Contractor will ask a maximum of one (1) question per RFI.

The Construction Manager will review the RFI and will either:

1. Return the RFI to the Contractor for additional information or response.

2. Forward the RFI to the Architect of Record for response, copying the Project Inspector in accordance with the below timelines.

3. Provide the response and return to the Contractor, with copies to the Architect of Record and Project Inspector. RFI's answered by the CM and stamped by the AOR are logged as official RFI's and subject to all of the below conditions.

The processing for a routine RFI shall be as follows:

1. CM will verify all RFI's for format and content prior to any disposition and may return to sender for edit, clarification and completeness.

2. When a Contractor submits an RFI to the CM it will be reviewed. If the RFI is deemed legitimate by the CM it will be immediately transmitted to the Architect of Record.

3. Once the Architect receives the RFI from the CM, he must respond or pass the RFI on to the proper consultant within three (3) days.

(In a Modernization project, the Architect must answer or pass the RFI on to a Consultant within twenty-four (24) hours.)

4. Consultants are given a maximum of seven (7) days to respond or show cause for delay. (For a Modernization Project this period is shortened to three (3) days.)

5. The appropriate recipient of the RFI will endeavor to provide the response as soon as possible within the above time constraints.

6. When the Construction Manager receives a response back from the Architect, the answer should be reviewed and transmitted to the Contractor and Project Inspector as soon as possible.

RFI's requiring critical response timing shall be duly annotated as to the urgency of the response date.

If the RFI review indicates a change or revision is necessary to the Contract Documents, the A/E will prepare appropriate drawings and/or specifications required to define the change or revision either by a CCD or a Bulletin if required.

If the Contractor believes the clarification or direction provided by the response to the RFI will impact the cost or schedule of the Project, he shall provide prompt notification thereof to the Construction Manager in accordance with the General Conditions. Upon notification thereof to the Construction Manager, the Contractor shall prepare an Allowance Usage Request or Proposed Change Order within 30 days, if approved by the District through the Construction Manager, which shall be processed as outlined in the Change Order Procedure of this manual. In the event the Contractor fails to notify the Construction Manager, no consideration will be given to the Contractor for additional costs as outlined in the Change Order Procedure.

See also Project Coordination Section (01 31 00, 1.06 Requests for Information) regarding frivolous Requests for Information.

I. SCHEDULES

The Contractor shall furnish to the Construction Manager any required schedules that addresses the work in his Contract(s) in accordance with the General Conditions. The schedules shall be in a format as approved by the Construction Manager, and as a minimum, shall include, without limitation, the following (see also General Conditions):

1. Detail of activities required for their mobilization and start of construction.

2. Activities of other Contractors which must be completed prior to starting various components of other work.

3. A plan for completion of work in sufficient detail to allow observation and monitoring by the Construction Manager. Any activity longer than five (5) working days shall be broken down into phases of five (5) working days or less in length.

4. List activities which must be complete for succeeding contractors to start their work.

5. Show submittals and shop drawing preparation and review time.

6. Long lead procurement requirements.

7. Include all necessary and required DSA Inspections in Schedule.

The Contractor shall prepare schedules in a Critical Path Method (CPM) format as required by the General Conditions. Contractor will review the logic and duration of activities affecting his work. The Construction Manager will conduct a meeting with Contractor(s) to incorporate revisions and issue the approved construction schedule.

The schedule will become the basis for determining completion of the Project and will be reviewed at each weekly meeting.

Contractor will prepare and submit at each weekly meeting a Short Interval Schedule (SIS) (Two Week Look-Ahead) The SIS (Two Week Look-Ahead) shall be a minimum two (2) week projection of activities currently in progress or to be started within the following two (2) week period (use form within this manual).

The SIS (Two Week Look-Ahead) will be reviewed against the base Contract Schedule each week to evaluate the progress of the work. Contractor shall submit a recovery schedule in the event his work falls behind the approved construction schedule.

J. INSPECTION & TESTING

Contractor shall be responsible for maintaining the necessary licenses required for the completion of the work.

The Owner will pay for State assessed plan check fees and inspection fees, unless otherwise indicated.

Contractor and Subcontractor will be responsible for obtaining and paying for any required City Business licenses.

The DSA Project Inspector will make normal building and code compliance inspections. Contractor will be responsible for compliance with all requirements of applicable codes per the Contract Documents. Contractor shall inform the Construction Manager at least 2 working days prior to scheduling required inspections. Use Inspection Request Form supplied in the appendix of this manual and also complete and submit the required DSA Form 156.

Inspection, testing, and sampling will be performed as specified in the General Conditions and the specific divisions of the Contract Documents. The Owner, through the Construction Manager, will contract for performance of soil, concrete, steel, grout and mortar testing. Review the Contract Documents for Contractor testing and sampling requirements. In all cases where testing is being performed of samples being taken, the Project Inspector, through the IR form, will be given notification pursuant to Contract Document requirements. Contractor shall also timely request special inspections as required by DSA and complete and submit the required DSA verified report forms.

If inspection or testing discloses errors, omissions, inconsistencies, or deficiencies during construction activities, the Contractor will be immediately notified using the Deviation Notice Form. If corrective action is not apparent, the Construction Manager may request the Contractor to propose a corrective action plan.

Where utilities (electric, water, drainage, sewer, gas, etc.) must be disrupted by construction activity, each Contractor shall notify the Construction Manager in writing at least fourteen (14) calendar days prior to the disruption, to be reflected on the 2 Week Look Ahead Schedule and include a logistics plan of the occupied site.

All **INSPECTION REQUESTS** will be channeled through the Construction Manager to the DSA Inspector (PI). The Construction Manager shall log and monitor time, date and subject of all Inspection Requests utilizing an Inspection Log, and maintaining a binder additionally containing copies of above completed form, as well as copies of Inspection Request Response form executed by the PI. Photographs of area or items to be inspected will be taken and kept as part of the permanent daily record of the project.

Inspection log must indicate the title/number of the photos and their permanent file location.

K. FINAL VERIFIED REPORTS are required.

Each Contractor shall submit the required DSA Final Verified Reports to the Construction Manager at the end of construction or as otherwise required by DSA.

Retention may not be paid if Final Verified Reports are not received. Use DSA-6 form supplied in appendix or any updated form from DSA at the completion of the project. The Contractor shall upload the DSA-6 to the DSA Box.

L. SAFETY

Contractor shall have sole and complete responsibility for initiating, maintaining and supervising all safety precautions and programs in connection with this Project. In no case shall the Owner, the Construction Manager, the Architect, the Inspector or their agents, employees or representatives, have either direct or indirect responsibility for the means, methods, techniques, sequences or procedures utilized by the Contractor, or for safety precautions and programs in connection with the work.

Contractor will provide the Construction Manager a copy of his updated safety program prior to commencing the work.

Prior to commencement of work at the site, Contractor must submit a Safety Plan to the District via the Construction Manager per the General Conditions (Specification 00 72 00). Contractor will conform to all OCIP Regulations **where applicable**.

M. CHANGE ORDER AND ALLOWANCE USAGE PROCEDURE
(Specification Section 00 72 00 Article 9)

The Owner, through the Construction Manager, may from time to time direct the Contractor to make changes in the work within the general scope of the Contract. All changes to the Contract will be implemented through written orders or directives prepared by the A/E and issued by the Construction Manager.

When the Construction Manager believes a change order to the construction documents is required that may involve a change in time or cost, he will request the A/E prepare a Bulletin or CCD and issue it to the Construction Manager. The A/E will sequentially number and date each

Bulletin. If the contractor believes a change order is required they will issue an AUR/PCO that fully describes the proposed change(s) to the Contract Documents, including sketches, new drawings, or revised specifications as required. The Construction Manager will maintain a log of all AUR/PCOs issued. The Construction Manager shall number each AUR/PCO. Sample AUR/PCO forms and work sheet are in the appendix.

If the Contractor intends to make claim for a change in the contract time or cost, he must give the Construction Manager written notice per contract documents after the occurrence of the event giving rise to the claim, or lose his rights to the cost recovery of the extra work arising from the claim. (General Conditions Section 00 72 00 Article 9).

The Construction Manager will evaluate the Contractor's quotation for the work, using an estimate of time and cost impact prepared by the A/E or the Construction Manager. If the quotation is acceptable to the Construction Manager, the proposal will be forwarded to the Owner and the A/E. If the quotation is judged by the Construction Manager to be not acceptable, he will begin negotiations with the Contractor to come to an agreement as to the time and cost impact.

The Construction Manager reserves the sole right to notify the Contractor when there will be no further negotiations, and when an impasse exists between the Contractor and the Construction Manager and the work is declared to be in dispute.

The Owner and the Architect may issue through the Construction Manager instructions to the contractor to proceed on a time and material basis. The routing procedure will be the same as a change order. If the AUR/PCO directs work to proceed prior to agreement on a lump sum quotation, the Contractor shall prepare an Extra Work Report **each day** for signature by the Construction Manager and/or the Inspector. **Extra Work tickets not signed daily will not be paid for.**

The Construction Manager will review each Allowance Usage Request or Proposed Change Order with the A/E to determine the appropriate DSA approval process and whether the Change Order is a DSA CCD form 140 type A or B Construction Change Document. All Substitutions affecting DSA regulated items shall be considered as Construction Change Document or Addenda. The Contractor must comply with all DSA requirements for Change Orders and Construction Change Documents.

N. APPLICATION FOR PAYMENT

Draft Application for Payment shall be made by the Contractor on a **monthly** basis for work completed on or before the **25th of each month**.

All Applications for Payment shall contain the approved detailed Schedule of Values submitted by the Contractor at the time of award. Applications shall be submitted on forms provided in the appendix. **No other form will be accepted**.

No later than the 25th of each month, Contractor shall submit a "Draft Pay Request" (pencil copy) to the Construction Manager for review. Only the Schedule of Values need be submitted. The "Draft Pay Request" shall include a detailed Schedule of Values showing percentages of work complete or scheduled to be complete through the end of the month. The Construction Manager, the A/E and Inspector will review and evaluate the "Draft Pay Request". Upon agreement of the amounts due the Contractor, the Contractor will prepare the notarized Application for Payment, and submit one electronic copy of the Application to the Construction Manager on the last working day of the month, for signatures by the Architect and the Inspector. After signatures are obtained, the Construction Manager will submit the Applications to the District for payment. The District will process the Application.

Payment for materials delivered to the Project site but not yet incorporated in the work may be made, **at the discretion of the Owner**. Such materials must be stored at the Project site, properly stacked, crated, boxed, and, if necessary, covered and protected from weather. Documentation of cost shall be provided with the payment request for materials. No payment will be considered without the required documentation. See additional requirements in the General Conditions.

Change Orders, if applicable, shall not be billed until approval of school board is received.

EVERY pay application must be accompanied by a CONDITIONAL Lien Release for the current application, and an UNCONDITIONAL Lien Release for the prior application. All Applications are to be NOTARIZED, and signatures are to be in BLUE ink.

O. PAY ESTIMATE CHECK OFF PROCEDURE (INTERNAL)

1. Verify all Schedule of Values shown on second page agrees with Schedule of Values submitted by Contractor at start of Project.

2. Check all upper details, both pages, are correctly filled in, i.e. Contractor Name and Address, complete Project Name, Architect Name, pay period dates, and that contract date is shown. (Date of Contract Agreement.)

3. Verify all previous information is correctly transferred from last prior pay application. Verify all math calculations are correct on page two and the correct numbers are transferred to page one. Verify all math on pay application page #1.

4. Verify all board approved Change Orders have been included in the pay application.

5. Verify Contractor signatures and notary signatures and stamp are on page #1.

6. Verify there is a Conditional Lien Release for the current payment request. If there has been a previous pay request, then verify there is also an Unconditional Lien Release for the previous estimate. These releases must be filled out and signed by the Contractor. The District will not pay if the releases are not in order.

7. Verify Preliminary Notice information against amounts billed and Request Lien Releases as necessary.

8. Verification of **As-built drawings update form signed by Project Inspector (PI).**

9. Signed Verification of Certified Payroll Records Submittal to Labor Commissioner Form received.

10. OCIP clearance is obtained – no outstanding issues.

11. Once all of the above is correct, then transfer the complete original to the Construction Manager for signatures by the Architect and the PI. The Architect should be available for signatures, within a reasonable time.

12. After all signatures are obtained, CM will distribute to the Accounting Department for processing.

P. POSTING OF PROJECT DOCUMENTS (PLANS AND SPECIFICATIONS)

1. All Contractors will maintain an up-to-the-day posted set of plans and Specifications for each project at all times. This is essential to the continuity of the project during construction and for archiving purposes. This "Posted Set" shall not leave the Inspector's Trailer for any reason, and must be kept in a secure location and scrupulously maintained and preserved at all times.

2. Posting must be done within (24) twenty-four hours of the receipt of a completed, signed, change to the Contract Documents.

3. Items that must be posted:

   a. All addendums to the bid set

   b. All Requests for Information (RFI)

   c. All Instructional Bulletins (IB)/Construction Change Documents (CCD)

4. For consistency the following color scheme for posting shall be followed throughout the District:

   a. All pre-bid addendums to the bid set shall be posted on YELLOW paper.

   b. All RFI's will be posted using 50% reduction and PINK paper.

   c. All Instructional Bulletins or CCDs will be posted using 50% reduction and PINK paper.

5. All postings should be sufficiently clear and concise enough to indicate a definitive change to the bid documents. Postings that implement changes on more than one plan sheet or specification page must be posted in the multiple locations or a reference to that posting must be made, sufficient to guide a user to a substantial and correct conclusion.

   Note: Use of 50% reduction is a vehicle for saving space. All postings should be located on the plan sheet or in the Specification Section referred to in the posted document. If frequency of posting is such that more room is needed it is permissible to insert blank sheets into the plans or blank pages into the Specifications. Posting on the reverse of the

preceding plan sheet is not advised due to the possibility of replacement sheets.

Q. ITEM OF CHANGE (IOC) LOG TO BE KEPT AND MAINTAINED BY CONSTRUCTION MANAGER and Reviewed at every Construction Meeting.

1. All changes to the Contract Documents are to be logged under separate cover in an Items of Change (IOC) Log and maintained on a continual updated basis.

2. Items in the IOC Log must correspond to items included in the Schedule of Values and be valuated based on given costs or good faith estimates.

3. The IOC Log should include, but be not limited to: Item Number; Date; Description; Budget Revision; checklist for necessary Approvals; and indication of Inclusion in a Change Order.

END OF SECTION

THIS PAGE INTENTIONALLY LEFT BLANK

COMPTON COMMUNITY COLLEGE DISTRICT
Daily Construction Job Report

School Site: Student Housing

CONTRACTOR _____

WEATHER _____

SUPT./FOREMAN _____

DATE _____

Time Work Started _____

Time Work Ended _____

WORK FORCE	Number of Hours					
WORKERS NAME	Foreman	Journeyman	Apprentice	Laborer	Operator	Other
1.						
2.						
3.						
4.						
5.						
6.						
7.						
8.						
9.						
10.						
11.						
12.						
13.					TOTAL	HOURS
14.						
15.						

WORK DONE and MATERIALS DELIVERED

COMPTON COMMUNITY COLLEGE DISTRICT
Construction Procedures Manual

SUBMITTAL FORM

CM #_____ (For CM Use Only)

Construction Manager Trailer **Gafcon Inc./Volz Company** **1111 E. Artesia Blvd.** **Compton, CA 90221**	**PROJECT: Student Housing** **PROJECT NO: CCC-084**

SUBMITTAL

_____ _____
BP # SUBMITTAL #

DATE: _____/____/____ **TITLE/Description: _____**

SPECIFICATION SECTION or DRWG. # :_____ **NO. COPIES SUBMITTED: _____**

NO. COPIES RETURNED: _____

TO: _____

DSA FILE NO: _____ CONTRACTOR: _____

ADDRESS: _____

DSA APP. NO: _____ PHONE: _____

ATTN.: _____

CONTRACTOR CERTIFIES: We have reviewed the attached submittal verifying products in this submittal, dimensions, adjacent work, and coordination of information is in accordance with the requirements of the work and contract documents, and approve this submittal (Reference Section 01330).

BY: _____ **DATE: _____/ _____ / _____**
Contractor's Representative

FOR USE BY ENGINEER: **ENGINEER'S STAMP:**

_____ NO EXCEPTIONS TAKEN

_____ MAKE CORRECTIONS NOTED

_____ REVISE & RESUBMIT

____ REJECTED

REMARKS:_____

_____

_____

COMPTON COMMUNITY COLLEGE DISTRICT
Construction Procedures Manual

SUBSTITUTION REQUEST FORM (AFTER BID)
Construction Manager #_____ (For CM Use Only)

DATE:_____ BID PACKAGE:_____

TO:_____

PROJECT: STUDENT HOUSING
SPECIFIED ITEM:

_____
Section Page Paragraph Description

The undersigned requests consideration of the following:

PROPOSED SUBSTITUTION:_____

_____

_____

Attached data includes product description, specifications, drawings, photographs, performance and test data adequate for evaluation of the request. Applicable portions of the data are clearly identified.

Attached data also includes a description of changes to the Contract Documents which the proposed substitution will require for its proper installation.

The undersigned certifies that the following paragraphs and any additional requirements in the General Conditions Article 3.10, unless modified by attachments, are correct:

1. The proposed substitution does not affect dimensions shown on drawings:
2. The undersigned will pay for changes to the building design, including engineering design, detailing, and construction costs caused by the requested substitution.
3. The proposed substitution will have no adverse affect on other trades, the construction schedule, or specified warranty requirements.
4. Maintenance and service parts will be locally available for the proposed substitution.
5. The proposed substitution is submitted within seven (7) calendar days after issuance of the Notice of Intent to Award.

The undersigned further states that the function, appearance, and quality of the proposed substitution are equivalent or superior to the specified item.

Submitted by: _____

Signature _____

Firm _____

Address _____

Remarks _____

Date _____

Telephone _____

Fax: _____ Date: _____

(For Use By The Design Consultant)

___ Accepted ___ Accepted as noted

___ Not Accepted ___ Received too late

Reviewed By _____

_____

_____

COMPTON COMMUNITY COLLEGE DISTRICT

INSPECTION REQUEST

DATE:	**CONTRACTOR:**

SUB-CONTRACTOR/ TRADE: (if any)

DESCRIPTION OF REQUIRED INSPECTION:

INSPECTION LOCATION:	DATE REQUIRED:
	TIME REQUIRED:
PHONE:	

REQUESTED BY:	DATE:
TITLE:	SPECIAL INSTRUCTIONS:
SIGNATURE:	BATCH PLANT INSP. REQ'D: YES NO

INSPECTORS COMMENTS:	
DATE:	SIGNATURE:

SUBMIT TO (CM), 3 WORKING DAYS PRIOR TO DATE & TIME REQUIRED.

DATE & TIME RECEIVED BY **CM**:
CM. PROJECT MANAGER:

cc: CM File

COMPTON COMMUNITY COLLEGE DISTRICT
REQUEST FOR INFORMATION

Gafcon/Volz #_____ (For Gafcon/Volz Use Only)

(ALL LINE ITEMS MUST BE COMPLETED PRIOR TO SUBMITTAL)

RFI No.
_____ RFI No.

TO: David Lelie, Construction Manager

FROM: _____

EMAIL: _____

PROJECT:

DWG. REF.: _____

Spec. Ref: _____

Trade _____

Date: _____

Description of Problem / Clarification / Information Required:

Drawings attached -

Proposed Solution:

Question By: _____ **Date:** _____

Response:

Response By: _____ **Date:** _____

Reviewed By: _____ **Date:** _____

COMPTON COMMUNITY COLLEGE DISTRICT

REQUEST FOR QUOTATION FORM

STUDENT HOUSING PROJECT

RFQ NO.:_____

DATE ____/____/____

TO:

_____

_____

_____

BID PACKAGE NO.:_____

Please submit price quotation for the following work:

_____

_____

_____

_____

_____

_____

_____

_____

_____

(Support Quotation with detailed cost breakdown and back-up materials.)

Reference Document, if any:_____

Price Quotation needed by:_____

Request submitted by:_____ DATE: ___/____/____

Construction Manager.

Parties agree and acknowledge the information in this Request for Quotation is for review purposes only. This Request for Quotation is not a request for, nor an authorization of additional work or an extension of the Contract period.

COMPTON COMMUNITY COLLEGE DISTRICT

ALLOWANCE USAGE REQUEST
CM #_____

RFP CCC-084 STUDENT HOUSING

ALLOWANCE USAGE REQUEST — AUR#_____

TO: _____ DATE ISSUED: _____

FROM: _____ PRICING DUE BY: _____

PROJECT No.: _____ PROJECT NAME: _____

Please submit an itemized quotation for change in the contract sum and time incidental to the proposed modifications to the Contract Documents as described herein. Cost breakdown format shall be as specified including all back up documentation.

Change Item: _____

THIS IS NOT A CHANGE ORDER NOR A DIRECTION TO PROCEED WITH THE WORK DESCRIBED HEREIN. REFERENCE RFQ#_____DESCRIPTION OF AUR:

REASON FOR ALLOWANCE USE:
A. [ ] District Requested Modification B. [ ] Unforeseen Conditions

REQUESTED BY: A. [ ] Architect B. [ ] DSA Inspector C. [ ] Contractor D. [ ] Owner

---

COST IMPACT: A. [ ] NONE B. [ ] DEDUCT: $ _____ C. [ ] ADD: $ _____

TIME IMPACT: A. [ ] NONE B. [ ] DEDUCT _____ DAYS C. [ ] ADD: _____ DAYS
Submit justification for time impact per Article 9 in the General Conditions 00 72 00

APPROVAL OF THE AUR BY ALL PARTIES LISTED BELOW SERVES AS A NOTICE TO PROCEED.

cc: Contractor: BY: _____

District: BY: _____

Architect/Engineer BY: _____

Project Inspector BY: _____

Construction Manager BY: _____

COMPTON COMMUNITY COLLEGE DISTRICT

POTENTIAL CHANGE ORDER
CM #_____

RFP CCC-084 STUDENT HOUSING

POTENTIAL CHANGE ORDER — PCO#_____

TO: _____ DATE ISSUED: _____

FROM: _____ PRICING DUE BY: _____

PROJECT No.: _____ PROJECT NAME: _____

Please submit an itemized quotation for change in the contract sum and time incidental to the proposed modifications to the Contract Documents as described herein. Cost breakdown format shall be as specified including all back up documentation.

Change Item: _____

THIS IS NOT A CHANGE ORDER NOR A DIRECTION TO PROCEED WITH THE WORK DESCRIBED HEREIN.
REFERENCE RFQ#_____DESCRIPTION OF PCO:

REQUESTED BY: A. [ ] Architect B. [ ] DSA Inspector C. [ ] Contractor D. [ ] Owner

COST IMPACT: A. [ ] NONE B. [ ] DEDUCT: $ _____ C. [ ] ADD: $ _____

TIME IMPACT: A. [ ] NONE B. [ ] DEDUCT _____ DAYS C. [ ] ADD: _____ DAYS
Submit justification for time impact per Article 9 in the General Conditions 00 72 00

APPROVAL OF THE PCO BY ALL PARTIES LISTED BELOW SERVES AS A NOTICE TO PROCEED.

cc: Contractor: BY: _____

District: BY: _____

Architect/Engineer BY: _____

Project Inspector BY: _____

Construction Manager BY: _____

COMPTON COMMUNITY COLLEGE DISTRICT

Allowance Usage Request/Proposed Change Order
CHANGES AND EXTRAS FORM

The following format shall be used, as applicable by the District and the Contractor to communicate proposed additions and deductions to the Contract. A copy of the Allowance Usage Request and Proposed Change Order form is provided at the end of this Article.

		EXTRA	CREDIT
(a)	Material (attach itemized quantity and unit cost plus sales tax)	_____	_____
(b)	Labor (attach itemized hours and rates)	_____	_____
(c)	Equipment (attach invoices)	_____	_____
(d)	**Subtotal**	_____	_____
(e)	**For Proposed Change Order and Allowance Usage Request:** If Subcontractor performed Work, add Subcontractor's overhead and profit to portions performed by Sub-contractor, not to exceed fifteen percent (15%) of item (d).	_____	_____
(f)	**Subtotal**	_____	_____

		EXTRA	CREDIT
(g)	**For Proposed Change Order:** General Contractor's Overhead and Profit: Not to exceed fifteen percent (15%) of Item (d) if Contractor performed the work. No more than five percent (5%) of Item (f) if Subcontractor performed the work. If work was performed by Contractor and Subcontractors, portions performed by Contractor shall not exceed fifteen percent (15%) if Item (d), and portions performed by Subcontractor shall not exceed five percent (5%) of Item (f)		
	For Allowance Usage Request: Zero (-0-) percent markup per General Conditions Specification Section 00 73 00 paragraph H	_____	_____
(h)	**Subtotal**	_____	_____
(i)	**For Proposed Change Order:** Bond not to exceed one percent (1%) of Item (d)		
	For Allowance Usage Request: Zero (-0-) percent bond per General Conditions Specification Section 00 73 00 paragraph H.	_____	_____
(j)	**TOTAL**	_____	_____
(k)	Date / Time	_____	_____

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

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

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

APPLICATION FOR PAYMENT

SCHEDULE OF VALUES

Schedule of Values Sheet

Application and certificate for payment containing contractor's signed certification, is attached in tabulations below, amounts are stated to the nearest dollar.
Use column 1 on contracts where variable retainage for line items may apply

Application #	
Application Date	
Period To	
Project #	

Contractor Name _____ _____

A	B	C	D	E	F	G		H	I
			Work Completed						
Item #	**Description of Work**	**Scheduled Value**	**From Previous Application (D + E)**	**This Period**	**Materials Stored (Not in D or E)**	**Total Completed & Stored To Date (D +E+F)**	**% (G/C)**	**Balance To Finish (C-G)**	**Retainage (Of Variable Rate)**
1			-	$ -	$ -	$ -	#DIV/0!	$ -	$ -
2			-	$ -	$ -	$ -	#DIV/0!	$ -	$ -
3			-	$ -	$ -	$ -	#DIV/0!	$ -	$ -
4			-	$ -	$ -	$ -	#DIV/0!	$ -	$ -
5			-	$ -	$ -	$ -	#DIV/0!	$ -	$ -
6			-	$ -	$ -	$ -	#DIV/0!	$ -	$ -
7			-	$ -	$ -	$ -	#DIV/0!	$ -	$ -
8			-	$ -	$ -	$ -	#DIV/0!	$ -	$ -
9			-	$ -	$ -	$ -	#DIV/0!	$ -	$ -
10			-	$ -	$ -	$ -	#DIV/0!	$ -	$ -
11			-	$ -	$ -	$ -	#DIV/0!	$ -	$ -
12			-	$ -	$ -	$ -	#DIV/0!	$ -	$ -
13			-	$ -	$ -	$ -	#DIV/0!	$ -	$ -
14			-	$ -	$ -	$ -	#DIV/0!	$ -	$ -
Change Orders (Approved)									
Totals		**$ -**	**$ -**	**$ -**		**$ -**	#DIV/0!	**$ -**	**$ -**

COMPTON COMMUNITY COLLEGE DISTRICT

CONDITIONAL WAIVER AND RELEASE UPON PROGRESS PAYMENT
[Civil Code §8132)]

Upon receipt by the undersigned of a check from _____
(Maker of Check)
in the sum of $_____ Payable to _____
(Amount of Check) (Payee or Payees of Check)
and when the check has been properly endorsed and has been paid by the bank upon which it is drawn, this document shall become effective to release any mechanic's lien, stop notice or bond right the undersigned has on the job of Compton Community College District located at _____ to the following extent.

This release covers a progress payment for labor, services, equipment or materials furnished to _____ through _____
(Your Customer) (Date)
only and does not cover any retention retained before or after the release date; extras furnished before the release date for which payment has not been received; extras or items furnished after the release date. Rights based upon work performed or items furnished under a written change order which has been fully executed by the parties prior to the release date are covered by this release unless specifically reserved by the claimant in this release. This release of any mechanic's lien, stop notice, or bond right shall not otherwise affect the contract rights, including rights between parties to the contract based upon a rescission, abandonment, or breach of the contract, or the right to the undersigned to recover compensation for furnished labor, services, equipment, or material covered by this release if that furnished labor, services, equipment, or material was not compensated by the progress payment.

Before any recipient of this document relies on it, said party should verify evidence of payment to the undersigned.

Dated: _____ Company Name: _____

By: _____
(Title)

NOTE: This form complies with the requirements of Civil Code Section 8132. It is to be used by a party who applies for a progress payment when the progress check has not yet cleared the bank. This release only becomes effective when the check, properly endorsed, has cleared the bank.

USE REVERSE SIDE AS RELEASE FOR INDIVIDUALS PERFORMING LABOR FOR WAGES

§ 484(b) OF THE CALIFORNIA PENAL CODE PROVIDES IN PART AS FOLLOWS:

"Any person who receives money for the purpose of obtaining paying for services, labor, materials or equipment and willfully fails to apply such money for such purpose by wither willfully failing to complete the improvements for which funds were provided or willfully failing to pay for services, labor, materials or equipment provided incident to such construction, and wrongfully diverts the funds to a use other that for which the funds were received, shall be guilty of a public offense and punishable by a fine not exceeding ten thousand dollars ($10,000), or by imprisonment in the state prison, or in the county jail not exceeding one year, or by both such fine and such imprisonment. If the amount diverted is in excess of one thousand dollars ($1,000). If the amount diverted is less than one thousand dollars ($1,000), the person shall be guilty of a misdemeanor."

§484(c) OF THE CALIFORNIA PENAL CODE PROVIDES AS FOLLOWS:

"Any person who submits a false voucher to obtain construction loan funds and does not use the funds for the purpose for which the claim was submitted is guilty of embezzlement."

§206.5 OF THE CALIFORNIA LABOR CODE PROVIDES:

"No employer shall require the execution of any release of any claim or right on account of wages due, or become due, or made as an advance on wages top be earned, unless payment of such wages has been made. Any release required or executed in violation of the provisions of this section shall be null and void as between the employer and the employee and the violation of the provisions of this section shall be a misdemeanor."

§532(e) OF THE CALIFORNIA PENAL CODE PROVIDES AS FOLLOWS:

"Any person who receives money for the purpose of obtaining or paying for services, labor, materials or equipment incident to constructing improvements on real property and willfully rebates any part of the money to or on behalf of anyone contracting with such person for provision of the services, labor, materials or equipment for which the money was given, shall be guilty of a misdemeanor, provided**,** however, that normal trade discount for prompt payment shall not be considered a violation of this section."

COMPTON COMMUNITY COLLEGE DISTRICT

UNCONDITIONAL WAIVER AND RELEASE UPON PROGRESS PAYMENT

Civil Code Section 8134

The undersigned has been paid in and has received a progress payment in the sum of

$_____ for _____
(Amount of Check Written & Numeric)

labor, services, equipment, or material furnished to Compton Community College District on the job of CCCD _____Project and does hereby release pro tanto any mechanics lien, stop notice, or bond right that the undersigned has on the above referenced job to the following extent. This release covers a progress payment for labor, services, equipment, or material furnish to **Compton Community College District** through _____ only and does not cover any retention retained before of (Date/End of Month) after the release date; extras furnished before the release date for which payment has not been received; extras or items furnished after the release date. Rights based upon work performed or items furnished under a written change order which has been fully executed by the parties prior to the release date are covered by this release unless specifically reserved by the claimant in this release. This release of any mechanic's lien, stop notice, or bond right shall not otherwise affect the contact rights including rights between parties to the contract based upon a rescission, abandonment, or breach of the contract, of the right of the undersigned to recover compensation for furnished labor, services equipment, or material covered by this release if that furnished labor, services, equipment, or material was not compensated by the progress payment.

Date: _____

_____ _____
(Company Name)

By: _____
(Signature)

_____ _____
(Print Name) (Title)

NOTICE: **THIS DOCUMENT WAIVES RIGHTS UNCONDITIONALLY AND STATES THAT YOU HAVE BEEN PAID FOR GIVING UP THOSE RIGHTS. THIS DOCUMENT IS ENFORCEABLE AGAINST YOU IF YOU SIGN IT, EVEN IF YOU HAVE NOT BEEN PAID. IF YOU HAVE NOT BEEN PAID, USE A CONDITIONAL RELEASE FORM.**

NOTE: This form of release complies with the requirements of Civil Code Section 8134. It is to be used to release claims to the extent that a progress payment has actually been received by the releasing party.

COMPTON COMMUNITY COLLEGE DISTRICT

CONDITIONAL WAIVER AND RELEASE UPON FINAL PAYMENT
(Civil Code Section 8136)

Upon receipt by the undersigned of a check from _____

(Maker of Check)

in the sum of $ _____

(Amount of Check)

payable to _____

(Payee or Payees of Check)

and when the check has been properly endorsed and has been paid by the bank upon which it is drawn, this document shall become effective to release pro tanto any mechanic's lien, stop notice or bond right the undersigned has on the job of Compton Community College District located at 1111 E. Artesia Blvd., Compton, CA 90221 to the following extent:

This release covers the final payment to the undersigned for all labor, services, equipment, or materials furnished on the _____, except for disputed claims for extra work in the amount of $_____.

DATED:_____ _____

(Company Name)

By: _____

_____

(Title)

NOTE: This form complies with the requirements of Civil Code Section 8136. It is to be used by the party who applies for a final payment when the final payment check has not yet cleared the bank. This release only becomes effective when the check, properly endorsed, has cleared the bank.

UNCONDITIONAL WAIVER AND RELEASE UPON FINAL PAYMENT

{Civil Code Section 8138}

The undersigned has been paid in full for all labor, services, equipment or materials furnished to _____

on the job of _____

located at _____

and does hereby release pro tanto any mechanic's lien, stop notice or bond right, except for disputed claims for extra work in the amount of $_____.

DATED:_____ _____

Company Name

By:_____

Signature

Title _____

NOTICE: **THIS DOCUMENT WAIVES RIGHTS UNCONDITIONALLY AND STATES THAT YOU HAVE BEEN PAID FOR GIVING UP THOSE RIGHTS. THIS DOCUMENT IS ENFORCEABLE AGAINST YOU IF YOU SIGN IT, EVEN IF YOU HAVE NOT BEEN PAID. IF YOU HAVE NOT BEEN PAID, USE A CONDITIONAL RELEASE UPON FINAL PAYMENT FORM.**

NOTE: This form of release complies with the requirements of Civil Code Section 8138. It is to be used to release claims to the extent that a final payment has actually been received by the releasing party.

Compton Community College District
Student Housing

Verification of As-Built Drawing Update

The contractor on the above named project has updated and provided clear notation on the project plans and specifications located in the Project Inspector's trailer of all as-built conditions for Pay Application #_____ through _____.

_____ _____
Date signed Project Inspector Signature

COMPTON COMMUNITY COLLEGE DISTRICT

3-WEEK-LOOK-AHEAD

1. Insert information, including dates
2. Include Contractor Company Name & Bid Package Number below
3. Include Signature below

Items to Schedule: _____

_____

Date: _____Signature: _____

Contractor:_____

COMPTON COMMUNITY COLLEGE DISTRICT

TIME AND MATERIAL WORK ITEM TICKET

PROJECT: _____ PCO/AUR#_____

CONTRACTOR: _____ SHEET# _____ of _____

Reference Document: _____ Submitted for work on: _____

Original Work Date for this Item: _____ Is Work Completed today? _____

Date of Last Work Activity: _____ Date Submitted to CM_____

WORK COMPLETED TODAY:

Location:

LABOR

EMPLOYEE NAME	CLASSIFICATION	Hours Noted	REMARKS
1._____	_____	_____	_____
2._____	_____	_____	_____
3._____	_____	_____	_____
4._____	_____	_____	_____
5._____	_____	_____	_____

MATERIAL

ITEM DESCRIPTION	QTY / UNITS	Hours Noted	REMARKS
1._____	_____	_____	_____
2._____	_____	_____	_____
3._____	_____	_____	_____
4._____	_____	_____	_____
5._____	_____	_____	_____

EQUIPMENT

EQUIPMENT	MAKE & MODEL	Hours Noted	REMARKS	Rented / Owned
1._____	_____	_____	_____	_____
2._____	_____	_____	_____	_____
3._____	_____	_____	_____	_____
4._____	_____	_____	_____	_____
5._____	_____	_____	_____	_____

CONTRACTOR CERTIFICATION: Signature by contractor to certify that all information on this sheet is true and accurate. Contractor also certifies that only the listed labor, material, and equipment listed were used for this item and that no other items are part of this work.	**SIGNATURES**
CM: Verifies hours worked as identified on this sheet only, not acceptance of any cost or schedule impact on behalf of the Owner.	
PI: Verifies hours worked as identified on this sheet only, not acceptance of any cost or schedule impact on behalf of the Owner.	

COMPTON COMMUNITY COLLEGE DISTRICT
1111 E. Artesia Blvd
Compton, California 90221

GUARANTEE

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

In the event the undersigned or its Surety fails to comply with the above-mentioned conditions within a reasonable period of time, as determined by the District, but not later than ten (10) days after being notified in writing by the District or within two (2) business days in the case of an emergency or urgent matter, the undersigned and its surety authorizes the District to proceed to have said defects repaired and made good at the expense of the undersigned and its surety, who will pay the costs and charges therefore upon demand. The undersigned and its surety shall be jointly and severally liable for any costs arising from the District's enforcement of this Guarantee.

GUARANTEE (continued)

_____
Contractor's Company Name

_____
Signature of Contractor

_____
Print Name

_____
Title

_____
Subcontractor's Company Name
(If work performed by subcontractor)

_____
Signature of Subcontractor

_____
Print Name

_____
Title

Representatives to be contacted for service:

Name: _____

Address: _____

Telephone Number: _____

END OF SECTION

DSA 6-C

CONTRACTOR VERIFIED REPORT

This form shall be completed by each contractor having a contract with the owner, in accordance with California Code of Regulations, Title 24, Part 1, Sections 4-343 or 4-220.

School District/Owner:		DSA File #: -
Project Name/School:		DSA App. #: -
Date of Report:	Number of Attached Pages: (*If none, enter zero.*)	DSA 152 Card #(s):
Note that ***DSA approved*** construction documents, referred to below, are those portions of the construction documents, duly approved by the DSA, that contain information related to and affecting the Structural Safety, Fire/Life Safety and Accessibility portions of the project.		*List all inspection card numbers for which this verified report applies.*

COMPLETE SECTIONS 1, 2, 3 & 4 AND PROVIDE ALL REQUIRED DOCUMENTATION

1. CONTRACTOR INFORMATION *(Enter name and check applicable box)*

	Name of Contractor (Company/Firm) Submitting this Report:
☐	Operating as general contractor responsible for all work shown in the *DSA approved* construction documents.
☐	Operating as contractor responsible for part of the work shown in the *DSA approved* construction documents. (*Describe scope of work in the contract.)*

2. REASON FOR FILING THIS VERIFIED REPORT *(Check applicable box)*

☐	**Interim Verified Report:** List affected form DSA 152 Inspection Card Section #(s):
☐	**Final Verified Report:** Construction of all work shown in the *DSA approved* construction documents that is part of my contract is complete.
☐	**Termination of Contract** prior to completion of all work in the contract *(Provide last date of work)*:
☐	**DSA Request** Dated:

3. DEFERRED SUBMITTALS *(Check applicable box)*

☐	This project does not require deferred submittals within the scope of my contract.
☐	All deferred submittals within the scope of my contract are approved by DSA.
☐	The following deferred submittals, within the scope of my contract, are **not approved** by DSA *(Provide list. Attach additional pages if necessary.)*:

4. DEVIATIONS AS OF THE DATE OF THIS REPORT *(Check applicable box)*

☐	All deviation notices pertinent to my contract related to work shown in the *DSA approved* construction documents are resolved.
☐	There are unresolved deviation notices pertinent to my contract and related to work shown in the *DSA approved* construction documents. *(Attach copies)*
☐	There is work pertinent to my contract that is not completed in compliance with the *DSA approved* construction documents. *(Briefly describe. Attach additional pages if necessary.)*

I attest that based on my own personal knowledge (as defined in California Code of Regulations, Title 24, Part 1, Sections 4-336 and 4-214) that, except as marked in Sections 3 and 4, as of the date of this report, the work has been performed and materials have been used and installed, in every material respect, in compliance with the *DSA approved* construction documents. I declare under penalty of perjury that I prepared this report and that all statements are true.

Signature: _____ Date: _____

Print Name: _____ Contractor's License No.: _____

Submit completed form to the DSA Regional Office with construction oversight authority for the project.

☐ DSA OAKLAND	☐ DSA SACRAMENTO	☐ DSA LOS ANGELES	☐ DSA SAN DIEGO
1515 Clay Street, Suite 1201 Oakland, CA 94612	1102 Q Street, Suite 5200 Sacramento, CA 95811	700 N. Alameda Street, Suite 5-500 Los Angeles, CA 90012	10920 Via Frontera Rd., Suite 300 San Diego, CA 92127

DSA

IR A-15

TESTING AND INSPECTION OF REMOTELY FABRICATED STRUCTURAL ELEMENTS

Disciplines: Structural

History: Revised 11/09/20 Under 2019 CAC
Last Revised 05/08/18 Under Prior CBCs
Original Issue 08/13/03

Division of the State Architect (DSA) documents referenced within this publication are available on the DSA Forms or DSA Publications webpages.

PURPOSE

The purpose of this Interpretation of Regulations (IR) clarifies requirements for testing materials and inspection of the construction that takes place off-site.

SCOPE

This IR is applicable to off-site construction including, but not limited to: factory-built buildings, proprietary structural elements, poles for lights, curbs/platforms for HVAC units, prefabricated ramps, elevator guide rails, wood and/or steel open-web joists, wood trusses, etc.

Exceptions: The following are outside the scope of this interpretation:

- The fabrication of bleachers (grandstands) is addressed in DSA's Interpretations of Regulations; see *IR 16-5: Design, Fabrication and Inspection of Bleachers, Folding and Telescopic Seating and Grandstands*.
- Packaged equipment such as HVAC units, motors, transformers, etc.
- Equipment that has received seismic certification pre-approval from the Office of Statewide Health Planning and Development (OSHPD).

BACKGROUND

In general, all aspects of the construction shown on the DSA-approved construction documents are subject to the California Building Code (CBC) and California Administrative Code (CAC) requirements for material testing and inspection, regardless of the location where the construction takes place. Since construction practices sometimes utilize specialized off-site manufacturing facilities to construct structures or portions of structures, this IR clarifies the requirements for inspection and structural tests of remotely fabricated items.

1. DEFINITIONS

Factory-Built Building

A building constructed in a plant at a location remote from the project site. Factory-built buildings include, but are not limited to: relocatable buildings, modular buildings (not relocatable), modular elevator towers, press boxes and modular shade structures.

Owner

For the purpose of this IR, owner shall be the State of California for state-owned or state-leased Essential Services Buildings.

Proprietary Structural Element

A structural element made or sold by a company or person that has the exclusive legal right to do so. Examples include, but are not limited to: moment connections qualified under the American Institute of Steel Construction (AISC) 358 and Buckling Restrained Braces.

TESTING AND INSPECTION OF REMOTELY FABRICATED STRUCTURAL ELEMENTS

2. TESTING AND SPECIAL INSPECTION

2.1 Material test and special inspection requirements are listed on form *DSA-103: List of Required Structural Tests and Special Inspections* and in the DSA-approved plans and/or specifications for each project.

The School Board/Owner—with the advice of the responsible architect or engineer—shall select the Laboratory of Record (LOR) to conduct all required structural tests for the project, and special inspections which are contracted to the laboratory. All required structural tests and special inspection services shall be performed by qualified representatives of the LOR, and under the direct supervision of the LOR's DSA-accepted engineering manager.

The School Board/Owner may contract individually and directly with a special inspector that is approved by DSA and supervised by the design professional in general responsible charge in accordance with CAC Section 4-335(f)1.B.

Exception: The LOR may subcontract structural tests and/or special inspections to a laboratory facility that is not DSA-accepted when all of the conditions of Sections 2.1.1 through 2.1.4 are met.

2.1.1 A facility accepted by DSA's Laboratory Evaluation and Acceptance program (LEA) does not exist within 300 miles of either the material supplier and/or the material fabrication location.

2.1.2 The required material test and/or special inspections are routine and the materials to be tested are used in an ordinary manner. Unusual materials and/or applications may require testing by an LEA-accepted facility at the discretion of the DSA field engineer for the project.

2.1.3 The facility to which services are subcontracted operates under the supervision of and reports directly to the LOR's approved engineering manager. The LOR's engineering manager shall verify the subcontracted facility's quality system management, personnel, equipment and operations meet the requirements of CAC Sections 4-335 and 4-335.1.

2.1.4 The LOR's engineering manager shall verify that all subcontracted tests and inspections are performed in accordance with the DSA-approved documents and that reports of such tests and inspections are submitted as required by code. Such supervision and control shall be evidenced by the engineering manager's signature and seal on the verified reports required by code.

3. GENERAL INSPECTION

Certain aspects of construction require inspection by an inspector approved by DSA, regardless of whether the construction occurs at an off-site facility or at the project site. In general, only Special Inspectors, DSA Class 1 inspectors (or equivalent for Essential Services Buildings), and Relocatable Building In-Plant inspectors are approved by DSA to inspect construction that occurs off-site.

Exceptions:

- With prior DSA District Structural Engineer (DSE) or their Supervisor's approval, DSA Class 2 and 3 inspectors may perform off-site construction inspection on projects within the inspector's classification. See *IR A-7: Inspector Certification and Approval*for project classification definitions.
- With prior DSA DSE or their Supervisor's approval, off-site inspection is not required if the nature of the construction allows the shop-fabricated assembly (excluding proprietary structural elements) to be fully inspected at the project site.

TESTING AND INSPECTION OF REMOTELY FABRICATED STRUCTURAL ELEMENTS

3.1 Factory-Built Building In-Plant Inspection

Inspectors performing factory-built building "in-plant" inspection are responsible for all aspects of the inspection of construction and for monitoring all work of the testing laboratories and special inspection that occurs in the fabrication plant. Such aspects of construction include, but are not limited to plywood shear wall nailing, gypsum wall board installation, roofing, electrical or mechanical work, etc., and may include welding inspection provided the inspector is appropriately certified. In-plant construction shall not commence until form *DSA 152 IPI: In-plant Inspector Inspection Card/Verified Report* has been issued by DSA in accordance with *PR 13-01: Construction Oversight Process.* Inspection, reporting, employment and all other aspects of inspection are identical to those defined for project inspectors except that the scope of work for which the "in-plant" inspector is responsible will not be the entire scope of the project. The portions of the construction that will occur in the fabrication plant and the portions that will occur at the project site must be clearly defined as part of the DSA-approved documents.

Exception: For factory-built building stockpile projects, the construction performed in the fabrication plant is the entire scope of the project.

REFERENCES:

California Code of Regulations (CCR) Title 24
Part 1: California Administrative Code (CAC), Sections 4-330 through 4-339

DSA 103-22: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS, 2022 CBC

Application Number:	**School Name:**	**School District:**
03-123205	Compton College	Compton Community College District
DSA File Number:	**Increment Number:**	**Date Created:**
19-C1	02	2023-09-21 13:48:25

2022 CBC

IMPORTANT: This form is only a summary list of structural tests and some of the special inspections required for the project. Generally, the structural tests and special inspections noted on this form are those that will be performed by the Geotechnical Engineer of Record, Laboratory of Record, or Special Inspector. The actual complete test and inspection program must be performed as detailed on the DSA approved documents. The appendix at the bottom of this form identifies work NOT subject to DSA requirements for special inspection or structural testing. The project inspector is responsible for providing inspection of all facets of construction, including but not limited to, special inspections not listed on this form such as structural wood framing, high-load wood diaphragms, cold-formed steel framing, anchorage of non-structural components, etc., per Title 24, Part 2, Chapter 17A (2022 CBC).

****NOTE:** Undefined section and table references found in this document are from the CBC, or California Building Code.

KEY TO COLUMNS

1. TYPE	2. PERFORMED BY
Continuous – Indicates that a continuous special inspection is required **Periodic** – Indicates that a periodic special inspection is required **Test** – Indicates that a test is required	**GE (Geotechnical Engineer)** – Indicates that the special inspection shall be performed by a registered geotechnical engineer or his or her authorized representative. **LOR (Laboratory of Record)** – Indicates that the test or special inspection shall be performed by a testing laboratory accepted in the DSA Laboratory Evaluation and Acceptance (LEA) Program. See CAC Section 4-335. **PI (Project Inspector) –** Indicates that the special inspection may be performed by a project inspector when specifically approved by DSA. **SI (Special Inspection)** – Indicates that the special inspection shall be performed by an appropriately qualified/approved special inspector.

REV B 08/15/2024

DSA 103-22: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (SOILS), 2022 CBC

Table 1705A.6, Table 1705A.7, Table 1705A.8

Application Number:	**School Name:**	**School District:**
03-123205	Compton College	Compton Community College District
DSA File Number:	**Increment Number:**	**Date Created:**
19-C1	02	2023-09-21 13:48:25

Geotechnical Reports: Project has a geotechnical report, or CDs indicate soils special inspection is required by GE

	S1. GENERAL:			
	Test or Special Inspection	**Type**	**Performed By**	**Code References and Notes**
☑	**a.** Verify that: • Site has been prepared properly prior to placement of controlled fill and/or excavations for foundations. • Foundation excavations are extended to proper depth and have reached proper material. • Materials below footings are adequate to achieve the design bearing capacity.	**Periodic**	**GE***	* By geotechnical engineer or his or her qualified representative. (See Appendix (end of this form) form for exemptions.)

	S2. SOIL COMPACTION AND FILL:			
	Test or Special Inspection	**Type**	**Performed By**	**Code References and Notes**
☐	**a.** Perform classification and testing of fill materials.	**Test**	**LOR***	* Under the supervision of the geotechnical engineer.
☑	**b.** Verify use of proper materials, densities and inspect lift thicknesses, placement and compaction during placement of fill.	**Continuous**	**GE***	* By geotechnical engineer or his or her qualified representative. (Refer to specific items identified in the Appendix (end of this form) form for exemptions where soils SI and testing may be conducted under the supervision of a geotechnical engineer or LOR's engineering manager. In such cases, the LOR's form DSA 291 shall satisfy the soil SI and test reporting requirements for the exempt items.)
☑	**c.** Compaction testing.	**Test**	**LOR***	* Under the supervision of the geotechnical engineer. (Refer to specific items identified in the Appendix (end of this form) for exemptions where soils testing may be conducted under the supervision of a geotechnical engineer or LOR's engineering manager. In such cases, the LOR's form DSA 291 shall satisfy the soil test reporting requirements for the exempt items.)

DSA 103-22: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (SOILS), 2022 CBC

Table 1705A.6, Table 1705A.7, Table 1705A.8

Application Number:	**School Name:**	**School District:**
03-123205	Compton College	Compton Community College District
DSA File Number:	**Increment Number:**	**Date Created:**
19-C1	02	2023-09-21 13:48:25

	S3. DRIVEN DEEP FOUNDATIONS (PILES):			
	Test or Special Inspection	**Type**	**Performed By**	**Code References and Notes**
☐	**a.** Verify pile materials, sizes and lengths comply with the requirements.	**Continuous**	**GE***	* By geotechnical engineer or his or her qualified representative.
☐	**b.** Determine capacities of test piles and conduct additional load tests as required.	**Test**	**LOR***	* Under the supervision of the geotechnical engineer.
☐	**c.** Inspect driving operations and maintain complete and accurate records for each pile.	**Continuous**	**GE***	* By geotechnical engineer or his or her qualified representative.
☐	**d.** Verify locations of piles and their plumbness, confirm type and size of hammer, record number of blows per foot of penetration, determine required penetrations to achieve design capacity, record tip and butt elevations and record any pile damage.	**Continuous**	**GE***	* By geotechnical engineer or his or her qualified representative.
☐	**e.** Steel piles.	Provide tests and inspections per STEEL section below.		
☐	**f.** Concrete piles and concrete filled piles.	Provide tests and inspections per CONCRETE section below.		
☐	**g.** For specialty piles, perform additional inspections as determined by the registered design professional in responsible charge.	*	*	* As defined on drawings or specifications.

	S4. CAST-IN-PLACE DEEP FOUNDATIONS (PIERS):			
	Test or Special Inspection	**Type**	**Performed By**	**Code References and Note**
☐	**a.** Inspect drilling operations and maintain complete and accurate records for each pier.	**Continuous**	**GE***	* By geotechnical engineer or his or her qualified representative. (See Appendix (end of this form) for exemptions.)

DSA 103-22: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (SOILS), 2022 CBC

Table 1705A.6, Table 1705A.7, Table 1705A.8

Application Number:	**School Name:**	**School District:**
03-123205	Compton College	Compton Community College District
DSA File Number:	**Increment Number:**	**Date Created:**
19-C1	02	2023-09-21 13:48:25

	Test or Special Inspection	**Type**	**Performed By**	**Code References and Note**
☐	**b.** Verify pier locations, diameters, plumbness, bell diameters (if applicable), lengths and embedment into bedrock (if applicable); record concrete or grout volumes.	**Continuous**	**GE***	* By geotechnical engineer or his or her qualified representative. (See Appendix (end of this form) for exemptions.)
☐	**c.** Confirm adequate end strata bearing capacity.	**Continuous**	**GE***	* By geotechnical engineer or his or her qualified representative. (See Appendix (end of this form) for exemptions.)
☐	**d.** Concrete piers.	Provide tests and inspections per CONCRETE section below.		

	S5. RETAINING WALLS:			
	Test or Special Inspection	**Type**	**Performed By**	**Code References and Notes**
☐	**a.** Placement, compaction and inspection of backfill.	**Continuous**	**GE***	**1705A.6.1.** * By geotechnical engineer or his or her qualified representative. (See section S2 above).
☐	**b.** Placement of soil reinforcement and/or drainage devices.	**Continuous**	**GE***	* By geotechnical engineer or his or her qualified representative.
☐	**c.** Segmental retaining walls; inspect placement of units, dowels, connectors, etc.	**Continuous**	**GE***	* By geotechnical engineer or his or her qualified representative. See DSA IR 18-2.
☐	**d.** Concrete retaining walls.	Provide tests and inspections per CONCRETE section below.		
☐	**e.** Masonry retaining walls.	Provide tests and inspections per MASONRY section below.		

DSA 103-22: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (SOILS), 2022 CBC

Table 1705A.6, Table 1705A.7, Table 1705A.8

Application Number:	**School Name:**	**School District:**
03-123205	Compton College	Compton Community College District
DSA File Number:	**Increment Number:**	**Date Created:**
19-C1	02	2023-09-21 13:48:25

	S6. OTHER SOILS:			
	Test or Special Inspection	**Type**	**Performed By**	**Code References and Notes**
☐	**a.** Soil Improvements	**Test**	**GE***	Submit a comprehensive report documenting final soil improvements constructed, construction observation and the results of the confirmation testing and analysis to CGS (California Geological Survey) for final acceptance. * By geotechnical engineer or his or her qualified representative.
☐	**b.** Inspection of Soil Improvements	**Continuous**	**GE***	* By geotechnical engineer or his or her qualified representative.
☐	**c.**			

DSA 103-22: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (CONCRETE), 2022 CBC

Table 1705A.3; ACI 318-19 Sections 26.12 & 26.13

Application Number:	**School Name:**	**School District:**
03-123205	Compton College	Compton Community College District
DSA File Number:	**Increment Number:**	**Date Created:**
19-C1	02	2023-09-21 13:48:25

	C1. CAST-IN-PLACE CONCRETE			
	Test or Special Inspection	**Type**	**Performed By**	**Code References and Notes**
☑	**a.** Verify use of required design mix.	**Periodic**	**SI**	**Table 1705A.3 Item 5, 1910A.1.**
☑	**b.** Identifiy, sample, and test reinforcing steel.	**Test**	**LOR**	**1910A.2;** ACI 318-19 Ch.20 and Section 26.6.1.2; DSA IR 17-10. (See Appendix (end of this form) for exemptions.)
☑	**c.** During concrete placement, fabricate specimens for strength tests, perform slump and air content tests, and determine the temperature of the concrete.	**Test**	**LOR**	**Table 1705A.3 Item 6**; ACI 318-19 Sections 26.5 & 26.12.
☑	**d.** Test concrete (f'_c).	**Test**	**LOR**	**1905A.1.17;** ACI 318-19 Section 26.12.
☑	**e.** Batch plant inspection: **Periodic**	**See Notes**	**SI**	Default of **'Continuous'** per **1705A.3.3**. If approved by DSA, batch plant inspection may be reduced to **'Periodic'** subject to requirements in Section **1705A.3.3.1,** or eliminated per **1705A.3.3.2.** See IR 17-13. (See Appendix (end of this form) for exemptions.)
☐	**f.** Welding of reinforcing steel.	Provide special inspection per STEEL, Category S/A4(d) & (e) and/or S/A5(g) & (h) below.		

	C2. PRESTRESSED / POST-TENSIONED CONCRETE (IN ADDITION TO SECTION C1):			
	Test or Special Inspection	**Type**	**Performed By**	**Code References and Notes**
☐	**a.** Sample and test prestressing tendons and anchorages.	**Test**	**LOR**	**1705A.3.4, 1910A.3**
☐	**b.** Inspect placement of prestressing tendons.	**Periodic**	**SI**	**1705A.3.4, Table 1705A.3 Items 1 & 9.**

	Test or Special Inspection	Type	Performed By	Code References and Notes
☐	**c.** Verify in-situ concrete strength prior to stressing of post-tensioning tendons.	**Periodic**	**SI**	**Table 1705A.3 Item 13.** Special inspector to verify specified concrete strength test prior to stressing.
☐	**d.** Inspect application of post-tensioning or prestressing forces and grouting of bonded prestressing tendons.	**Continuous**	**SI**	**1705A.3.4, Table 1705A.3 Item 9;** ACI 318-14 Section 26.13

	C3. PRECAST CONCRETE (IN ADDITION TO SECTION C1):			
	Test or Special Inspection	**Type**	**Performed By**	**Code References and Notes**
☐	**a.** Inspect fabrication of precast concrete members.	**Continuous**	**SI**	ACI 318-19 Section 26.13.
☐	**b.** Inspect erection of precast concrete members.	**Periodic**	**SI***	**Table 1705A.3 Item 10.** * May be performed by PI when specifically approved by DSA.
☐	**c.** For precast concrete diaphragm connections or reinforcement at joints classified as moderate or high deformability elements (MDE or HDE) in structures assigned to Seismic Design Category D, E or F, inspect such connections and reinforcement in the field for: 1. Installation of the embedded parts 2. Completion of the continuity of reinforcement across joints. 3. Completion of connections in the field.	**Continuous**	**SI**	Table 1705A.3; ACI 318-19 Section 26.13.1.3; ACI 550.5
☐	**d.** Inspect installation tolerances of precast concrete diaphragm connections for compliance with ACI 550.5.	**Periodic**	**SI**	Table 1705A.3; ACI 318-19 Section 26.13.1.3; ACI 550.5

	C4. SHOTCRETE (IN ADDITION TO SECTION C1):			
	Test or Special Inspection	**Type**	**Performed By**	**Code References and Notes**
☐	**a.** Inspect shotcrete placement for proper application techniques.	**Continuous**	**SI**	**1705A.3.9, Table 1705A.3 Item 7, 1908A.1, 1908A.2, 1908A.3.** See ACI 506.2-13 Section 3.4, ACI 506R-16.
☐	**b.** Sample and test shotcrete (f'_c).	**Test**	**LOR**	**1908A.2, 1705A.3.9**

	C5. POST-INSTALLED ANCHORS:			
	Test or Special Inspection	**Type**	**Performed By**	**Code References and Notes**
☑	**a.** Inspect installation of post-installed anchors	**See Notes**	**SI***	**1617A.1.19, Table 1705A.3 Item 4a (Continuous) & 4b (Periodic), 1705A.3.8** (See Appendix (end of this form) for exemptions). ACI 318-14 Sections 17.8 & 26.13. * May be performed by the project inspector when specifically approved by DSA.
☑	**b.** Test post-installed anchors.	**Test**	**LOR**	**1910A.5.** (See Appendix (end of this form) for exemptions.)

	C6. OTHER CONCRETE:			
	Test or Special Inspection	**Type**	**Performed By**	**Code References and Notes**
☐	**a.**			

DSA 103-22: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (STEEL AND ALUMNINUM), 2022 CBC

1705A.2.1, Table 1705A.2.1; AISC 303-16, AISC 341-16, AISC 358-16, AISC 360-16; AISI S100-20; RCSC 2014; AWS D1.1, AWS D1.2, AWS D1.3, AWS D1.4, AWS D1.8

Application Number:	**School Name:**	**School District:**
03-123205	Compton College	Compton Community College District
DSA File Number:	**Increment Number:**	**Date Created:**
19-C1	02	2023-09-21 13:48:25

	S/A1. STRUCTURAL STEEL, COLD-FORMED STEEL AND ALUMINUM USED FOR STRUCTURAL PURPOSES			
	Test or Special Inspection	**Type**	**Performed By**	**Code References and Notes**
☑	**a.** Verify identification of all materials and: • Mill certificates indicate material properties that comply with requirements. • Material sizes, types and grades comply with requirements.	**Periodic**	*	**Table 1705A.2.1 Item 3a–3c.** 2202A.1**;** AISI S100-20 Section A3.1 & A3.2, AISI S240-20 Section A3 & A5, AISI S220-20 Sections A4 & A6. * By special inspector or qualified technician when performed off-site.
☑	**b.** Test unidentified materials	**Test**	**LOR**	**2202A.1.**
☑	**c.** Examine seam welds of HSS shapes	**Periodic**	**SI**	DSA IR 17-3.
☑	**d.** Verify and document steel fabrication per DSA-approved construction documents.	**Periodic**	**SI**	Not applicable to cold-formed steel light-frame construction, except for trusses (**1705A.2.4**).
☐	**e.** Buckling restrained braces.	**Test**	**LOR**	Testing and special inspections in accordance with IR 22-4.

	S/A2. HIGH-STRENGTH BOLTS:			
	Test or Special Inspection	**Type**	**Performed By**	**Code References and Notes**
☑	**a.** Verify identification markings and manufacturer's certificates of compliance conform to ASTM standards specified in the DSA-approved documents.	**Periodic**	**SI**	**Table 1705A.2.1 Items 1a & 1b, 2202A.1;** AISC 360-16 Section A3.3, J3.1, and N3.2; RCSC 2014 Section 1.5 & 2.1; DSA IR 17-8 & DSA IR 17-9.
☑	**b.** Test high-strength bolts, nuts and washers.	**Test**	**LOR**	**Table 1705A.2.1 Item 1c, 2213A.1**; RCSC 2014 Section 7.2; DSA IR 17-8.
☑	**c.** Bearing-type ("snug tight") connections.	**Periodic**	**SI**	**Table 1705A.2.1 Item 2a, 1705A.2.6, 2204A.2**; AISC 360-16 J3.1, J3.2, M2.5 & N5.6; RCSC 2014 Section 9.1; DSA IR 17-9.
☑	**d.** Pretensioned and slip-critical connections.	*	**SI**	**Table 1705A.2.1 Items 2b & 2c, 1705A.2.6, 2204A.2;** AISC 360-16 J3.1, J3.2, M2.5 & N5.6; RCSC 2014 Sections 9.2 & 9.3; DSA IR 17-9. *"Continuous" or "Periodic" depends on the tightening method used.

	S/A3. WELDING:			
	Test or Special Inspection	**Type**	**Performed By**	**Code References and Notes**
☑	**a.** Verify weld filler material identification markings per AWS designation listed on the DSA-approved documents and the WPS.	**Periodic**	**SI**	**1705A.2.5, Table 1705A.2.1 Items 4 & 5**; AWS D1.1 and AWS D1.8 for structural steel; AWS D1.2 for Aluminum; AWS D1.3 for cold-formed steel; AWS D1.4 for reinforcing steel; DSA IR 17-3.
☑	**b.** Verify weld filler material manufacturer's certificate of compliance.	**Periodic**	**SI**	DSA IR 17-3.
☑	**c.** Verify WPS, welder qualifications and equipment.	**Periodic**	**SI**	DSA IR 17-3.

	S/A4. SHOP WELDING (IN ADDITION TO SECTION S/A3):			
	Test or Special Inspection	**Type**	**Performed By**	**Code References and Notes**
☑	**a.** Inspect groove welds, multi-pass fillet welds, single pass fillet welds > 5/16", plug and slot welds.	**Continuous**	**SI**	**Table 1705A.2.1 Items 5a.1–4;** AISC 360-16 (and AISC 341-16 as applicable); DSA IR 17-3.
☑	**b.** Inspect single-pass fillet welds ≤ 5/16", floor and roof deck welds.	**Periodic**	**SI**	**1705A.2.2, Table 1705A.2.1 Items 5a.5 & 5a.6;** AISC 360-16 (and AISC 341-16 as applicable); DSA IR 17-3.
☑	**c.** Inspect welding of stairs and railing systems.	**Periodic**	**SI**	**1705A.2.1**; AISC 360-16 (and AISC 341-16 as applicable); AWS D1.1 & D1.3; DSA IR 17-3.
☐	**d.** Verification of reinforcing steel weldability other than ASTM A706.	**Periodic**	**SI**	**1705A.3.1**; AWS D1.4; DSA IR 17-3. Verify carbon equivalent reported on mill certificates.
☐	**e.** Inspect welding of reinforcing steel.	**Continuous**	**SI**	**Table 1705A.2.1 Item 5b, 1705A.3.1, Table 1705A.3 Item 2, 1903A.8;** AWS D1.4; DSA IR 17-3.

	Test or Special Inspection	Type	Performed By	Code References and Notes
	S/A5. FIELD WELDING (IN ADDITION TO SECTION S/A3):			
	Test or Special Inspection	**Type**	**Performed By**	**Code References and Notes**
☑	**a.** Inspect groove welds, multi-pass fillet welds, single pass fillet welds > 5/16", plug and slot welds.	**Continuous**	**SI**	**Table 1705A.2.1 Items 5a.1–4;** AISC 360-16 (AISC 341-16 as applicable); DSA IR 17-3.
☑	**b.** Inspect single-pass fillet welds ≤ 5/16".	**Periodic**	**SI**	**Table 1705A.2.1 Item 5a.5;** AISC 360-16 (AISC 341-16 as applicable); DSA IR 17-3.
☑	**c.** Inspect end-welded studs (ASTM A-108) installation (including bend test).	**Periodic**	**SI**	**2213A.2**; AISC 360-16 (AISC 341-16 as applicable); AWS D1.1; DSA IR 17-3.
☑	**d.** Inspect floor and roof deck welds.	**Periodic**	**SI**	**1705A.2.2, Table 1705A.2.1 Item 5a.6;** AISC 360-16 (AISC 341-16 as applicable); AWS D1.3; DSA IR 17-3.
☐	**e.** Inspect welding of structural cold-formed steel.	**Periodic**	**SI***	**1705A.2.5; AWS D1.3; DSA IR 17-3.** The quality control provisions of AISI S240-20 Chapter D shall also apply. * May be performed by the project inspector when specifically approved by DSA.
☑	**f.** Inspect welding of stairs and railing systems.	**Periodic**	**SI***	**1705A.2.1;** AISC 360-16 (AISC 341-16 as applicable); AWS D1.1 & D1.3; DSA IR 17-3. * May be performed by the project inspector when specifically approved by DSA.
☐	**g.** Verification of reinforcing steel weldability.	**Periodic**	**SI**	**1705A.3.1**; AWS D1.4; DSA IR 17-3. Verify carbon equivalent reported on mill certificates.
☐	**h.** Inspect welding of reinforcing steel.	**Continuous**	**SI**	**Table 1705A.2.1 Item 5b, 1705A.3.1, Table 1705A.3 Item 2, 1903A.8;** AWS D1.4; DSA IR 17-3.

	Test or Special Inspection	**Type**	**Performed By**	**Code References and Notes**
	S/A6. NONDESTRUCTIVE TESTING:			
	Test or Special Inspection	**Type**	**Performed By**	**Code References and Notes**
☑	**a.** Ultrasonic	**Test**	**LOR**	**1705A.2.1, 1705A.2.5;** AISC 341-16 J6.2, AISC 360-16 N5.5; AWS D1.1, AWS D1.8; DSA IR 17-2.
☐	**b.** Magnetic Particle	**Test**	**LOR**	**1705A.2.1, 1705A.2.5;** AISC 341-16 J6.2, AISC 360-16 N5.5; AWS D1.1, AWS D1.8; DSA IR 17-2.
☐	**c.**	**Test**	**LOR**	

	S/A7. STEEL JOISTS AND TRUSSES:			
	Test or Special Inspection	**Type**	**Performed By**	**Code References and Notes**
☐	**a.** Verify size, type and grade for all chord and web members as well as connectors and weld filler material; verify joist profile, dimensions and camber (if applicable); verify all weld locations, lengths and profiles; mark or tag each joist.	**Continuous**	**SI**	**1705A.2.3, Table 1705A.2.3;** AWS D1.1; DSA IR 22-3 for steel joists only. **1705A.2.4;** AWS D1.3 for cold-formed steel trusses.

	Test or Special Inspection	**Type**	**Performed By**	**Code References and Notes**
	S/A8. SPRAYED FIRE-RESISTANT MATERIALS:			
	Test or Special Inspection	**Type**	**Performed By**	**Code References and Notes**
☐	**a.** Examine structural steel surface conditions, inspect application, take samples, measure thickness and verify compliance of all aspects of application with DSA-approved documents.	**Periodic**	**SI**	**1705A.15, 1705A.1, 1705A.2, 1705A.3, 1705A.4.**
☐	**b.** Test density.	**Test**	**LOR**	**1705A.15.1, 1705A.15.5, ASTM E736**
☐	**c.** Bond strength adhesion/cohesion.	**Test**	**LOR**	**1705A.15.1, 1705A.15.4, ASTM E605**

	S/A9. ANCHOR BOLTS AND ANCHOR RODS:			
	Test or Special Inspection	**Type**	**Performed By**	**Code References and Notes**
☑	**a.** Anchor Bolts and Anchor Rods	**Test**	**LOR**	Sample and test anchor bolts and anchor rods not readily identifiable per procedures noted in DSA IR 17-11.
☐	**b.** Threaded rod not used for foundation anchorage.	**Test**	**LOR**	Sample and test threaded rods not readily identifiable per procedures noted in DSA IR 17-11.

	S/A10. STORAGE RACK SYSTEMS:			
	Test or Special Inspection	**Type**	**Performed By**	**Code References and Notes**
☐	**a.** Materials used, to verify compliance with one or more of the material test reports in accordance with the approved construction documents.	**Periodic**	**SI**	Table 1705A.13.7
☐	**b.** Fabricated storage rack elements.	**Periodic**	**SI**	1704A.2.5; Table 1705A.13.7

	Test or Special Inspection	Type	Performed By	Code References and Notes
☐	**c.** Storage rack anchorage installation.	**Periodic**	**SI**	ANSI/MH16.1 Section 7.3.2; Table 1705A.13.7
☐	**d.** Completed storage rack system to indicate compliance with the approved construction documents.	**Periodic**	**SI***	Table 1705A.13.7; * May be preformed by the project inspector when specifically approved by DSA.

	S/A11. Other Steel			
	Test or Special Inspection	**Type**	**Performed By**	**Code References and Notes**
☐	**a.**			

DSA 103-22: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (WOOD), 2022 CBC

1705A.5, Table 1705A.5.7

Application Number:	**School Name:**	**School District:**
03-123205	Compton College	Compton Community College District
DSA File Number:	**Increment Number:**	**Date Created:**
19-C1	02	2023-09-21 13:48:25

	W1. PREFABRICATED WOOD TRUSSES:			
	Test or Special Inspection	**Type**	**Performed By**	**Code References and Notes**
☐	**a.** Inspect fabrication of manufactured open-web trusses.	**Continuous**	**SI**	**1705A.5.6;** DSA IR 23-8.
☐	**b.** Inspect fabrication of manufactured metal-plate-connected trusses.	**Continuous**	**SI**	**1705A.5.6, 1705A.5.7;** DSA IR 23-4.

	W2. MANUFACTURED WOOD STRUCTURAL ELEMENTS:			
	Test or Special Inspection	**Type**	**Performed By**	**Code References and Notes**
☑	**a.** Inspect fabrication of structural glued-laminated timber.*	**Continuous**	**SI**	* See **1705A.5.5** for exceptions
☐	**b.** Inspect fabrication of cross-laminated timber.	**Continuous**	**SI**	**1705A.5.5**
☐	**c.** Inspect erection of mass timber.	**Peridodic**	**SI**	**Table 1705A.5.3**, Item 2
☐	**d.** Inspect mass timber connections with threaded fasteners, bolts, and/or adhesive anchors other than described in item e below. Inspect concealed mass timber connections.	**Peridodic**	**SI**	**Table 1705A.5.3**, Items 3.1, 3.3, 3.4, 3.5. For threaded fasteners: Verify use of proper installation equipment. Verify use of pre-drilled holes where required. Inspect screws, including diameter, length, head type, spacing, installation angle, and depth.
☐	**e.** Inspect mass timber connections with adhesive anchors installed in a horizontal or upward orientation.	**Continuous**	**SI**	**Table 1705A.5.3**, Item 3.2
☐	**f.** Inspect application of sealants or adhesives applied to mass timber elements.	**Peridodic**	**SI**	**1705A.20**

DSA 103-22: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (WOOD), 2022 CBC

1705A.5, Table 1705A.5.7

Application Number:	**School Name:**	**School District:**
03-123205	Compton College	Compton Community College District
DSA File Number:	**Increment Number:**	**Date Created:**
19-C1	02	2023-09-21 13:48:25

	W3. OTHER Wood:			
	Test or Special Inspection	**Type**	**Performed By**	**Code References and Notes**
☐	**a.**			

REV B 08/15/2024

Appendix: Work Exempt from DSA Requirements for Structural Tests / Special Inspections

Application Number:	School Name:	School District:
03-123205	Compton College	Compton Community College District
DSA File Number:	**Increment Number:**	**Date Created:**
19-C1	02	2023-09-21 13:48:25

Exempt items given in DSA IR A-22 or the 2019 CBC (including DSA amendments) and those items identified below with a check mark by the design professional are NOT subject to DSA requirements for the structural tests **/** special inspections noted. **Items marked as exempt shall be identified on the approved construction documents**. The project inspector shall verify all construction complies with the approved construction documents.

	SOILS:
☐	1. Deep foundations acting as a cantilever footing with a design based on minimum allowable pressures per CBC Table 1806A.2 and without a geotechnical report for the following cases: A) free standing sign or scoreboard, B) cell or antenna towers and poles less than 35'-0" tall (e.g., lighting poles, flag poles, poles supporting open mesh fences, etc.), C) single-story structure with dead load less than 5 psf (e.g., open fabric shade structure), or D) covered walkway structure with an apex height less than 10'-0" above adjacent grade.
☐	2. Shallow foundations, etc. are exempt from special inspections and testing by a Geotechnical Engineer for the following cases: A) buildings without a geotechnical report and meeting the exception item #1 criteria in CBC Section 1803A.2 supported by native soil (any excavation depth) or fill soil (not exceeding 12" depth per CBC Section 1804A.6), B) soil scarification/recompaction not exceeding 12" depth, C) native or fill soil supporting exterior non-structural flatwork (e.g., sidewalks, site concrete ramps, site stairs, parking lots, driveways, etc.), D) unpaved landscaping and playground areas, or E) utility trench backfill.

	CONCRETE/MASONRY:
☐	1. Post-installed anchors for the following: A) exempt non-structural components (e.g., mechanical, electrical, plumbing equipment - see item 7 for "Welding" in the Appendix below) given in CBC Section 1617A.1.18 (which replaces ASCE 7-16, Section 13.1.4) or B) interior nonstructural wall partitions meeting criteria listed in exempt item 3 for "Welding" in the Appendix below
☐	2. Concrete batch plant inspection is not required for items given in CBC Section 1705A.3.3.2 subject to the requirements and limitations in that section.
☐	3. Non-bearing non-shear masonry walls may be exempt from certain DSA masonry testing and special inspection items as allowed per DSA IR 21-1. Refer to construction documents for specific exemptions accordingly for each applicable wall condition.
☐	4. Epoxy shear dowels in site flatwork and/or other non-structural concrete.

Appendix: Work Exempt from DSA Requirements for Structural Tests / Special Inspections

Application Number:	School Name:	School District:
03-123205	Compton College	Compton Community College District
DSA File Number:	**Increment Number:**	**Date Created:**
19-C1	02	2023-09-21 13:48:25

	CONCRETE/MASONRY:
☐	5. Testing of reinforcing bars is not required for items given in CBC Section 1910A.2 subject to the requirements and limitations in that section.

	WELDING:
☐	1. Solid-clad and open-mesh fences, gates with maximum leaf span of 10', and gates with a maximum rolling section of 10' all having an apex height less than 8'-0" above lowest adjacent grade. When located above circulation or occupied space below, these gates/fences are not located within 1.5x gate/fence height (max 8'-0") to the edge of floor or roof.
☐	2. Handrails, guardrails, and modular or relocatable ramps associated with walking surfaces less than 30" above adjacent grade (excluding post base connections per the 'Exception' language in Section 1705A.2.1); fillet welds shall not be ground flush.
☐	3. Non-structural interior cold-formed steel framing spanning less than 15'-0", such as in interior partitions, interior soffits, etc. supporting only self weight and light-weight finishes or adhered tile, masonry, stone, or terra cotta veneer no more than 5/8" thickness and apex less than 20'-0" in height and not over an exit way. Maximum tributary load to a member shall not exceed the equivalent of that occurring from a 10'x10' opening in a 15' tall wall for a header or king stud.
☐	4. Manufactured support frames and curbs using hot rolled or cold-formed steel (i.e., light gauge) for mechanical, electrical, or plumbing equipment weighing less than 2000# (equipment only) (connections of such frames to superstructure elements using welding will require special inspection as noted in selected item(s) for Sections S/A3, S/A4 and/or S/A5 of listing above).
☐	5. Manufactured components (e.g., Tolco, B-Line, Afcon, etc.) for mechanical, electrical, or plumbing hanger support and bracing (connections of such components to superstructure elements using welding will require special inspection as noted in selected item(s) for Sections S/A3, S/A4 and/or S/A5 of listing above).
☐	6. TV Brackets, projector mounts with a valid listing (see DSA IR A-5) and recreational equipment (e.g., playground structures, basketball backstops, etc.) (connections of such elements to superstructure elements using welding will require special inspection as noted in selected item(s) for sections S/A3, S/A4 and/or S/A5 located in the Steel/Aluminum category of listing above).
☐	7. Any support for exempt non-structural components given in CBC Section 1617A.1.18 (which replaces ASCE 7-16, Section 13.1.4) meeting the following: A) when supported on a floor/roof, <400# and resulting composite center of mass (including component's center of mass) ≤4' above supporting floor/roof, B) when hung from a wall or roof/floor, <20# for discrete units or <5 plf for distributed systems.

DSA 103-22: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS(SIGNATURE), 2022 CBC

Application Number:	**School Name:**	**School District:**
03-123205	Compton College	Compton Community College District
DSA File Number:	**Increment Number:**	**Date Created:**
19-C1	02	2023-09-21 13:48:25

Name of Architect or Engineer in general responsible charge:

Shane S. Fitzgerald, SE, DBIA

Name of Structural Engineer (When structural design has been delegated):

Signature of Architect or Structural Engineer:  Date: 10/19/2023

Note: To facilitate DSA electronic mark-ups and identification stamp application, DSA recommends against using secured electronic or digital signatures.

DSA STAMP

REV B 08/15/2024

DSA 103-22: LIST OF REQUIRED VERIFIED REPORTS, CBC 2022

Application Number:	School Name:	School District:
03-123205	Compton College	Compton Community College District
DSA File Number:	**Increment Number:**	**Date Created:**
19-C1	02	2023-09-21 13:48:25

1. Soils Testing and Inspection: Geotechnical Verified Report Form DSA 293
2. Structural Testing and Inspection: Laboratory Verified Report Form DSA 291
3. Concrete Batch Plant Inspection: Laboratory Verified Report Form DSA 291
4. Post-installed Anchors: Laboratory Verified Report Form DSA 291, or, for independently contracting SI, Special Inspection Verified Report Form DSA 292
5. Shop Welding Inspection: Laboratory Verified Report Form DSA 291, or, for independently contracting SI, Special Inspection Verified Report Form DSA 292
6. Field Welding Inspection: Laboratory Verified Report Form DSA 291, or, for independently contracting SI, Special Inspection Verified Report Form DSA 292
7. High-Strength Bolt Installation Inspection: Laboratory Verified Report Form DSA 291, or, for independently contracting SI, Special Inspection Verified Report Form DSA 292
8. Mass Timber Inspection: Laboratory Verified Report Form DSA 291 , or, for independently contracting SI, Special Inspection Verified Report Form DSA 292

DSA 103-22: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS, 2022 CBC

Application Number:	**School Name:**	**School District:**
03-123205	Compton College	Compton Community College District
DSA File Number:	**Increment Number:**	**Date Created:**
	01	2023-04-03 08:54:01

2022 CBC

IMPORTANT: This form is only a summary list of structural tests and some of the special inspections required for the project. Generally, the structural tests and special inspections noted on this form are those that will be performed by the Geotechnical Engineer of Record, Laboratory of Record, or Special Inspector. The actual complete test and inspection program must be performed as detailed on the DSA approved documents. The appendix at the bottom of this form identifies work NOT subject to DSA requirements for special inspection or structural testing. The project inspector is responsible for providing inspection of all facets of construction, including but not limited to, special inspections not listed on this form such as structural wood framing, high-load wood diaphragms, cold-formed steel framing, anchorage of non-structural components, etc., per Title 24, Part 2, Chapter 17A (2022 CBC).

****NOTE:** Undefined section and table references found in this document are from the CBC, or California Building Code.

KEY TO COLUMNS

1. TYPE	2. PERFORMED BY
Continuous – Indicates that a continuous special inspection is required **Periodic** – Indicates that a periodic special inspection is required **Test** – Indicates that a test is required	**GE (Geotechnical Engineer)** – Indicates that the special inspection shall be performed by a registered geotechnical engineer or his or her authorized representative. **LOR (Laboratory of Record)** – Indicates that the test or special inspection shall be performed by a testing laboratory accepted in the DSA Laboratory Evaluation and Acceptance (LEA) Program. See CAC Section 4-335. **PI (Project Inspector) –** Indicates that the special inspection may be performed by a project inspector when specifically approved by DSA. **SI (Special Inspection)** – Indicates that the special inspection shall be performed by an appropriately qualified/approved special inspector.

REV B 08/15/2024

DSA 103-22: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (SOILS), 2022 CBC

Table 1705A.6, Table 1705A.7, Table 1705A.8

Application Number:	**School Name:**	**School District:**
03-123205	Compton College	Compton Community College District
DSA File Number:	**Increment Number:**	**Date Created:**
	01	2023-04-03 08:54:01

Geotechnical Reports: Project has a geotechnical report, or CDs indicate soils special inspection is required by GE

	S1. GENERAL:			
	Test or Special Inspection	**Type**	**Performed By**	**Code References and Notes**
☑	**a.** Verify that: • Site has been prepared properly prior to placement of controlled fill and/or excavations for foundations. • Foundation excavations are extended to proper depth and have reached proper material. • Materials below footings are adequate to achieve the design bearing capacity.	**Periodic**	**GE***	* By geotechnical engineer or his or her qualified representative. (See Appendix (end of this form) form for exemptions.)

	S2. SOIL COMPACTION AND FILL:			
	Test or Special Inspection	**Type**	**Performed By**	**Code References and Notes**
☐	**a.** Perform classification and testing of fill materials.	**Test**	**LOR***	* Under the supervision of the geotechnical engineer.
☐	**b.** Verify use of proper materials, densities and inspect lift thicknesses, placement and compaction during placement of fill.	**Continuous**	**GE***	* By geotechnical engineer or his or her qualified representative. (Refer to specific items identified in the Appendix (end of this form) form for exemptions where soils SI and testing may be conducted under the supervision of a geotechnical engineer or LOR's engineering manager. In such cases, the LOR's form DSA 291 shall satisfy the soil SI and test reporting requirements for the exempt items.)
☐	**c.** Compaction testing.	**Test**	**LOR***	* Under the supervision of the geotechnical engineer. (Refer to specific items identified in the Appendix (end of this form) for exemptions where soils testing may be conducted under the supervision of a geotechnical engineer or LOR's engineering manager. In such cases, the LOR's form DSA 291 shall satisfy the soil test reporting requirements for the exempt items.)

DSA 103-22: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (SOILS), 2022 CBC

Table 1705A.6, Table 1705A.7, Table 1705A.8

Application Number:	**School Name:**	**School District:**
03-123205	Compton College	Compton Community College District
DSA File Number:	**Increment Number:**	**Date Created:**
	01	2023-04-03 08:54:01

	S3. DRIVEN DEEP FOUNDATIONS (PILES):			
	Test or Special Inspection	**Type**	**Performed By**	**Code References and Notes**
☐	**a.** Verify pile materials, sizes and lengths comply with the requirements.	**Continuous**	**GE***	* By geotechnical engineer or his or her qualified representative.
☐	**b.** Determine capacities of test piles and conduct additional load tests as required.	**Test**	**LOR***	* Under the supervision of the geotechnical engineer.
☐	**c.** Inspect driving operations and maintain complete and accurate records for each pile.	**Continuous**	**GE***	* By geotechnical engineer or his or her qualified representative.
☐	**d.** Verify locations of piles and their plumbness, confirm type and size of hammer, record number of blows per foot of penetration, determine required penetrations to achieve design capacity, record tip and butt elevations and record any pile damage.	**Continuous**	**GE***	* By geotechnical engineer or his or her qualified representative.
☐	**e.** Steel piles.	Provide tests and inspections per STEEL section below.		
☐	**f.** Concrete piles and concrete filled piles.	Provide tests and inspections per CONCRETE section below.		
☐	**g.** For specialty piles, perform additional inspections as determined by the registered design professional in responsible charge.	*	*	* As defined on drawings or specifications.

	S4. CAST-IN-PLACE DEEP FOUNDATIONS (PIERS):			
	Test or Special Inspection	**Type**	**Performed By**	**Code References and Note**
☐	**a.** Inspect drilling operations and maintain complete and accurate records for each pier.	**Continuous**	**GE***	* By geotechnical engineer or his or her qualified representative. (See Appendix (end of this form) for exemptions.)

DSA 103-22: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (SOILS), 2022 CBC

Table 1705A.6, Table 1705A.7, Table 1705A.8

Application Number:	**School Name:**	**School District:**
03-123205	Compton College	Compton Community College District
DSA File Number:	**Increment Number:**	**Date Created:**
	01	2023-04-03 08:54:01

	Test or Special Inspection	**Type**	**Performed By**	**Code References and Note**
☐	**b.** Verify pier locations, diameters, plumbness, bell diameters (if applicable), lengths and embedment into bedrock (if applicable); record concrete or grout volumes.	**Continuous**	**GE***	* By geotechnical engineer or his or her qualified representative. (See Appendix (end of this form) for exemptions.)
☐	**c.** Confirm adequate end strata bearing capacity.	**Continuous**	**GE***	* By geotechnical engineer or his or her qualified representative. (See Appendix (end of this form) for exemptions.)
☐	**d.** Concrete piers.	Provide tests and inspections per CONCRETE section below.		

	S5. RETAINING WALLS:			
	Test or Special Inspection	**Type**	**Performed By**	**Code References and Notes**
☐	**a.** Placement, compaction and inspection of backfill.	**Continuous**	**GE***	**1705A.6.1.** * By geotechnical engineer or his or her qualified representative. (See section S2 above).
☐	**b.** Placement of soil reinforcement and/or drainage devices.	**Continuous**	**GE***	* By geotechnical engineer or his or her qualified representative.
☐	**c.** Segmental retaining walls; inspect placement of units, dowels, connectors, etc.	**Continuous**	**GE***	* By geotechnical engineer or his or her qualified representative. See DSA IR 18-2.
☐	**d.** Concrete retaining walls.	Provide tests and inspections per CONCRETE section below.		
☐	**e.** Masonry retaining walls.	Provide tests and inspections per MASONRY section below.		

DSA 103-22: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (SOILS), 2022 CBC

Table 1705A.6, Table 1705A.7, Table 1705A.8

Application Number: 03-123205	**School Name:** Compton College	**School District:** Compton Community College District
DSA File Number:	**Increment Number:** 01	**Date Created:** 2023-04-03 08:54:01

	S6. OTHER SOILS:			
	Test or Special Inspection	**Type**	**Performed By**	**Code References and Notes**
☑	**a.** Soil Improvements	**Test**	**GE***	Submit a comprehensive report documenting final soil improvements constructed, construction observation and the results of the confirmation testing and analysis to CGS (California Geological Survey) for final acceptance. * By geotechnical engineer or his or her qualified representative.
☑	**b.** Inspection of Soil Improvements	**Continuous**	**GE***	* By geotechnical engineer or his or her qualified representative.
☐	**c.**			

REV B 08/15/2024

Appendix: Work Exempt from DSA Requirements for Structural Tests / Special Inspections

Application Number:	School Name:	School District:
03-123205	Compton College	Compton Community College District
DSA File Number:	**Increment Number:**	**Date Created:**
	01	2023-04-03 08:54:01

Exempt items given in DSA IR A-22 or the 2019 CBC (including DSA amendments) and those items identified below with a check mark by the design professional are NOT subject to DSA requirements for the structural tests **/** special inspections noted. **Items marked as exempt shall be identified on the approved construction documents**. The project inspector shall verify all construction complies with the approved construction documents.

	SOILS:
☐	1. Deep foundations acting as a cantilever footing with a design based on minimum allowable pressures per CBC Table 1806A.2 and without a geotechnical report for the following cases: A) free standing sign or scoreboard, B) cell or antenna towers and poles less than 35'-0" tall (e.g., lighting poles, flag poles, poles supporting open mesh fences, etc.), C) single-story structure with dead load less than 5 psf (e.g., open fabric shade structure), or D) covered walkway structure with an apex height less than 10'-0" above adjacent grade.
☐	2. Shallow foundations, etc. are exempt from special inspections and testing by a Geotechnical Engineer for the following cases: A) buildings without a geotechnical report and meeting the exception item #1 criteria in CBC Section 1803A.2 supported by native soil (any excavation depth) or fill soil (not exceeding 12" depth per CBC Section 1804A.6), B) soil scarification/recompaction not exceeding 12" depth, C) native or fill soil supporting exterior non-structural flatwork (e.g., sidewalks, site concrete ramps, site stairs, parking lots, driveways, etc.), D) unpaved landscaping and playground areas, or E) utility trench backfill.

	CONCRETE/MASONRY:
☐	1. Post-installed anchors for the following: A) exempt non-structural components (e.g., mechanical, electrical, plumbing equipment - see item 7 for "Welding" in the Appendix below) given in CBC Section 1617A.1.18 (which replaces ASCE 7-16, Section 13.1.4) or B) interior nonstructural wall partitions meeting criteria listed in exempt item 3 for "Welding" in the Appendix below
☐	2. Concrete batch plant inspection is not required for items given in CBC Section 1705A.3.3.2 subject to the requirements and limitations in that section.
☐	3. Non-bearing non-shear masonry walls may be exempt from certain DSA masonry testing and special inspection items as allowed per DSA IR 21-1. Refer to construction documents for specific exemptions accordingly for each applicable wall condition.
☐	4. Epoxy shear dowels in site flatwork and/or other non-structural concrete.

Appendix: Work Exempt from DSA Requirements for Structural Tests / Special Inspections

Application Number:	**School Name:**	**School District:**
03-123205	Compton College	Compton Community College District
DSA File Number:	**Increment Number:**	**Date Created:**
	01	2023-04-03 08:54:01

	CONCRETE/MASONRY:
☐	5. Testing of reinforcing bars is not required for items given in CBC Section 1910A.2 subject to the requirements and limitations in that section.

	WELDING:
☐	1. Solid-clad and open-mesh fences, gates with maximum leaf span of 10', and gates with a maximum rolling section of 10' all having an apex height less than 8'-0" above lowest adjacent grade. When located above circulation or occupied space below, these gates/fences are not located within 1.5x gate/fence height (max 8'-0") to the edge of floor or roof.
☐	2. Handrails, guardrails, and modular or relocatable ramps associated with walking surfaces less than 30" above adjacent grade (excluding post base connections per the 'Exception' language in Section 1705A.2.1); fillet welds shall not be ground flush.
☐	3. Non-structural interior cold-formed steel framing spanning less than 15'-0", such as in interior partitions, interior soffits, etc. supporting only self weight and light-weight finishes or adhered tile, masonry, stone, or terra cotta veneer no more than 5/8" thickness and apex less than 20'-0" in height and not over an exit way. Maximum tributary load to a member shall not exceed the equivalent of that occurring from a 10'x10' opening in a 15' tall wall for a header or king stud.
☐	4. Manufactured support frames and curbs using hot rolled or cold-formed steel (i.e., light gauge) for mechanical, electrical, or plumbing equipment weighing less than 2000# (equipment only) (connections of such frames to superstructure elements using welding will require special inspection as noted in selected item(s) for Sections S/A3, S/A4 and/or S/A5 of listing above).
☐	5. Manufactured components (e.g., Tolco, B-Line, Afcon, etc.) for mechanical, electrical, or plumbing hanger support and bracing (connections of such components to superstructure elements using welding will require special inspection as noted in selected item(s) for Sections S/A3, S/A4 and/or S/A5 of listing above).
☐	6. TV Brackets, projector mounts with a valid listing (see DSA IR A-5) and recreational equipment (e.g., playground structures, basketball backstops, etc.) (connections of such elements to superstructure elements using welding will require special inspection as noted in selected item(s) for sections S/A3, S/A4 and/or S/A5 located in the Steel/Aluminum category of listing above).
☐	7. Any support for exempt non-structural components given in CBC Section 1617A.1.18 (which replaces ASCE 7-16, Section 13.1.4) meeting the following: A) when supported on a floor/roof, <400# and resulting composite center of mass (including component's center of mass) ≤4' above supporting floor/roof, B) when hung from a wall or roof/floor, <20# for discrete units or <5 plf for distributed systems.

DSA 103-22: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS(SIGNATURE), 2022 CBC

Application Number:	**School Name:**	**School District:**
03-123205	Compton College	Compton Community College District
DSA File Number:	**Increment Number:**	**Date Created:**
	01	2023-04-03 08:54:01

Name of Architect or Engineer in general responsible charge:

Shane S. Fitzgerald, SE

Name of Structural Engineer (When structural design has been delegated):

Signature of Architect or Structural Engineer:  Date: 04/03/2023

Note: To facilitate DSA electronic mark-ups and identification stamp application, DSA recommends against using secured electronic or digital signatures.

DSA STAMP

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 03-123205 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 10/02/2023

REV B 08/15/2024

DSA 103-22: LIST OF REQUIRED VERIFIED REPORTS, CBC 2022

Application Number:	**School Name:**	**School District:**
03-123205	Compton College	Compton Community College District
DSA File Number:	**Increment Number:**	**Date Created:**
	01	2023-04-03 08:54:01

1. Soils Testing and Inspection: Geotechnical Verified Report Form DSA 293

REV B 08/15/2024

V. PROJECT / CONTRACT COMPLETION

A. The contracts of certain other Contractors may be complete prior to the overall completion of the project, as determined by the Construction Manager. The entire project is not finally complete until Contractors have completed their work and all equipment and furnishings have been installed, systems tested, and accepted and all notices of completion recorded. The District may occupy all or any part of the project prior to completion, in accordance with the Contract Documents. See General Conditions Article 3.8 or further details regarding project completion and requirements.

VI. CONTRACT CLOSE-OUT

A. Contract close-out involves review of the Contract Documents, drawings, specifications, schedules, and inspection reports to ensure the Contractors have satisfactorily completed the requirements of the Contract Documents (General Conditions) before release of the retainage, the Contractor must deliver to the Construction Manager the following close-out submittals and documentation: Including, but not limited to, the following (see also General Conditions):

1. Certificate(s) of Inspection as applicable

2. Project record documents, including as-built documents (Hard and Electronic per the District Requirements)

3. Operation and Maintenance Manuals - (per Contract Documents)

4. Warranties and Bonds - two wet signed notarized originals that MUST be signed with blue ink

5. Keys and keying schedule

6. Spare parts and materials

7. Statement of completion of all punch list items

8. Affidavit that all payrolls, bills, and indebtedness connected with the work have been paid or satisfied - sworn statement

9. Final waiver of liens

10. Consent of Surety to final payment

11. Final Verified Reports

12. Other data as required by the Construction Manager for assurance of satisfaction of the requirements of the contract documents.

13. In-Service Schedule

14. Commissioning

The A/E will make distribution of the close-out submittals to the Owner with copies to the appropriate project team members.

B. The A/E will draft the Notice of Completion for Board presentation. The District normally files these with the County within ten (10) days of the Board's action.

C. Upon completion and submittal of all contract close-out times, the Contractor shall submit written notice to the Construction Manager that the project is ready for final inspection. Concurrent with the request for final inspection, the Contractor shall prepare and submit a final application for payment, the Construction Manager, in conjunction with the A/E, will issue a final certificate for payment to the Owner recommending final payment. The Owner will make final payment, less outstanding Stop Notices.

END OF SECTION

VII. APPENDIX

A. GENERAL FORMS:

1. Daily Construction Job Report
2. Submittal Form
3. Substitution Request Form
4. Inspection Request
5. Request For Information
6. Request For Quotation Form
7. Allowance Usage Request Form
8. Potential Change Order
9. Change and Extras Form
10. Schedule of Values Sheet
11. Instruction Sheet for Pay Applications
12. Application and Certification for Payment
13. Conditional Waiver And Release Upon Progress Payment
14. Unconditional Waiver And Release Upon Progress Payment
15. Conditional Waiver And Release Upon Final Payment
16. Unconditional Waiver And Release Upon Final Payment
17. As-Built Verification Form
18. 3-Week-Look-Ahead
19. Time and Material Work Item Ticket
20. Guarantee Form
21. DSA-6 Form

COMPTON COMMUNITY COLLEGE DISTRICT

PROJECT COORDINATION

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDED:

A. The GENERAL CONTRACTOR shall coordinate his Work and Work of his subcontractors for the Project.

B. General Contractor shall:

1. Coordinate work of his own employees and suppliers.

2. Expedite his work to assure compliance with schedules.

3. Coordinate his work with that of other General Contractors, subcontractors, and work by DISTRICT.

C. General Contractor shall coordinate his work and the work of his subcontractors.

D. This General Contractor understands and will coordinate with Bid Documents to ensure proper coordination, scheduling and ensure that the required Fire Watch/Security is well informed and coordinated with the Construction Manager and reviewed at each construction meeting.

1.2 RELATED REQUIREMENTS:

A. The General Conditions of the Contract: Authority and responsibilities of the Contractor and subcontractor.

1.3 CONSTRUCTION ORGANIZATION AND START-UP:

A. The General Contractor shall establish on-site lines of authority and communications, and each Contractor shall:

1. Attend pre-construction meeting and mandatory weekly progress meetings.

2. Establish procedures for inter-project communications:

a. Submittals

b. Reports and records

c. Recommendations

d. Coordination drawings

e. Schedules (Critical path method, submitted to CONSTRUCTION MANAGER in accordance with the General Conditions)

f. Resolution of conflicts

3. Interpret Contract Documents:

a. Consult with CONSTRUCTION MANAGER to obtain interpretation from the ARCHITECT.

b. Assist in resolution of questions or conflicts which may arise.

c. Transmit written interpretations to subcontractors and to other concerned parties.

4. Assist in obtaining permits and approvals:

a. Building permits and special permits required for all Work or for temporary facilities.

b. Verify that subcontractors have obtained inspections for all Work through the D.S.A. approved INSPECTOR.

5. Control the use of site:

a. Supervise field engineering and site layout.

b. Allocate space for each subcontractor's use for field offices, sheds, and work and storage areas as approved by the CONSTRUCTION MANAGER.

c. Establish access, traffic and parking allocations and regulations.

d. Monitor use of site during construction.

1.4 GENERAL DUTIES:

A. Construction Schedules - General Contractor shall:

1. Prepare a detailed schedule of basic operations for all subcontractors.

    a. Each subcontractor shall prepare sub-schedules to comply with critical phases.

2. Monitor schedules as work progresses:

    a. Identify potential variances between scheduled and probable completion dates for each phase.

    b. Recommend to CONSTRUCTION MANAGER adjustments in schedule to meet required completion dates.

    c. Adjust schedules of subcontractors as required.

    d. Document changes in schedule, submit to DISTRICT and ARCHITECT/ENGINEER through the CONSTRUCTION MANAGER and to involved subcontractors.

    e. Upon written notice by CONSTRUCTION MANAGER, GENERAL CONTRACTOR shall, within three (3) calendar days, provide a complete recovery schedule, including manpower loading, resource loading, detailing how the GENERAL CONTRACTOR and his subcontractors will recover GENERAL CONTRACTOR'S original scheduled milestone dates. Recovery schedule shall show overtime, weekends, or multiple shifts as necessary to meet each milestone of the original schedule.

3. Observe Work of each subcontractor to monitor compliance with schedule.

    a. Verify that labor and equipment are adequate for the Work and the schedule.

    b. Confirm that product procurement schedules are adequate.

    c. Confirm that product deliveries are adequate to maintain schedule.

d. Report noncompliance to District D.S.A. approved INSPECTOR, with recommendation for changes.

B. Process Shop Drawings, product data and samples - General Contractor shall:

1. Prior to submittal to ARCHITECT/ENGINEER, review for compliance with Contract Documents:

a. Field dimensions and clearance dimensions.

b. Relation to available space.

c. Relation to other contracts and to other trades.

d. Effect of any changes on the Work of any other contracts or other trades.

e. Provide written approval that submittals have been approved by General Contractor.

C. Review coordination drawings prepared by mechanical and electrical Contractors - General Contractor shall:

1. Prior to submittal to ARCHITECT/ENGINEER, through the CONSTRUCTION MANAGER, review for compliance with Contract Documents.

2. Resolve conflicts and assure coordination of the Work of, or affected by, mechanical and electrical trades, or by special equipment requirements.

D. Inspection and testing - General Contractor shall:

1. Inspect Work to assure performance in accordance with requirements of Contract Documents.

2. Bring to ARCHITECT'S/ENGINEER'S attention, through the CONSTRUCTION MANAGER, the need of any special testing and inspections of suspect Work.

3. Reject Work which does not comply with requirements of Contract Documents.

4. Coordinate Testing Laboratory services:

a. Verify that required laboratory personnel are present.

b. Verify that tests are made in accordance with specified standards.

c. Review test reports for compliance with specified criteria.

d. Recommend and administer any required retesting.

E. Monitor the use of temporary utilities - General Contractor shall verify that adequate services are provided and maintained.

F. Monitor the GENERAL CONTRACTOR'S periodic cleaning - General Contractor shall:

1. Enforce compliance with Specifications.

2. Resolve any conflicts.

G. Arrange for delivery of DISTRICT furnished products - General Contractor shall:

1. Inspect for condition at delivery.

2. Turn over to appropriate subcontractor, obtain receipt.

H. Changes and substitutions - General Contractor shall:

1. Recommend necessary or desirable changes to DISTRICT and to ARCHITECT/ENGINEER, through the CONSTRUCTION MANAGER.

2. Review subcontractor's requests for changes and substitutions. Submit recommendations to DISTRICT and to ARCHITECT/ENGINEER through the CONSTRUCTION MANAGER.

3. Assist ARCHITECT/ENGINEER, through the CONSTRUCTION MANAGER, in negotiating Change Orders.

4. Promptly notify all subcontractors of pending changes or substitutions.

1.5 CLOSE-OUT DUTIES:

A. Mechanical and electrical equipment start-up:

1. Coordinate check-out of utilities, operations systems, and equipment.

2. Assist in initial start-up and testing.

3. Record dates of start of operation of systems and equipment.

4. Submit to DISTRICT written notice of beginning of warranty period for equipment put into service.

B. At completion of Work of Contract, conduct an inspection to assure that:

1. Specified cleaning has been accomplished.

2. Temporary facilities have been removed from site.

C. Substantial Completion:

1. Conduct an inspection to confirm or supplement General Contractor's list of work to be completed or corrected.

2. Assist ARCHITECT/ENGINEER, through the CONSTRUCTION MANAGER, in preparation of correction list.

3. Supervise correction and completion of Work as established in Certificate of Substantial Completion.

D. When DISTRICT occupies a portion of Project prior to final completion, coordinate established responsibilities of GENERAL CONTRACTOR and DISTRICT.

E. Final Completion:

1. When General Contractor determines that Work is finally complete, conduct an inspection to verify completion of Work, prior to Punchlist.

2. Assist ARCHITECT/ENGINEER, through the CONSTRUCTION MANAGER, in verification of final completion.

F. Administration of Contract Close-out: - General Contractor shall:

1. Review final submittals and as-builts prior to transmittal.

2. Transmit to ARCHITECT/ENGINEER, through the CONSTRUCTION MANAGER, with recommendations for action.

1.6 REQUEST FOR INFORMATION

A. General Contractor shall plan, schedule, coordinate and sequence Work so Requests for Information (RFI), if necessary, may be submitted to the Architect/Engineer in a timely manner so as not to delay progress of Work. Submission of and responses to RFI(s) with copies to Owner, shall be transmitted via email to designated email addresses.

B. Telephone conversations requesting information shall be confirmed in writing for prompt reply of all RFI(s). General Contractor shall coordinate the timing of email or telephone conversations to be made with the Architect's/Engineer's office between the hours of 8:00 a.m. and noon, Monday through Friday.

C. Architect/Engineer shall have the same time period to respond to RFI(s) as "shop drawing review period". When Architect/Engineer responds to an RFI within 5 working days after receipt of RFI but when the response already is contained or included within contract documents, or is based on referenced standards, or is based on established and common construction practices, Contractor shall reimburse the Architect at the following hourly rates:

Principal	$200
Associate Architect/Project Manager	200
Project Architect/Engineer	200
Job Captain	100
Draftsperson	100
Support Staff	100

If RFI requires Architect's/Engineer's Consultant(s) acknowledgement, General Contractor shall reimburse consultant(s), at the same hourly rate for consultant's staff; General Contractor shall also pay to the Architect, a percentage for

overhead and profit to the consultant's fee, equal to the markup the General Contractor adds to "Change Orders".

D. General Contractor shall be billed at "Request for Payment" meeting, and payment is due on the 10th day of the following month. If payment is not received by Architect/Engineer by that date, Architect's/Engineer's response to pending RFIs will be delayed by the same number of days as the days the payment check for RFI services is late.

E. No damages for delay due to RFI response beyond allotted time will be allowed, unless Contractor can show that RFI was not foreseeable with proper planning, scheduling, coordination, and sequencing, and the Architect's/Engineer's late response delayed timely purchase or delivery of equipment or material, or limited construction personnel from proceeding with their task(s), within previously listed "Construction Schedule" activity period(s).

1.7 QUALITY ASSURANCE

A. Familiarity with Contract Documents:

1. General Contractor and all Subcontractors shall conduct a study necessary to become completely familiar with all requirements. Applicable requirements indicated or described in the Contract Documents, and the publications referred to, are a part of the Work required as though repeated in each such Section.

2. In the event discrepancies or conflicts are encountered, notify the Architect/Engineer immediately. Where there is discrepancy between different parts of the contract documents, including referenced codes and standards, the documents requiring the higher quality, the greater quantity, or the more difficult work shall govern, unless determined otherwise by the Architect.

3. Promptly distribute required information to entities concerned and ensure the needed actions are taken.

B. Reporting: Unless otherwise noted by the General Contractor in his transmittals, all of the General Contractor's data transmittals to the Architect/Engineer for the Architect's/Engineer's review will be construed as stipulating that the General Contractor has thoroughly and completely reviewed and coordinated the data prior to transmittal.

C. Interfacing: It shall be solely the responsibility of General Contractor to make sure that the assigned work completes in a timely manner and that all interfaces are prepared, connected, and function as required.

PART 2 – PRODUCTS – All products will be submitted and approved by the Architect/Engineer prior to purchase and then placement.

PART 3 - EXECUTION

3.1 PLANNING THE WORK

A. By thorough advance planning of activities, coordinate the following in addition to other coordination activities required:

1. Materials, services, and equipment purchasing.

2. Shipping.

3. Receipt and storage at the site.

4. Installation, including interface with related items.

5. Inspection and testing, to the extent required under the Contract.

6. Assistance in initial start-up and operational tests.

7. Completion of the Work, including removal and disposal of Contractor's surplus material and equipment, and final cleaning of structures and sites.

3.2 COORDINATION

A. Coordinate construction activities included under various Sections of these Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations included under different Sections of the Specifications that are dependent upon each other for proper installation connection and operation.

B. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and ensure orderly progress of the Work.

3.3 GENERAL INSTALLATION PROVISIONS

A. Coordination methods used by the General Contractor are at the General Contractor's option, except that the Architect/Engineer may disapprove Work completed by the General Contractor or data submitted by the General Contractor when, in the Architect's/Engineer's judgment, coordination has been inadequate to ensure the specified quality.

B. Mounting Heights: Where mounting heights are not indicated, install individual components at standard mounting heights recognized within the industry for the particular application indicated. Refer questionable mounting height decisions to the Architect for final decision.

END OF SECTION

COMPTON COMMUNITY COLLEGE DISTRICT

ACCELERATION OF WORK

PART 1 - GENERAL

1.1 SUMMARY

A. This Section specifies administrative and procedural requirements for the acceleration of the work by the Contractor.

1. Where work is falling behind the construction schedule and the total project may not be completed by the date for contract completion as adjusted by change orders.

2. Where the District requires the entire project or a portion thereof be completed at a date earlier than the contract completion date as adjusted by change orders.

B. Related Sections

1. Section 01 25 00 - Contract Modifications Procedures

2. Section 01 29 00 - Payment Procedures

3. Section 01 33 00 - Submittals.

C. Construction Completion date as stated in the Agreement shall be the completion dated as revised by all time extensions granted at the time acceleration of the work begins.

1.2 NOTICE TO ACCELERATE WORK

A. If in the judgment of the Architect and School District it becomes necessary at any time to accelerate the work or a portion thereof to increase rate of progress when the contractor has not complied with the approved schedule, Contractor when directed in writing, shall increase his construction forces, equipment, hours of work, number of shifts, delivery of materials and provide means to insure timely completion of the project.

1. Any increase in cost to Contractor to accelerate the work progress to meet construction schedules or contract completion dates are the responsibility of the Contractor.

2. Contractor shall not be entitled to additional compensation for additional effort he applies to the work to meet construction schedules or contract completion dates.

3. Overtime hours by Contractor or its Subcontractors are the responsibility of the Contractor and are not grounds for additional compensation.

B. If in the judgment of the Architect/Engineer and School District it become necessary at any time to accelerate the work or a portion thereof be completed at a date earlier than the contract completion date, Contractor when directed in writing, shall increase his construction forces, equipment, hours of work, number of shifts, delivery of materials and provide means to insure an earlier completion date.

1. Architect/Engineer and District shall determine new accelerated completion date.

2. Any increase in the cost to Contractor in compliance which such accelerated completion date shall be adjusted by Change Order.

C. All directives or orders to accelerate the work will be in writing. Any directive or order terminating acceleration of the work will be in writing.

D. Phased Construction: Where the project includes phased construction and portions of the project are to be completed at earlier times than other portions of the contract, the above stated acceleration provisions shall apply to each phase of the construction contract.

1.3 CONTRACTOR RESPONSIBILITIES

A. Contractor shall when so directed by the Architect/Engineer or School District to accelerate the work or portion thereof, deploy Subcontractors, accelerate material deliveries, increase work forces, increase hours of work, provide additional shifts or provide other methods to accelerate progress of the work.

B. Contractor shall within ten (10) calendar days after receiving written notice to accelerate the work, provide in writing to the Architect/Engineer and District specific measures being taken or planned to increase rate of progress along with a revised Construction Schedule. Architect/Engineer may require the

Contractor to make adjustments in the plan of action to insure acceleration of the work.

C. Contractor shall continue acceleration of the work until scheduled progress is regained for timely completion of the project. Timely completion shall be understood as the contract completion date, as revised by all time extensions granted at the time acceleration begins.

1.4 REVISED CONSTRUCTION SCHEDULE

A. Critical-Path Acceleration of Work Schedule: Prepare a new revised fully developed, Critical Path Method type Contractor's construction schedule showing an Acceleration of Work Schedule and new completion dates where an earlier completion date is directed. Revised schedule shall show acceleration of work scheduled to increase progress of the work to provide for timely completion of the project.

PART 2 – PRODUCTS - (Not Applicable)

PART 3 – EXECUTION - (Not Applicable)

END OF SECTION

COMPTON COMMUNITY COLLEGE DISTRICT

SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes: General requirements for the submittal of Shop Drawings, product literature, samples, RFIs, and other data.

1. To ensure that specified products are furnished and installed in accordance with the design intent, procedures have been established for advance submittal of relevant data, and for review and acceptance or rejection of that data by the Architect.

2. Procedures have been established to ensure that Contractor requests for information and clarification are processed efficiently and promptly.

B. Referenced Documents and Sections:

1. Document 00 72 00 - General Conditions.

2. Section 01 45 00 - Quality Control.

3. Section 01 63 00 - Product Substitution Procedures.

C. Substitutions: Requests for substitutions shall be made in accordance with the provisions of, and in a form described in, Section 01 63 00.

1.2 DEFINITIONS

A. Request For Information (RFI): A document submitted by the Contractor requesting clarification of a portion of the Contract Documents, hereinafter referred to as RFI.

1. Proper RFI: An RFI that includes a detailed written statement indicating the specific Drawings or Specification section in need of clarification and the nature of the clarification requested.

B. Improper RFIs: RFIs that are not properly prepared.

1. Improperly prepared RFIs will be processed by the Architect/Engineer at the Architect's/Engineer's standard hourly rate. The Architect will charge the Owner, and such costs will be deducted from monies still due the Contractor.

    a. The Contractor will be notified by the Architect/Engineer prior to the processing of Improper RFIs.

C. Frivolous RFIs: RFIs that request information that is clearly shown on the Contract Documents.

1. Frivolous RFIs may be returned unprocessed. If processed, the Architect may charge the Owner at the Architect's/Engineer's standard hourly rate, and such costs will be deducted from monies due the Contractor.

    a. The Contractor will be notified by the Architect/Engineer prior to the processing of Frivolous RFIs.

1.3 SCHEDULE OF SUBMITTALS

A. Schedules: Furnish required schedules in accordance with the General Conditions listing all items that will be submitted for acceptance-review by the Construction Manager and Architect/Engineer.

1. Include Shop Drawings, manufacturer's literature, test procedures, test results, certificates of compliance, material samples, and special guaranties.

2. Indicate scheduled dates for submitting the above items, projected needs for responses, and procurement dates.

3. Revise and update submittal schedule as required to keep current. Make revised schedules available to the Architect/Engineer for review.

B. For drawings larger than 11 inches by 17 inches, submit two copies of blueline prints, and one reproducible sepia or vellum of each Shop Drawing submittal, or as determined by mutual agreement. One reproducible copy will be returned to Contractor for reproduction and distribution as required.

1. Alternately, provide two sets of plain bond paper copies 11 inches by 17 inches in size.

C. Make submittals in accordance with the General Conditions to allow adequate time for securing necessary acceptances, for revision and resubmittal, for placing orders and securing delivery, and to accommodate the rate of construction progress required under the Contract.

D. Do not begin work requiring submittals until the submittals have been returned with the other professional consultant's stamp indicating review and acceptance.

1. Provide acknowledgement stamp by Contractor signifying review and acceptance of submittal as defined in Article 1.5 - Coordination of Submittals.

1.4 IDENTIFICATION OF SUBMITTALS

A. On submittal forms acceptable to the Architect/Engineer, identify each submittal and resubmittal by including the following information:

1. Name and address of submitter, including name and telephone number of the individual to be contacted for further information.

2. Complete name of Project.

3. Drawing number and Specification Section number to which the submittal applies.

4. Whether submittal is an original or a resubmittal.

5. Date submittal was prepared or revised.

1.5 COORDINATION OF SUBMITTALS

A. General: Fully coordinate materials prior to submittal for review. Include a transmittal form with a signed statement that submittal satisfies the following procedures:

1. Determine and verify field dimensions and other field conditions.

2. Coordinate with work of related trades.

3. Coordinate with the requirements of public agencies having jurisdiction.

4. Secure required approvals from public agencies and signify by stamp, or other legitimate means, that they have been secured.

5. Indicate necessary deviations from the Contract Documents in a clear manner.

B. Grouping of Submittals: Make submittals in groups containing associated items. The Architect reserves the right to reject partial submittals as not complying with provisions of the Contract Documents.

PART 2 - PRODUCTS

2.1 PRODUCT DATA

A. When required by Part 1 - General of the respective Sections, submit manufacturer's printed product data and instructions for products used on the Project. Include catalog cuts, diagrams, and other descriptive material published by the manufacturer, as well as evidence of compliance with safety and performance standards to demonstrate conformance to the specified requirements. Catalog numbers alone will not be acceptable.

1. Include complete lists of materials, illustrations, standard schedules, performance charts, instructions, brochures, diagrams, and other information proposed for use, giving manufacturer's name, catalog number, and catalog cut for each item, where applicable.

2. When materials, equipment, or fixtures are identified by numeric, alphabetical, or alphanumerical designations, identify materials, equipment, and fixtures proposed for use with identical designations.

2.2 SHOP DRAWINGS

A. When required by Part 1 - General of the respective Sections for the various portions of the construction, provide special detailed drawings, diagrams, schedules, and other data in amplification of the Contract Documents before proceeding with the work.

1. Refer to Document 00 72 00 - General Conditions for obligations under the Contract regarding Shop Drawings, product data, and samples.

B. Submit Shop Drawings prepared by qualified detailers. Identify details by reference to Contract Drawing sheet and detail numbers and by specification section and article numbers. Provide a blank area approximately 4 inches by 4 inches for Architect's review stamp.

1. Do not use reproductions of Contract Drawings for fabrication or erection drawings.

C. Shop Drawings submitted shall include not less than the following:

1. Dimensioned plans, elevations, and sections locating assembly components in relationship to each other and in relationship to contiguous building structure.

2. Typical and special fabrication and installation details, including details of anchorage to supporting structure.

3. Materials and finishes.

D. Indicate desired deviations from Contract Drawings on Shop Drawings by placing a heavy line around features on which acceptance is requested. Append a note to each deviation specifically requesting acceptance.

1. Contractor is advised that the identification of "desired deviations" will not be construed as a means of requesting substitutions. Make requests for substitutions in accordance with the provisions of Section 01 63 00.

E. Refer to Part 3 - Execution, for additional review documentation procedures.

2.3 SAMPLES

A. When required by Part 1 - General of the respective Sections of the Specifications, submit physical examples of each item which illustrate materials, equipment, or workmanship, and establish standards by which the work will be judged.

B. All products requiring color selection shall be submitted prior to any selection of colors by the Architect/Engineer. Allow sufficient time for color selection of all items so as not to delay construction progress.

2.4 QUALITY CONTROL SUBMITTALS

A. Test Reports: When and as directed by the Architect/Engineer, submit certified laboratory test reports confirming physical characteristics of materials used in the performance of the work. Refer to Section 01 45 00 for general requirements for inspections and tests.

B. Manufacturer's Instructions: Submit manufacturer's current recommended methods of installation, including relevant limitations, safety and environmental cautions, and application rates.

2.5 EQUIPMENT ROOM LAYOUT DRAWINGS

A. Prepare and submit equipment room layout drawings where required by the Contract Drawings and additionally for areas where equipment proposed for use could present interface or space difficulties.

1. Submit room layout drawings within 10 calendar days after receipt of Notice to Proceed in conformance with the requirements specified for Shop Drawings.

2. Include elevations of wall mounted items.

2.6 CERTIFICATES OF COMPLIANCE

A. When required by Part 1 - General of the respective Sections of the Specifications, furnish certificates to demonstrate compliance of materials with specification requirements, including statements of application and extended guaranties, executed in duplicate. Furnish certificates to the Architect at least 10 days prior to delivery of product. Review certificates before submittals are made to ensure compliance with the specification requirements, and to ensure that the affidavit is properly executed.

1. Furnish certificates relative to flame-resistance for all decorative materials.

B. Furnish certificates signed by an official authorized to act on behalf of the manufacturing company, material supplier, or other third-

party entity, as required. Furnish certificates that contain the name and address of the Contractor, the Project name and location, and the quantity and dates of shipment or delivery to which the certificates apply. In the case of copies of laboratory test reports submitted with certificates, furnish test reports which contain the name and address of the testing laboratory and the dates of the tests to which the report applies.

C. Certification will not be construed as relieving the Contractor from furnishing satisfactory material if, after tests are performed on selected samples, the material is found not to meet the specific requirements.

2.7 CONSTRUCTION COST BREAKDOWN

A. Within 10 calendar days after issuance of Notice to Proceed, submit a Construction Cost Breakdown (Schedule of Values) based on final Contract Sum and scope of work for use in evaluating construction progress and certificates of payment.

PART 3 - EXECUTION

3.1 CONTRACTOR'S REVIEW

A. Check subcontractor-submitted drawings and data, verify field measurements, apply review stamp, and submit to the Architect/Engineer promptly.

1. Indicate on review stamp that Contractor has reviewed subcontractor's submittal for conformance to the specified product and submittal procedures.

2. Disapprove and return to the material supplier, submittals not meeting the requirements of the Contract Documents.

3.2 ARCHITECT'S REVIEW

A. The Architect/Engineer will review, and either accept or reject with reasonable promptness and as outlined in the accepted submittal schedule, data and drawings submitted by the Contractor. The Architect/Engineer will review submittals for conformance with the intent of the design, and for compliance with specific and relevant requirements of the Contract Documents.

1. The Architect/Engineer will reject and return to the Contractor, Shop Drawings and product literature submitted without the Contractor's review stamp.

2. The Architect/Engineer will reject and return to the Contractor, Shop Drawings not thoroughly reviewed by Contractor prior to submittal.

B. The Architect/Engineer is not responsible for delays caused by rejection of Shop Drawings submitted by the Contractor.

C. Review Procedures:

1. Review will not relieve the Contractor from responsibility for errors.

a. Acceptance of submittals shall not be construed as authorizing changes in the Contract Sum or Contract Time, nor shall it be construed as relieving the Contractor of his responsibility for coordination of work with other trades, or interpreted as approving quantities and dimensions.

2. Notations:

a. REVIEWED: Fabrication, manufacture, or construction may proceed.

b. MAKE CORRECTIONS NOTED: Fabrication, manufacture, or construction may proceed providing submittal complies with comments and notations. If, for any reason, Contractor cannot comply with the comments and notations, Contractor shall bring reasons to the attention of the Architect/Engineer promptly. If Contractor cannot comply with the comments and notations, the MAKE CORRECTIONS NOTED becomes REJECTED. The Contractor shall return the revised version of the submittal to the Architect/Engineer when requested to do so.

c. REJECTED: Submittal does not comply with the Contract Documents and fabrication, manufacture, and construction shall not proceed. Submittals stamped REJECTED are not permitted on the job site. Review and re-submit submittal.

3.3 DISTRIBUTION OF SUBMITTALS BY CONTRACTOR

A. After Architect's/Engineer's review, distribute copies of Shop Drawings and product data which carry the Architect's/Engineer's stamp as determined at the pre-construction meeting. If not otherwise determined, distribute one copy to each of the following:

1. Contractor's Project site file.

2. Project record documents file.

3. Subcontractor, supplier, or fabricator.

4. Other prime Contractors, if applicable.

5. Owner's Representative (at Owner's option).

B. Distribute samples as directed.

C. Maintain an up-to-date submittal log.

3.4 CONTRACTOR'S RESPONSIBILITY

A. The Architect's/Engineer's review of submittals or data shall not relieve the Contractor from responsibility for deviations from Contract Drawings or Specifications unless the Contractor has called the Architect's/Engineer's and Owner's attention to such deviations and secured written acceptance, nor shall it relieve him of responsibility for errors in Shop Drawings or other data.

B. In the event the Architect/Engineer rejects a submittal twice for valid reasons, including improper procedures, the Contractor shall accept the responsibility to pay for professional services to cover further processing of the submittal. A flat hourly rate, as agreed upon, shall be paid by the Contractor.

END OF SECTION

COMPTON COMMUNITY COLLEGE DISTRICT

ALTERATION PROJECT PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

A. This Section specifies administrative and procedural requirements for Alteration or Modernization Projects for acceptance of existing site conditions, selective demolition, cutting and patching of existing buildings and site improvements, removal and reinstallation of existing materials, wiring and equipment and interface with existing construction.

B. Refer to other Sections for specific requirements and limitations applicable to Alteration or Modernization projects

C. Requirements of this Section apply to Sections in Divisions 2 through 16.

1.2 RELATED SECTIONS

A. Section 01 01 00 - Summary of work.

B. Section 01 73 20 - Cutting and Patching

1.3 ALTERATION PROJECTS GENERAL PROCEDURES

A. Alteration/Modernization projects require that the contractor may need to demolish, cut, alter, expose, modify, repair, replace, reconstruct, patch, reroute, or other construction procedures to interface new construction into existing construction.

B. The Drawings and specifications are not intended to show in detail all Alteration Project Procedures for interface of new construction into existing construction. It is the responsibility of the Contractor to include in the Contract Price Allowances for such Alteration Procedures.

1.4 QUALITY ASSURANCE

A. Matching existing Construction: On Alteration\Modernization projects new materials are to match existing materials for patching and extending work.

B. Determine type and quality of existing materials by inspection and testing. Existing construction shall be used as a standard of quality for new construction unless noted or specified otherwise.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Use materials that are identical to existing materials. If identical materials are not available or cannot be used where exposed surfaces are involved, use materials that match existing adjacent surfaces to the fullest extent possible with regard to visual effect. Use materials whose installed performance will equal or surpass that of existing materials.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that selective demolition is complete and areas are ready for installation of new work.

3.2 PREPARATION

A. Cut, move, or remove items as necessary for access to alteration and renovation work. Replace and restore prior to completion.

B. Remove unsuitable material not marked for salvage, such as rotted wood, corroded metals, and deteriorated construction. Replace materials as specified for the affected finish material.

C. Remove debris and abandoned items from area and from concealed spaces.

D. Remove surface finishes to provide for proper installation of new work.

E. Temporarily close openings in exterior surfaces to protect existing improvement from weather, temperature and humidity during construction of new work.

3.3 INSTALLATION

A. Coordinate work of Alteration/Modernization to expedite completion and to accommodate School occupancy of the facility.

B. Remove, cut and patch in a manner to minimize damage to existing facilities and to provide a means of restoring materials and finishes to original conditions.

C. Refinish visible existing surfaces to remain in Alteration/Modernization areas to specified condition for each material, with a neat transition to adjacent finishes.

D. In addition to the specified new equipment, fixtures, wiring, conduit, materials, etc. bring existing systems to full operational conditions before Alteration/Modernization work is completed.

E. Patch, repair and refinish work that was damaged during mechanical, electrical and other modernization work.

3.4 TRANSITIONS

A. Where the removal or addition of walls, ceilings and finishes abuts existing construction, construct a smooth and even transition. Patch new work to existing to match adjacent work in texture and appearance.

B. When existing surfaces are cut so that a smooth transition with new construction is not possible, terminate existing surface along a straight line at a natural line of division, such as a corner change in finish or a joint. Replace existing finish as required for a smooth transition.

C. Trim bottom of existing doors as required to clear new floor finish.

3.5 CONSTRUCTION INTERFERENCE

A. Where existing construction interferes with new construction, such as pipes, conduit, junction boxes, and other existing construction that may be in a location that is not compatible with new construction, contractor is to relocate, move, provide replacement or otherwise remove the construction interference.

B. Contractor is to field verify existing conditions and is not to reply on Existing Record Drawings provided by the School District. Contractor is not to rely on any verbal instructions or verbal locations given by School District Personnel unless given or stated in writing. Existing

Record drawings if provided are for information only and may not indicate the exact existing construction.

3.6 REPAIR OF DAMAGED SURFACES

A. Where removal of partitions, ceilings, walls or finishes results in adjacent spaces becoming damaged, rework floors, walls and ceilings to provide for a smooth plane without break, steps, or bulkheads.

B. Patch or replace portions of existing surfaces which are damaged, lifted, discolored, or showing other imperfections. Repair substrate prior to patching finish.

3.7 FINISHES

A. Finish surfaces as specified in individual Product sections.

B. Finish patches to produce uniform finish and texture over the entire area. When finish cannot be matched, refinish entire surface to nearest joint corner or intersection.

END OF SECTION

COMPTON COMMUNITY COLLEGE DISTRICT

REFERENCES

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Requirements for reference materials applicable to contract documents

B. Definitions of abbreviations, terms, and symbols.

C. Establishes edition dates for reference standards found elsewhere in the specifications.

1.2 DEFINITIONS

A. General: Basic Contract definitions are included in the General Conditions.

B. Indicated: The term "indicated" refers to graphic representations, notes, or schedules on the Drawings, other paragraphs or schedules in the Specifications, and similar requirements in the Contract Documents. Where terms such as "shown," "noted," "scheduled," and "specified" are used, it is to help the reader locate the reference; no limitation on location is intended. Except as specifically noted.

C. Directed: Terms such as "directed," "requested," "authorized," "selected," "approved," "required," and "permitted" mean "directed by the Architect/Engineer," "requested by the Architect/Engineer," and similar phrases. However, no such implied meaning will be interpreted to extend Architect/Engineer responsibility into Contractor's area of construction supervision.

D. Approve: The term "approved," where used in conjunction with the Architect's/Engineer's action on the Contractor's submittals, applications, and requests, is limited to the Architect's/Engineer's duties and responsibilities as stated in General and Supplementary Conditions. In no case will "approval" by the Architect/Engineer be interpreted as a release of the contractor from responsibilities to fulfill requirements of contract documents.

E. Regulation: The term "Regulations" includes laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, as well as rules, conventions, and agreements within the construction industry that control performance of the Work.

F. Furnish: The term "furnish" is used to mean "supply and deliver to the Project site, ready for unloading, unpacking, assembly, installation, and similar operations."

G. Install: The term "install" is used to describe operations at project site including the actual "unloading, unpacking, assembly, erection, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations."

H. Provide: The term "provide" means "to furnish and install, complete and ready for the intended use."

I. Installer: An "Installer" is the Contractor or an entity engaged by the Contractor, either as an employee, subcontractor, or sub-subcontractor, for performance of a particular construction activity, including installation, erection, application, and similar operations. Installers are required to be experienced in the operations they are engaged to perform.

1. The term "experienced" when used with the term "Installer" means having a minimum of 5 previous Projects similar in size and scope to this Project, being familiar with the precautions required, and having complied with requirements of the authority having jurisdiction.

J. Project Site is the space available to the Contractor for performance of construction activities, either exclusively or in conjunction with others performing other work as part of the Project. The extent of the Project Site is shown on the Drawings and may or may not be identical with the description of the land upon which the Project is to be built.

K. Testing Laboratories: A "testing laboratory" is an independent entity engaged to perform specific inspections or tests, either at the Project Site or elsewhere, and to report on and, if required, to interpret results of those inspections or tests.

1.3 REFERENCE STANDARDS

A. Applicability of Standards: Except where the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents. Such standards are made a part of the Contract Documents by reference.

B. Publication Dates: Where the date of issue of a referenced standard is not specified, comply with the standard in effect as of bid date or date of Contract Execution, for projects that are not competitively bid.

C. Upon request, the Contractor is required to make available at the job site within a reasonable time a copy of all referenced standards referred to in the Specifications. Standards are to be maintained in the Project Job Site Office Library for use by the Architect/Engineer, College District and College District's inspector for the purpose of establishing requirements applicable to equipment, materials, quality and workmanship.

D. Conflicting Requirements: Where compliance with two or more standards is specified, and the standards establish different or conflicting requirements for minimum quantities or quality levels, refer requirements that are different, but apparently equal, and uncertainties to the Architect for a decision before proceeding.

1. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. In complying with these requirements, indicated numeric values are minimum or maximum, as appropriate for the context of the requirements. Refer uncertainties to the Architect for a decision before proceeding.

1.4 ABBREVIATIONS

A. Abbreviations and Names: Trade association names and titles of general standards are frequently abbreviated. Where such acronyms or abbreviations are used in the Specifications or other Contract Documents, they mean the recognized name of the trade association, standards generating organization, authority having jurisdiction, or other entity applicable to the context of the text provision.

B. Refer to the "Encyclopedia of Associations," published by Gale Research Co., available in most libraries or the Construction Specifications Institute (CSI) Technical Document TD-2-5 November 1989, entitled "Sources of Construction Information".

PART 2 – PRODUCTS - (Not Applicable)

PART 3 – EXECUTION - (Not Applicable)

END OF SECTION

COMPTON COMMUNITY COLLEGE DISTRICT
1111 E. Artesia Blvd
Compton, California 90221
(310) 900-1600

Student Housing

Work Plan and Milestone Schedule

Task Name	Finish Date
Pre-bid Mandatory Job Walk:	09/04/2024 @ 10:00 AM
Bid Opening:	10/07/2024 @ 2:00 PM
Notice of Intent to Award:	10/08/2024
Board Approval	10/15/2024
Anticipated Issuance of Notice to Proceed	10/16/2024
Anticipated Commencement Date of Contract Time:	10/17/2024
Contract Time for Substantial Construction Completion:	735 days after commencement date of Contract Time established in the NTP.
Punchlist/Closeout completion:	795 days after commencement date of Contract Time established in the NTP.

COMPTON COMMUNITY COLLEGE DISTRICT

QUALITY CONTROL

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. This Section specifies administrative and procedural requirements for quality control services.

B. Quality control services include inspections and tests and related actions including reports, performed by independent agencies, governing authorities, and the Contractor. They do not include Contract enforcement activities performed by the Architect/Engineer.

C. Inspection and testing services are required to verify compliance with requirements specified or indicated. These services do not relieve the Contractor of responsibility for compliance with Contract Document requirements.

D. Requirements of this Section relate to customized fabrication and installation procedures, not production of standard products.

1. Specific quality control requirements for individual construction activities are specified in the Sections that specify those activities. Those requirements, including inspections and tests, cover production of standard products as well as customized fabrication and installation procedures.

2. Inspections, test and related actions specified are not intended to limit the Contractor's quality control procedures that facilitate compliance with Contract Document requirements.

3. Requirements for the Contractor to provide quality control services required by the Architect/Engineer, Owner, or authorities having jurisdiction are not limited by provisions of this Section.

1.2 RELATED REQUIREMENTS SPECIFIED ELSEWHERE

A. Inspections and testing required by laws, ordinances, rules, regulations or orders of public authorities: General Conditions.

B. Certification of Products: Respective specification sections.

C. Test, Adjust and Balance of Equipment: Respective specification sections.

1.3 RESPONSIBILITIES

A. The Owner will engage and pay for the services of an independent agency to perform inspections and tests specified as the Owner's responsibilities. A Division of the State Architect (DSA) accepted Testing Laboratory directly employed by the District (Owner) shall conduct all the required tests and inspections for the project. A “DSA Certified” Project Inspector employed by the District (Owner) and approved by DSA shall provide continuous inspection of Work.

1.4 DEFICIENCIES

A. Tests or inspections due to the following will be reimbursed to the Owner by deductive change order.

1. Retesting because of failure of initial samples.

2. Additional costs due to overtime work or extra shifts work because of improper scheduling of work or of delivery of materials by Contractor.

3. Failure to properly notify laboratory.

4. Changes in sources, lots or suppliers of materials after original tests.

5. Changes in methods or materials of construction requested by Contractor that require testing, inspection, or other related services in excess of that required by original design.

6. Concrete mix designs in excess of first successful design for each concrete type.

7. Overtime or extra shift work requiring overtime work by Owner's Inspector.

8. This contractor will have the sole responsibility of coordinating the Schedule with the Construction Manager for Owner/General Contractor, Bid Package 01, provided Fire Watch.

1.5 TESTS

A. Selection of the material required to be tested shall be the responsibility of the laboratory or the Owner's representative and not selected by the Contractor.

B. The Contractor shall notify the Owner's representative a sufficient time in advance of the manufacture of material to be supplied by him under the Contract Documents, which must be tested, in order that the Owner may arrange for the testing of material at the source of supply.

C. Any material shipped by the Contractor from the source of supply prior to satisfactory testing and inspection or prior to the receipt of notice from said representative that testing and inspection will not be required shall not be incorporated in the work.

D. Duties of the Testing Agency: The independent testing agency engaged to perform inspections, sampling and testing of materials and construction specified in individual Specification Sections shall cooperate with the Architect/Engineer and Contractor in performance of its duties, and is to provide qualified personnel to perform required inspections and tests.

1. Notify the Architect/Engineer and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.

2. The agency is not authorized to release, revoke, alter or enlarge requirements of the Contract Documents, or approve or accept any portion of the Work.

3. The agency shall not perform any duties of the Contractor.

E. Perform specified instructions, sampling and testing of materials and methods of construction:

1. Comply with specified standards; ASTM, other recognized authorities, and as specified.

2. Ascertain compliance with requirements of Contract Documents.

3. Comply with requirements of Title 24, Part I, Sec. 4-333.

F. Coordination: The Contractor and each agency engaged to perform inspections, tests, Fire Watch and similar services shall coordinate the sequence of activities to accommodate required services with a minimum of delay. In addition the Contractor and each agency shall coordinate activities to avoid the necessity of removing and replacing construction to accommodate inspections and tests.

1.6 SUBMITTALS

A. Promptly submit copies of reports of inspections and tests mill analysis, concrete mix designs and certifications per applicable sections of the specifications.

1. Comply with requirements of Division of State Architect testing and inspection requirements.

2. One copy of all test reports shall be forwarded to the Division of the State Architect by the testing agency. Such reports shall include all tests made, regardless of whether such tests indicated 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 Title 24, CCR and with the approved specifications. Test reports shall show the specified design strength. They shall also state definitely whether or not the material or materials tested comply with requirements.

3. Verification of Test Reports: Each testing agency shall submit to the Office of the State Architect a verified report in duplicate covering all of the tests which are required to be made by the agency during the progress of the project. Such report shall be furnished each time that work on the project is suspended, covering the tests up to that time, and at the completion of the project, covering all tests.

4. Submit one copy of all test reports to:

a. Owner

b. Architect/Engineer

c. Structural Engineer

d. Contractor

e. Inspector

f. Division of the State Architect (DSA)

g. Submit verification of test reports to DSA per Title 24, Part 1, CCR, Sec. 4-336.

1.7 QUALITY ASSURANCE

A. All tests and inspection required by the Division of the State Architect are to be conducted in strict accordance with requirements of Title 24, CCR.

B. Contractor shall comply with all Project Inspection Card requirements (DSA Form 152), DSA PR 13-01 and 13-02, and all related DSA required inspection and testing requirements.

1.8 INSPECTION BY THE SCHOOL DISTRICT

A. The School District and its representative 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 School District shall have the right to reject materials and workmanship which are defective, or to require their correction. Rejected workmanship shall be satisfactorily corrected and rejected materials shall be removed from the premises without charge to the School District. If the Contractor does not correct such rejected work within a reasonable time, fixed by written notice, the School District may correct same and charge the expense to the Contractor.

C. Should it be considered necessary or advisable by the School District at any time before final acceptance of the entire work to make an examination of work already completed by removing or tearing out the same, the Contractor shall on request promptly furnish all necessary facilities, labor and materials. If such work is found to be defective in any respect due to fault of the Contractor or his subcontractor, 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 materials necessarily involved in the examination and replacement shall be allowed the Contractor.

D. District to provide an Inspector employed by the District in accordance with the requirements of the California Code of Regulations, Title 24, to be assigned to the work. His duties are specifically defined in Title 24, Part I, Sec. 4-342. The work of construction in all stages of progress shall be subject to the personal continuous observation of the Inspector. He 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 him fully informed respecting the progress and manner of the work and the character of the materials. Inspection of the work shall not relieve Contractor from any obligation to fulfill this Contract.

1.9 WORK BY DISTRICT'S INSPECTORS

A. General inspection of construction.

B. Concrete slump tests.

C. Concrete cylinder samples.

D. Cement samples and tests.

E. Reinforcing Steel sample and test, (#5 and larger).

F. Continuous inspection of Structural Concrete placement.

G. Structural Steel sample and test.

H. Continuous inspection of welds, (shop and field).

1.10 CONTRACTOR'S RESPONSIBILITIES

A. Cooperate with laboratory personnel, provide access to work, to manufacturer's operations.

B. Provide to laboratory, selected preliminary representative samples of materials to be tested, in required quantities.

C. Furnish casual labor and facilities:

1. To provide access to work to be tested.

2. To obtain and handle samples at the site.

3. To facilitate inspections and tests.

4. For laboratory's exclusive use for storage and curing of test samples.

D. Notify laboratory sufficiently in advance of operations to allow for his assignment of personnel and scheduling of tests. Per Specification Section 1305, the contractor will provide an updated 2 Week Look Ahead to ensure proper and timely scheduling.

PART 2 - PRODUCTS - (Not Applicable)

PART 3 - EXECUTION

3.1 MISCELLANEOUS TESTS AND INSPECTIONS

A. Soil and Compaction Testing and Inspection: Performed by soils engineer employed and paid by the School District.

B. Roofing Inspection: As specified in Section "Roofing".

C. Moisture and Bond Tests for resilient flooring and non-breathing floor surface materials. Performed by Independent Testing Agency and paid for by the School District.

D. Special Tests: Special tests requested by School District, Architect or Division of the State Architect will be paid for by the School District, except that if such tests fail, the costs for failed tests and additional retesting shall be deducted from the Contract Price by Change Order.

3.2 SCHEDULE OF TESTS, INSPECTIONS AND METHODS

A. Foundations (Chapter 18A):

1. Earth Fill Compaction: 1804A.6

B. Concrete (Chapter 19A):

1. Materials:

a. Portland Cement Tests: 1910A.1

b. Concrete Aggregates: 1903A.5

c. Reinforcing Bars: 1910A.2

d. Batch Plant Inspection and Tests: 1705A.3.3

2. Concrete Quality:

a. Proportions of Concrete: 1903A.5, 1903A.6, 1904A.1

b. Strength Tests of Concrete: 1706A.1

3. Concrete Inspection:

a. Job Site Inspection: 1704A, 1705A

b. Batch Plant or Weighmaster Inspection: 1705A.3.3

C. Structural Steel (Chapter 22A):

1. Materials:

a. Structural Steel, Cold-Formed Steel: 2211A

b. Structural Steel Construction: 2205A

2. Inspection and tests of Structural Steel:

a. Tests of Structural and Cold Formed Steel: 1705A.2

b. Tests of End-Welded studs (Nelson Studs): 2213A.2

c. Welding Inspection: 1705A.2

d. High Strength Bolts: 1705A.2, 2213A.1

D. Wood (Chapter 23A):

1. Materials:

a. Lumber and Plywood Grading: 2303

b. Glue-Laminated Member testing: 2303

Note: Chapters and Articles refer to 2021 UBC and 2022 Title 24 Part 2, California Building Code (CBC), 2022

3.3 REPAIR AND PROTECTION

A. General: upon completion of inspection, testing, sample-taking and similar services, repair damaged construction and restore substrates and finishes to eliminate deficiencies, including deficiencies in visual qualities of exposed finishes. Comply with Contract Document requirements for "Cutting and Patching".

B. Protect construction exposed by or for quality control service activities, and protect repaired construction.

C. Repair and protection is the Contractor's responsibility, regardless of the assignment of responsibility for inspection, testing or similar service.

END OF SECTION

COMPTON COMMUNITY COLLEGE DISTRICT

TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 SUMMARY

A. This Section specifies requirements for temporary services and facilities, including utilities, construction and support facilities, security and protection.

B. Temporary utilities required include but are not limited to:

1. Water service and distribution.

2. Temporary electric power and light.

3. Telephone service with separate Fax line.

4. Storm and sanitary sewer.

C. Temporary construction and support facilities required include but are not limited to:

1. Temporary heat and cooling.

2. Field offices and storage sheds.

3. Sanitary facilities, including drinking water.

4. Temporary enclosures.

5. Temporary Project identification sign.

6. Waste disposal services.

D. Security and protection facilities required include but are not limited to:

1. Temporary fire protection. Coordination of Fire Watch.

2. Barricades, warning signs.

3. Environmental protection.

4. Temporary security fencing when requested and in compliance with any Phase temporary fencing plan provided.

1.2 SUBMITTALS

A. Temporary Utilities: Submit reports of tests, inspections, meter readings and similar procedures performed on temporary utilities.

1.3 RELATED WORK

A. All equipment furnished by subcontractors shall comply with all requirements of pertinent safety regulations. The ladders, planks, hoists, and similar items normally furnished by the individual trades in execution of their own portions of the work are not part of this section.

B. Permanent installation and hook-up of the various lines are described in the other pertinent sections.

1.4 QUALITY ASSURANCE

A. Regulations: Comply with industry standards and applicable laws and regulations of authorities having jurisdiction, including but not limited to:

1. Building Code requirements.

2. Health and safety regulations.

3. Utility company regulations.

4. Police, Fire Department and Rescue Squad rules.

5. Environmental protection regulations.

B. Standards: Comply with NFPA Code 241, "Building Construction and Demolition Operations", ANSI-A10 Series standards for "Safety Requirements for Construction and Demolition", and NECA Electrical Design Library "Temporary Electrical Facilities."

1. Refer to "Guidelines for Bid Conditions for Temporary Job Utilities and Services", prepared jointly by AGC and ASC, for industry recommendations.

2. Electrical Service: Comply with NEMA, NECA and UL standards and regulations for temporary electric service.

Install service in compliance with National Electric Code (NFPA 70).

C. Inspections: Arrange for authorities having jurisdiction to inspect and test each temporary utility before use. Obtain required certifications and permits.

1.5 PROJECT CONDITIONS

A. Conditions of Use: Keep temporary services and facilities clean and neat in appearance. Operate in a safe and efficient manner. Take necessary fire prevention measures. Do not overload facilities, or permit them to interfere with progress. Do not allow hazardous dangerous or unsanitary conditions, or public nuisances to develop or persist on the site.

PART 2 - PRODUCTS

2.1 MATERIALS

A. General: Provide new materials; if acceptable to the Architect/Engineer, undamaged previously used materials in serviceable condition may be used. Provide materials suitable for the use intended.

B. Water: Provide potable water approved by local health authorities.

2.2 FIELD OFFICE

A. Provided by this Bid Package; Provide on-site, adequate field space for use by construction forces, the District Inspector, and the Architect during the time construction is in progress. The offices shall be conveniently located and shall be watertight and waterproof, clean, insulated, heated, cooled, lockable, provided with windows to give adequate light and ventilation, have electrical service outlets, and have a floor. Minimum size of temporary site construction trailer to be a minimum of 720 square feet for construction management and IOR use only. General contractor construction trailer to be a minimum of 720 square feet. Trailers to have bathrooms integrated in the trailers.

1. The Contractor shall provide and pay for separate telephone service for phone and high-speed internet. Telephone and high-speed internet are to be separate lines.

2. Equip with a minimum of two desk and a layout table. Equip with additional chairs for field meetings.

3. The offices, equipment, and furniture shall remain the property of the Contractor and shall be removed by contractor upon completion of work.

4. A complete set of approved plans and specifications shall be kept in the office at all times.

5. See section 00-73-00, as it contains more specific information as it pertains to the construction trailer for the CM and IOR.

B. Inspectors Field Office: Contractor is required to provide for the use of the School District's Inspector a temporary office space to be located as directed by the Inspector and to be maintained until removal is authorized by the School District. Space is to have a lockable separate room area with a table for plans and a desk with two chairs. At least one entrance to Inspector office space is to be from the outside and not through the Contractors field office space. Provide and pay for high speed internet service. Maintain for Inspector until completion of the Contract.

2.3 TOILET FACILITIES

A. Provided by Each Bid Package for their personnel; Provide, install and maintain, for duration of the work, temporary outside toilet facilities for use of construction personnel. Toilet facilities and handwashing stations shall be constructed, maintained and supplied as required for the numbers of construction personnel required, and according to local regulations.

2.4 FIRST AID

A. Maintain such first aid supplies as may be required for minor accidents. Make arrangements with local emergency center and nearest hospital to receive cases requiring medical attention, including emergencies. Such information shall be conspicuously displayed at the construction office.

2.5 WATCHMAN SERVICES

A. Provided by this Bid Package; The Contractor shall provide such watchman services as he may deem necessary to properly safeguard materials, tools, appliances, and work during all hours that operations under the Contract are not actively proceeding. The

District will not assume any responsibility for the loss of or damage to materials, tools, appliances or work arising from acts of theft, vandalism, malicious mischief, or other causes.

2.6 FIRE PROTECTION

A. Provide fire extinguisher on the premises during the course of construction of the type and sizes recommended by the NBFU to control fires resulting from the particular work being performed. Instruct employees in their use. Place extinguisher in the immediate vicinity of the work being performed, ready to be used.

B. During the use of hazardous equipment such as acetylene torches, welding equipment, bitumen kettles, salamanders and similar devices, no work shall be commenced or equipment used unless fire extinguisher of an approved type and capacity are placed in the working area and available for use by the workmen using such hazardous equipment.

C. Provide fire extinguisher conforming to the requirements, as minimums, of NFPA 10 and 241.

2.7 SAFETY AND PROTECTION

A. Provided by this Bid Package the Contractor shall furnish and erect temporary or permanent fences around the areas, as indicated on the drawings, and elsewhere where required for protection of the work, and to prevent unauthorized persons from entering the construction area. Temporary fences shall be at least eight feet (8'-0") above grade, of chain link or other substantial construction. Necessary gates for access to the site shall be placed where directed by the School District.

B. Furnish or construct barricades, lights and other guards about the work area that may be required by local ordinance or for public safety and necessity. Protect all work from vandalism.

2.8 TEMPORARY UTILITY SERVICES

A. Provided by this Bid Package; Power, Lighting, Sewer, Water: Furnish, install and maintain temporary wiring, poles, meter board, service entrance switch, lamps and equipment necessary to provide temporary lighting and power for the construction site.

1. Temporary power is available from location as directed by the Power Company.

2. Any temporary transmission lines required shall be installed by Contractor.

3. Provide power sources within eighty feet of any working position to allow the use of one hundred foot extension cords.

B. Water: Install required temporary connections to existing water. Locate temporary pipelines so that they do not interfere with traffic or drainage. Design and construct such pipelines so that they do not leak or cause damage or nuisance.

1. Upon completion of work, remove all temporary piping and utilities.

2.9 HEAT, COOLING AND VENTILATION

A. Provide temporary heat, cooling and ventilation as required to maintain adequate environmental conditions to facilitate the progress of the work, to meet specified minimum conditions for the installation of materials, and to protect materials and finishes from damage due to temperature and humidity.

1. Pay costs of installation, maintenance, operation and removal, and fuel consumed.

2.10 CONSTRUCTION AIDS

A. Provide construction aids and equipment required by personnel and to facilitate the execution of the work; scaffolds, staging, ladders, stairs, ramps, runways, platforms, railings, hoists, cranes, chutes and other such facilities and equipment.

B. Provide all necessary facilities and means of access to all parts of the structure so that Governmental Agency Inspectors, Special Inspectors and the Architect and Structural Engineer may inspect any portion of the structure.

1. Means of access includes, but is not limited to, ladders, and/or scaffolds.

2.11 ACCESS ROADS AND PARKING AREAS

A. Prior to starting work, the Contractor, District and the Architect or their representative shall make a thorough survey of the site and approaches thereto. The Contractor will maintain temporary access

roads required to perform the work and locate construction offices at locations approved by the Architect/Engineer and the District. The Contractor shall verify all grade elevations indicated on the Drawings at the site and immediately notify the Architect/Engineer if any deviations are found. The Contractor shall assume all responsibility if any work proceeds without such notification.

B. Maintain specific vehicular access as required for the orderly progress of the work. Fill, compact and grade areas as necessary to provide suitable support during all weather conditions for anticipated loads including municipal fire apparatus. Provide adequate surface drainage and do not interrupt natural flow of existing drainage.

C. Provide designated parking areas for use by construction personnel.

D. Restore temporary vehicular access and parking areas to original or to specified conditions at completion of work.

2.12 TEMPORARY CONTROLS

A. Provide and maintain methods, equipment, and temporary construction, as necessary to provide controls over environmental conditions at the construction site and related areas under Contractor's control; remove physical evidence of temporary facilities at completion of work.

B. Dust Control: Provide positive methods and apply dust control materials and methods to minimize raising dust from construction operations. Provide positive means to prevent air-borne dust from dispersing into the atmosphere.

C. Water Control: Provide methods to control surface water to prevent damage to the Project, the site, or adjoining properties.

1. Control fill, grading and ditching to direct surface drainage away from excavations, pits, tunnels, and other construction areas; and to direct drainage to proper runoff.

2. Provide, operate and maintain hydraulic equipment of adequate capacity to control surface water.

3. Dispose of drainage water in a manner to prevent flooding, erosion, or other damage to any portion of the site or to adjoining areas.

D. Pollution Control:

1. Provide methods, means and facilities required to prevent contamination of soil, water or atmosphere by the discharge of noxious substances from construction operations.

2. Provide equipment and personnel; perform emergency measures required to contain any spillages, and to remove contaminated soils or liquids.

E. Excavate and dispose of any contaminated earth off-site, and replace with suitable compacted fill and topsoil.

1. Take special measures to prevent harmful substances from entering public waters and atmosphere.

a. Prevent disposal of wastes, effluent, chemicals, or other such substances in sanitary or storm sewers.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Use qualified personnel for installation of temporary facilities. Locate facilities where they will serve the Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required.

B. Provide each facility ready for use when needed to avoid delay. Maintain and modify as required. Do not remove until facilities are no longer needed, or are replaced by authorized use of completed permanent facilities.

3.2 TEMPORARY UTILITY INSTALLATION

A. General: Engage the appropriate local utility company to install temporary service or connect to existing service. Where the company provides only part of the service, provide the remainder with matching, compatible materials and equipment; comply with the company's recommendations.

1. Arrange with the company and existing users for a time when service can be interrupted, where necessary, to make connections for temporary services.

2. Provide adequate capacity at each stage of construction. Prior to temporary utility availability, provide trucked-in services.

3. Obtain any necessary easements to bring temporary utilities to the site, where the Owner's easements cannot be used for that purpose.

4. Use Charges: Cost or use charges for temporary facilities are not chargeable to the Owner or Architect, and will not be accepted as a basis of claims for a Change Order.

B. Water Service: Install water service and distribution piping of sizes and pressures adequate for construction until permanent water service is in use. Water may be taken from existing site water supply.

1. Sterilization: Sterilize temporary water piping prior to use.

C. Temporary Electric Power Service: Provide weatherproof, grounded electric power service and distribution system of sufficient size, capacity, and power characteristics during construction period. Include meters, transformers, overload protected disconnects, automatic ground-fault interrupters and main distribution switch gear.

3.3 PROJECT IDENTIFICATION AND SIGNS

A. Project Identification and Temporary Signs: Prepare project identification and other signs of the size indicated; install signs where indicated to inform the public and persons seeking entrance to the Project. Support on posts or framing of preservative treated wood or steel. Do not permit installation of unauthorized signs.

B. Provide temporary on-site informational signs.

1. As required by codes, laws and regulatory agencies.

2. To identify key elements of the construction facilities.

3. To direct traffic.

C. Project Identification Sign: Size, design and information lettered as specified and as shown on drawing located at the end of this section. Finish with 3 coats of paint. Locate sign as indicated or directed by the Architect and School District.

3.4 OWNERSHIP OF TEMPORARY FACILITIES AND CONTROLS

A. Items provided by the Contractor under this section shall remain the property of the Contractor and shall be removed from the job site immediately upon completion of the work.

3.5 COLLECTION AND DISPOSAL OF WASTE

A. Collect waste from construction areas and elsewhere daily. Comply with requirements of NFPA 241 for removal of combustible waste material and debris. Enforce requirements strictly. Do not hold materials more than 7 days during normal weather or 3 days when the temperature is expected to rise above 80 deg F (27 deg C). Handle hazardous, dangerous, or unsanitary waste materials separately from other waste by containerizing properly. Dispose of material in a lawful manner.

3.6 OPERATION, TERMINATION AND REMOVAL

A. Termination and Removal: Unless the Architect requests that it be maintained longer, remove each temporary facility when the need has ended, or when replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with the temporary facility. Repair damaged Work, clean exposed surfaces and replace construction that cannot be satisfactorily repaired.

1. Materials and facilities that constitute temporary facilities are property of the Contractor. The School District reserves the right to take possession of Project identification signs.

END OF SECTION

SECTION 015639 - TEMPORARY TREE AND PLANT PROTECTION

PART 1 - GENERAL

1.1 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.

1.2 DEFINITIONS

A. Protection Zone: Area surrounding individual trees, groups of trees, shrubs, or other vegetation to be protected during construction, and defined by a circle concentric with each tree or shrub with a radius 1.25 times the diameter of the drip line unless otherwise indicated.

1.3 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Samples: For each type of organic mulch in sealed plastic bags labeled with composition of materials by percentage of weight, protection-zone fencing and protection-zone signage.

C. Tree Pruning Schedule: Written schedule detailing scope and extent of pruning of trees to remain that interfere with or are affected by construction.

D. 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 damaged.

E. Maintenance Recommendations: From arborist, for care and protection of trees affected by construction during and after completing the Work.

F. Existing Conditions: Documentation of existing trees and plantings indicated to remain, which establishes preconstruction conditions that might be misconstrued as damage caused by construction activities.

1.4 QUALITY ASSURANCE

A. Arborist Qualifications: Certified Arborist as certified by ISA, licensed arborist in jurisdiction where Project is located, current member of ASCA, or registered Consulting Arborist as designated by ASCA.

B. Preinstallation Conference: Conduct conference at Project site.

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.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Topsoil: 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 1 inch in diameter; and free of weeds, roots, and toxic and other non-soil materials.

B. Topsoil: Stockpiled topsoil from location shown on Drawings.

C. Organic Mulch: Ground or shredded bark, free from deleterious materials.

D. Protection-Zone Fencing: Fencing fixed in position and meeting the following requirements. Previously used materials may be used when approved by Architect.

1. Chain-Link Protection-Zone Fencing: Galvanized-steel fencing fabricated from minimum 2-inch opening, 0.148-inch- diameter wire chain-link fabric; with pipe posts, minimum 2-3/8-inch- OD line posts, and 2-7/8-inch- OD corner and pull posts; with 1-5/8-inch- OD top rails and 0.177-inch- diameter bottom tension wire; with tie wires, hog ring ties, and other accessories for a complete fence system.
2. Height of Fencing: 6 feet.
3. Gates: Swing access gates matching material and appearance of fencing, to allow for maintenance activities within protection zones.

E. Protection-Zone Signage: Shop-fabricated, rigid plastic or metal sheet with attachment holes prepunched and reinforced; legibly printed with nonfading lettering.

PART 3 - EXECUTION

3.1 EXAMINATION AND PREPARATION

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. 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.

C. Protection Zones: Mulch areas inside protection zones and other areas indicated with 6 inch average thickness of organic mulch. Do not place mulch within 6 inches of tree trunks.

3.2 PROTECTION ZONES

A. Protection-Zone Fencing: Install protection-zone fencing along edges of protection zones in a manner that will prevent people from easily entering protected area except by entrance gates.

1. Chain-Link Fencing: Install to comply with ASTM F 567 and with manufacturer's written instructions.
2. Posts: Set or drive posts into ground one-third the total height of the fence without concrete footings. Where a post is located on existing paving or concrete to remain, provide appropriate means of post support acceptable to Architect.
3. Access Gates: Install where indicated.

B. Protection-Zone Signage: Install protection-zone signage in visibly prominent locations in a manner approved by Architect.

C. Repair or replace trees, shrubs, and other vegetation indicated to remain or be relocated that are damaged by construction operations, in a manner approved by Architect.

D. Maintain protection-zone fencing and signage in good condition as acceptable to Architect and remove when construction operations are complete and equipment has been removed from the site.

3.3 EXCAVATION

A. General: Excavate at edge of protection zones and for trenches indicated within protection zones according to requirements in Section 31 2000 - Earth Moving.

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 for root pruning.

C. Do not allow exposed roots to dry out before placing permanent backfill.

3.4 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. Temporarily support and protect roots from damage until they are permanently covered with soil.
3. Cover exposed roots with burlap and water regularly.
4. Backfill as soon as possible according to requirements in Section 312000 - Earth Moving.

B. Root Pruning at Edge of Protection Zone: Prune roots by cleanly cutting all roots to the depth of the required excavation.

C. Root Pruning within Protection Zone: Clear and excavate by hand to the depth of the required excavation to minimize damage to root systems. Use narrow-tine spading forks, comb soil to expose roots, and cleanly cut roots as close to excavation as possible.

3.5 CROWN PRUNING

A. Prune branches that are affected by temporary and permanent construction. Prune branches as follows:

1. Prune trees to remain to compensate for root loss caused by damaging or cutting root system. Provide subsequent maintenance during Contract period as recommended by arborist.
2. Pruning Standards: Prune trees according to ANSI A300 (Part 1).
3. Cut branches with sharp pruning instruments; do not break or chop.
4. Do not apply pruning paint to wounds.

B. Chip removed branches and dispose of off-site.

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. 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.

C. Minor Fill within Protection Zone: Where existing grade is 2 inches or less below elevation of finish grade, fill with topsoil. Place topsoil in a single uncompacted layer and hand grade to required finish elevations.

3.7 FIELD QUALITY CONTROL

A. Inspections: Engage a qualified arborist to direct plant-protection measures in the vicinity of trees, shrubs, and other vegetation indicated to remain and to prepare inspection reports.

3.8 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 Architect.

1. Have arborist perform the root cutting, branch pruning, and damage repair of trees and shrubs.
2. Treat damaged trunks, limbs, and roots according to arborist's written instructions.
3. Perform repairs within 24 hours.
4. Replace vegetation that cannot be repaired and restored to full-growth status, as determined by Architect.

3.9 DISPOSAL OF SURPLUS AND WASTE MATERIALS

A. Disposal: Remove excess excavated material, displaced trees, trash and debris, and legally dispose of them off Owner's property.

END OF SECTION

COMPTON COMMUNITY COLLEGE DISTRICT

PRODUCT OPTIONS

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. This Section establishes procedures for specified product options.

B. The intent of this section is to insure that specified product options exceed or equal the quality of the specified products and are furnished and installed in accordance with the design intent.

C. This Section does not apply to any substitution requests that should have been made at time of bid in accordance with the Instructions to Bidders and the bid documents. **The District can reject any requests for substitution in its sole discretion if the Contractor did not submit a request at the time of bid in accordance with the Instructions to Bidders and the bid documents**.

1.2 RELATED SECTIONS

A. Information for Bidders

B. Instructions to Bidders

C. General and Supplementary Conditions

D. Section 01 25 00- Contract Modification Procedures

E. Section 01 33 00 - Submittal Procedures

F. Section 01 63 00 - Product Substitution Procedures

1.3 PRODUCT OPTIONS

A. Where product options are included in the specifications sections and are specified by naming more than one, or several acceptable products or manufacturers, select any product or manufacturer listed.

1. Where more than one manufacturer or product is listed in the specifications and only one manufacturer or product is specified in detail with model numbers and features, the one specified in detail shall be considered the standard of quality required for all manufacturers or products listed.

B. Where product options are included in the specifications and they are followed by an "or equal " or "approved equal" or equal meeting a specified standard, review and approval by the Architect/Engineer and School District is required for Contractor-proposed equal items. Procedures specified in Section 01630 are to be followed.

C. For items specified only by Reference Standards, select any item meeting standards.

D. Performance Specifications: For items specified by performance requirements, select any item meeting the performance standards specified.

E. Descriptive Specifications: When specifications describe a product or assembly, listing exact components and characteristics, without the use of a brand or trade name, provide a product or assembly that contains the components and characteristics specified.

F. Compliance with Standards Specifications: When specifications only require compliance with a Code, Regulation or Voluntary Standard, Provide products that comply with the specified Codes, Regulations or Standards.

G. Submit request, as required for substitution, for any item or manufacturer not specifically named in the specifications on the Substitution Request Form enclosed with the Bidding Documents.

1. Architect/Engineer and School District will determine acceptability of proposed substitutions.

2. The Compton Community College District has a Resolution: No. 2009-10-21 and 2015-16-50 for the Designation of Specific Material, Product, or Service for numerous District Standard product and systems. (see resolutions for details).

PART 2 – PRODUCTS - (Not Applicable)

PART 3 – EXECUTION - (Not Applicable)

END OF SECTION

COMPTON COMMUNITY COLLEGE DISTRICT

PRODUCT SUBSTITUTION PROCEDURES

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. This Section establishes procedures for Contractor submittal of substitutions. This Section does not apply to any substitution requests that should have been made at time of bid in accordance with the Instructions to Bidders and the bid documents. **The District can reject any requests for substitution in its sole discretion if the Contractor did not submit a request at the time of bid in accordance with the Instructions to Bidders and the bid documents.**

B. This Section provides procedures for review and compliance with Public Contract Code section 3400 for the "or equal" clause allowing bidders to furnish any equal material, product, thing or service. Or equal items proposed by bidders are considered substitutions and are subject to approval of the Architect and School District. Burden of proof for "Or Equals" is the responsibility of the Contractor.

C. The intent of this section is to insure that proposed substitutions exceed or equal the quality of the specified products and are furnished and installed in accordance with the Contract Documents.

1.2 RELATED SECTIONS

A. Information for Bidders

B. General and Supplementary Conditions

C. Section 01 62 00 - Product Options

D. Section 01 25 00- Contract Modification Procedures

1.3 SUBSTITUTIONS

A. Substitution requests are to be submitted by Generals Contractors Only. Requests submitted by Subcontractors, Material Suppliers, Manufacturers and other interested parties, other than General Contractors, will not be considered. Submit requests on the attached **SUBSTITUTION REQUEST FORM (AFTER BID)** in

section 1305. **Substitution requests will only be considered for an "or equal" product specifically listed in the technical specifications for this project. No other substitutions will be considered.** (ie if Carrier AC units are used on plans and specifications say "Carrier, Trane or York" – Trane or York would be considered as a substitution.)

B. Comply with provisions of Articles for Substitutions in the Information for Bidders, General Conditions and any modifications to these documents provided in the Supplementary Conditions.

C. Tabulate products by specification section number and title.

D. Submit separate request for each substitution. Support each request with the information and documents below and any other requirements in the General Conditions Article 3.10.:

1. Complete data substantiating compliance of proposed substitution with requirements stated in Contract Documents:

    a. Product identification, including manufacturer's name and address.

    b. Manufacturer's literature; identify:

        i. Product description.

        ii. Reference standards.

        iii. Performance and test data.

        iv. Fire resistance and fire ratings.

    c. Samples, as applicable.

    d. Name and address of similar projects on which product has been used, and date of each installation.

2. Itemized comparison of the proposed substitution with product specified; list significant variations.

3. Any effect the substitution may have on other trade contracts.

4. List of changes required in other work or products.

5. Accurate cost data comparing proposed substitution with product specified.

   a. Amount of any change in cost.

6. Designation of required license fees or royalties.

7. Designation of availability of maintenance services, sources of replacement materials.

8. Comparison of physical size and weight with product specified.

9. Comparison of physical shape and available finishes.

E. Substitutions will not be considered for acceptance when:

1. They are indicated or implied on shop drawings or product data submittals and where not approved in compliance with the General Conditions and this section.

2. Substitution request procedures included in this Section, the Information for Bidders, and in the General and Supplementary Conditions are not complied with by the Contractor.

3. The School District has determined that compatibility, standardization, technological sophistication, service and uniformity are necessary with regard to technological and certain safety items across the Schools in the District.

F. Substitute products shall not be installed in the construction without written acceptance of the Architect and School District.

G. Substitution request must be submitted no more than 35 days after award of the contract

1.4 CONTRACTOR'S SUBSTITUTION CERTIFICATION

A. In making formal request for substitution contractor certifies that:

1. He has investigated proposed product and has determined that it is equal to or superior in all respects to that specified.

2. He will provide same warranties or bonds for substitution as for product specified.

3. He will coordinate installation of accepted substitution into the work, and will make such changes as may be required for the work to be complete in all respects including modification of the work of other trades.

4. He waives claims for additional costs caused by substitution which may subsequently become apparent.

5. Substituted material is similar in physical appearance, size and weight and will install with the same opening and attachments.

6. Substituted material has the same or better fire rating and fire resistive qualities, including flame spread, smoke developed, UL tested and listing.

7. Meets all requirement set forth in the General Conditions

1.5 ARCHITECT'S/ENGINEER'S DUTIES

A. Review contractor's request for substitutions with reasonable promptness.

B. Consult with District and provide notification to contractor, in writing, of decision to accept or reject requested substitution.

1.6 AVAILABILITY OF SPECIFIED ITEMS

A. Verify prior to bidding that all specified and substituted items will be available in time for installation during orderly and timely progress of the work.

B. In the event specified items will not be available, notify the Architect prior to receipt of bids.

C. Cost of delays because of non-availability of specified items, when such delays could have been avoided by the Contractor, will be back-charged as necessary and shall not be borne by the Architect or School District.

1.7 SUBSTITUTION WARRANTY REQUIREMENTS

A. Submit with the substitution request an executed Substitution Warranty. The Form is provided at the end of this Section. This form shall apply to substitutions submitted for acceptance prior to bid, prior to award of contract and for substitutions required after contract has been executed.

B. The Contractor is to warrant, in writing on company letterhead, that the substituted items are to perform as specified, and assume complete responsibility for the same. This includes responsibility and costs required for modifications to building, other materials, or equipment, and any additional coordination with work of other trades. The Contractor if required or requested by the Architect or School District shall pay for testing, of Substitution proposed.

PART 2 – PRODUCTS - (Not Applicable)

PART 3 – EXECUTION - (Not Applicable)

END OF SECTION

COMPTON COMMUNITY COLLEGE DISTRICT

CLEANING

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes: Cleaning throughout the construction period and final project cleaning prior to the acceptance tour.

B. Related Work Described Elsewhere: In addition to standards specified herein, comply with requirements for cleaning as described in other sections of these Specifications.

1.2 QUALITY ASSURANCE

A. Inspection: Conduct daily inspection, and more often if necessary, to verify that requirements of cleanliness are being met.

B. Codes and Standards: In addition to the requirements specified herein, comply with pertinent requirements of authorities having jurisdiction.

PART 2 - PRODUCTS

2.1 CLEANING MATERIALS AND EQUIPMENT

A. Provide required personnel, equipment, and materials needed to maintain the specified standard of cleanliness.

2.2 COMPATIBILITY

A. Use cleaning materials and equipment that are compatible with the surfaces being cleaned, as recommended by the manufacturer of the material to be cleaned.

PART 3 - EXECUTION

3.1 PROGRESS CLEANING

A. General:

1. Retain stored items in an orderly arrangement allowing maximum access, not impeding drainage or traffic, and providing the required protection of materials.

2. Do not allow the accumulation of scrap, debris, waste materials, and other items not required for construction of this work. Debris

shall be removed from the site and disposed of in a lawful manner. Disposal receipts of dump tickets shall be furnished to Architect/Engineer upon request.

3. At least twice each month, and more often if necessary, remove scrap, debris, and waste material from the job site.

4. Provide adequate storage for items awaiting removal from the job site, observing requirements for fire protection and protection of the ecology.

B. Site:

1. Daily, and more often if necessary, inspect the site and pick up all scrap, debris, and waste material. Remove items to the place designated for their storage. Combustible waste shall be removed from the site. Flammable waste shall be kept in sealed metal containers until removed from the site.

2. Weekly, and more often if necessary, inspect arrangements of materials stored on the site; restack, tidy, or otherwise service arrangements to meet the requirements specified above.

3. Maintain the site in a neat and orderly condition.

C. Structures:

1. Daily, and more often if necessary, inspect the structures and pick up scrap, debris, and waste material. Remove items to the place designated for their storage.

2. Daily, and more often if necessary, sweep interior spaces clean.

a. “Clean”, for the purpose of this subparagraph, shall be interpreted as meaning free from dust and other materials capable of being removed by use of reasonable effort and a handheld broom, i.e., “broom-clean”.

3. As required preparatory to installation of succeeding materials, clean the structures of pertinent portions thereof to the degree of cleanliness recommended by the manufacturer of the succeeding material, using equipment and materials required to achieve the required cleanliness.

4. Following the installation of finish floor materials, clean the finish floor daily, and more often if necessary, and while work is being performed in the space in which finish materials have been installed.

a. "Clean", for the purpose of this subparagraph, shall be interpreted as meaning free from foreign material that, in the opinion of the Architect, may be injurious to the finish floor material, i.e., "vacuum- clean".

3.2 FINAL CLEANING

A. Definition: Except as otherwise specifically provided, "clean", for the purpose of the Article, shall be interpreted as meaning the level of cleanliness generally provided by skilled cleaners using commercial quality building maintenance equipment and materials, i.e., "scrub and polish clean".

B. General: Prior to completion of the work, remove from the job site all tools, surplus materials, equipment, scrap, debris, and waste and conduct final progress cleaning as described above.

C. Site: Unless otherwise specifically directed by the Architect, water and broom clean paved areas on the site and public paved areas directly adjacent to the site. Remove resultant debris.

D. Structures:

1. Exterior: In areas affected by the work under this contract, visually inspect exterior surfaces and remove traces of soil, waste material, smudges, and other foreign matter. Remove traces of splashed material from adjacent surfaces. If necessary to achieve a uniform degree of exterior cleanliness, hose down the exterior of the structure.

   In the event of stubborn stains not removable with water, the Architect may require light sandblasting or other cleaning at no additional cost to the Owner.

2. Interior: In areas affected by the work under this contract, visually inspect interior surfaces and remove traces of soil, waste material, smudges, and other foreign matter. Remove traces of splashed materials from adjacent surfaces. Remove paint drippings, spots, stains, and dirt from finished surfaces. Use only the cleaning materials and equipment instructed by the manufacturer of the surface material.

3. Glass: Clean glass inside and outside.

4. Polished surfaces: On surfaces requiring the routine application or buffed polish, apply the polish recommended by the manufacturer of the material being polished. Glossy surfaces shall be cleaned and shined as intended by the manufacturer.

E. Timing: Schedule final cleaning as accepted by the Architect to enable the Owner to accept a completely clean project.

3.3 CLEANING DURING OWNER'S OCCUPANCY

A. Should the Owner occupy the work or any portion thereof prior to its completion by the Contractor and acceptance by the Owner, responsibilities for interim and final cleaning of the occupied spaces shall be determined by the Architect in accordance with the General Conditions of the Contract.

END OF SECTION

COMPTON COMMUNITY COLLEGE DISTRICT

FIELD ENGINEERING

PART 1 - GENERAL

1.1 SUMMARY

A. General: This Section specifies administrative and procedural requirements for field engineering services, including, but not necessarily limited to, the following:

1. Land survey Work.

2. Civil engineering services.

3. Structural engineering services.

1.2 RELATED SECTIONS

A. Section 01 33 00 - Submittals

B. Section 31 00 00 - Earthwork

1.3 SUBMITTALS

A. Certificates: Submit a certificate signed by the Land Surveyor or Professional Engineer certifying that the location and elevation of improvements comply with the Contract Documents. These Surveys and updated “As-Builts” will be submitted with every pay application for review and acceptance by the Engineer and Inspector of Record.

B. Submittal Copies of final as built property survey.

C. Project Record Documents: Submit a record of Work performed and record survey data as required under provisions of Sections "Submittals", "Project Closeout", and Specification Number 01 78 20 – “Project Record Documents”.

1.4 QUALITY ASSURANCE

A. Surveyor: Engage a Registered Land Surveyor registered in the State where the project is located, to perform land surveying services required.

B. Engineer: Engage a Professional Engineer of the discipline required, registered in the state of California, in which the Project is located, to perform required engineering services.

PART 2 – PRODUCTS - (Not Applicable)

PART 3 - EXECUTION

3.1 EXAMINATION

A. The District will identify existing control points and property line corner stakes.

B. Verify layout information shown on the Drawings, in relation to the property survey and existing benchmarks before preceding to layout the Work. Locate and protect existing benchmarks and control points. Preserve permanent reference points (if any) during construction.

1. Do not change or relocate benchmarks or control points without prior written approval. Promptly report lost or destroyed reference points, or requirements to relocate reference points because of necessary changes in grades or locations.

2. Promptly replace lost or destroyed project control points. Base replacements on the original survey control points.

C. Establish and maintain a minimum of two permanent benchmarks on the site, referenced to data established by survey control points.

1. Record benchmark locations, with horizontal and vertical data, on Project Record Documents.

D. Existing utilities and equipment: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning site work, investigate and verify the existence and location of underground utilities and other construction. Contact underground service alert at 1(800) 422-4133 or call 811 before start of construction.

1. Prior to construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer and water service piping.

3.2 PERFORMANCE

A. Working from lines and levels established by the survey, establish benchmarks and markers to set lines and levels at each story of construction and elsewhere as needed to properly locate each element of the Project. Calculate and measure required dimensions within indicated or recognized tolerances. Do not scale Drawings to determine dimensions.

1. Advise entities engaged in construction activities, of marked lines and levels provided for their use.

2. As construction proceeds, check every major element for line, level and plumb.

B. Surveyor's Log: Maintain a surveyor's log of control and other survey Work. Make this log available for reference.

1. Record deviations from required lines and levels, and advise the Architect when deviations that exceed indicated or recognized tolerances are detected. On Project Record Drawings, record deviations that are accepted and not corrected.

2. On completion of foundation walls, major site improvements, and other Work requiring field engineering services, prepare a certified survey showing dimensions, locations, angles and elevations of construction and site work.

C. Site Improvements: Locate and lay out site improvements, including pavements, stakes for grading, fill and topsoil placement, utility slopes and invert elevations by instrumentation and similar appropriate means.

D. Building Lines and Levels: Locate and lay out batter boards for structures, building foundations, column grids and locations, floor levels and control lines and levels required for mechanical and electrical Work.

E. Existing Utilities: Furnish information necessary to adjust, move or relocate existing structures, utility poles, lines, services or other appurtenances located in, or affected by construction. Coordinate with local authorities having jurisdiction.

F. Final Property Survey: Before Substantial Completion, prepare a final property survey showing significant features (real property) for the Project. Include on the survey a certification, signed by the Surveyor, to the effect that principal metes, bounds, lines and levels of the Project are accurately positioned as shown on the survey.

END OF SECTION

SECTION 01 73 00 - EXECUTION

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. This Section includes general procedural requirements governing execution of the Work including, but not limited to, the following:

1. Construction layout.
2. Field engineering and surveying.
3. Installation of the Work.
4. Cutting and patching.
5. Coordination of Owner-installed products.
6. Progress cleaning.
7. Starting and adjusting.
8. Protection of installed construction.

B. Related Sections include the following:

1. Section 01 31 00 "Project Coordination" for procedures for coordinating field engineering with other construction activities.
2. Section 01 33 00 "Submittal Procedures" for submitting surveys.
3. Section 01 77 00 "Closeout Procedures" for submitting final property survey with Project Record Documents, recording of Owner-accepted deviations from indicated lines and levels, and final cleaning.
4. Section 07 84 13 "Penetration Firestopping" for patching penetrations in fire-rated construction.

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 construction to original conditions after installation of other work.

1.4 INFORMATIONAL SUBMITTALS

A. Qualification Data: For professional engineer.

B. Certificates: Submit certificate signed by professional engineer certifying that location and elevation of improvements comply with requirements.

C. Certified Surveys: Submit two copies signed by professional engineer.

D. Final Property Survey: Submit 10 copies showing the Work performed and record survey data.

1.5 QUALITY ASSURANCE

A. Land Surveyor Qualifications: A professional land surveyor who is legally qualified to practice in California and who is experienced in providing land-surveying services of the kind indicated.

B. Cutting and Patching: Comply with requirements for and limitations on cutting and patching of construction elements.

1. Structural Elements: When cutting and patching structural elements, notify Architect of locations and details of cutting and await directions from Architect before proceeding. Shore, brace, and support structural elements during cutting and patching. Do not cut and patch structural elements in a manner that could change their load-carrying capacity or increase deflection
2. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety.
3. Other Construction Elements: Do not cut and patch other construction elements or components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or that results in increased maintenance or decreased operational life or safety. Other construction elements include but are not limited to the following:

    a. Water, moisture, or vapor barriers.
    b. Membranes and flashings.
    c. Exterior curtain-wall construction.
    d. Sprayed fire-resistive material.
    e. Equipment supports.
    f. Piping, ductwork, vessels, and equipment.
    g. Noise- and vibration-control elements and systems.

4. Visual Elements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch exposed construction 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.

C. Manufacturer's Installation Instructions: Obtain and maintain on-site manufacturer's written recommendations and instructions for installation of products and equipment.

PART 2 - PRODUCTS

2.1 MATERIALS

A. General: Comply with requirements specified in other Sections.

B. In-Place Materials: Use materials for patching 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 provide a match acceptable to Architect for the visual and functional performance of in-place materials.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Existing Conditions: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities and other construction affecting the Work.

1. Before construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, and water-service piping; and underground electrical services.
2. Furnish location data for work related to Project that must be performed by public utilities serving Project site.

B. Examination and Acceptance of Conditions: Before proceeding with each component of the Work, examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.

1. Examine roughing-in for mechanical and electrical systems to verify actual locations of connections before equipment and fixture installation.
2. Examine walls, floors, and roofs for suitable conditions where products and systems are to be installed.
3. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.

C. Written Report: Where a written report listing conditions detrimental to performance of the Work is required by other Sections, include the following:

1. Description of the Work.
2. List of detrimental conditions, including substrates.
3. List of unacceptable installation tolerances.
4. Recommended corrections.

D. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

3.2 PREPARATION

A. Existing Utility Information: Furnish information to local utility that is necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction. Coordinate with authorities having jurisdiction.

B. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

C. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.

D. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents caused by differing field conditions outside the control of Contractor, submit a request for interpretation to Architect according to Section 01 26 13 "Request for Interpretation."

3.3 CONSTRUCTION LAYOUT

A. Verification: Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to the property survey and existing benchmarks. If discrepancies are discovered, notify Architect and Construction Manager promptly.

B. General: Engage a professional engineer to lay out the Work using accepted surveying practices.

1. Establish benchmarks and control points to set lines and levels at each story of construction and elsewhere as needed to locate each element of Project.
2. Establish limits on use of Project site.
3. Establish dimensions within tolerances indicated. Do not scale Drawings to obtain required dimensions.
4. Inform installers of lines and levels to which they must comply.
5. Check the location, level and plumb, of every major element as the Work progresses.

6. Notify Architect when deviations from required lines and levels exceed allowable tolerances.
7. Close site surveys with an error of closure equal to or less than the standard established by authorities having jurisdiction.

C. Site Improvements: Locate and lay out site improvements, including pavements, grading, fill and topsoil placement, utility slopes, and invert elevations.

D. Building Lines and Levels: Locate and lay out control lines and levels for structures, building foundations, column grids, and floor levels, including those required for mechanical and electrical work. Transfer survey markings and elevations for use with control lines and levels. Level foundations and piers from two or more locations.

E. Record Log: Maintain a log of layout control work. Record deviations from required lines and levels. Include beginning and ending dates and times of surveys, weather conditions, name and duty of each survey party member, and types of instruments and tapes used. Make the log available for reference by Architect.

3.4 FIELD ENGINEERING

A. Identification: Owner will identify existing benchmarks, control points, and property corners.

B. Reference Points: Locate existing permanent benchmarks, control points, and similar reference points before beginning the Work. Preserve and protect permanent benchmarks and control points during construction operations.

1. Do not change or relocate existing benchmarks or control points without prior written approval of Architect. Report lost or destroyed permanent benchmarks or control points promptly. Report the need to relocate permanent benchmarks or control points to Architect before proceeding.
2. Replace lost or destroyed permanent benchmarks and control points promptly. Base replacements on the original survey control points.

C. Benchmarks: Establish and maintain a minimum of two permanent benchmarks on Project site, referenced to data established by survey control points. Comply with authorities having jurisdiction for type and size of benchmark.

1. Record benchmark locations, with horizontal and vertical data, on Project Record Documents.
2. Where the actual location or elevation of layout points cannot be marked, provide temporary reference points sufficient to locate the Work.
3. Remove temporary reference points when no longer needed. Restore marked construction to its original condition.

D. Certified Survey: On completion of foundation walls, major site improvements, and other work requiring field-engineering services, prepare a certified survey showing dimensions, locations, angles, and elevations of construction and sitework.

E. Final Property Survey: Prepare a final property survey showing significant features (real property) for Project. Include on the survey a certification, signed by professional engineer, that principal metes, bounds, lines, and levels of Project are accurately positioned as shown on the survey.

1. Show boundary lines, monuments, streets, site improvements and utilities, existing improvements and significant vegetation, adjoining properties, acreage, grade contours, and the distance and bearing from a site corner to a legal point.
2. Recording: At Substantial Completion, have the final property survey recorded by or with authorities having jurisdiction as the official "property survey."

3.5 INSTALLATION

A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.

1. Make vertical work plumb and make horizontal work level.
2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
3. Conceal pipes, ducts, and wiring in finished areas, unless otherwise indicated. Where indicated to remain exposed, arrange overhead systems in an orderly manner.
4. Coordinate headroom clearance in occupied spaces with Architect and Interior Design drawings. Provide maximum possible headroom clearance in all unoccupied spaces.

B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.

C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.

D. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.

E. Sequence the Work and allow adequate clearances to accommodate movement of construction items on site and placement in permanent locations.

F. Tools and Equipment: Do not use tools or equipment that produces harmful noise levels.

G. Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.

H. Attachment: Provide blocking and attachment plates and anchors and fasteners of adequate size and number to securely anchor each component in place, accurately located and aligned with other portions of the Work. Where size and type of attachments are not indicated, verify size and type required for load conditions

1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Architect.
2. Allow for building movement, including thermal expansion and contraction.
3. Coordinate installation of anchorages. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.

I. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.

J. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.

K. Protect adjacent property and adjoining work, including sealant bond surfaces, from spillage or blow-over of coatings, paints, sprayed fire-resistive material, and other spray-applied products. Cover adjoining and nearby surfaces, including live plants and grass, if there is possibility of spray-applied products being deposited on surfaces.

3.6 CUTTING AND PATCHING

A. Cutting and Patching, 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. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during installation or cutting and patching operations, by methods and with materials so as not to void existing warranties.

C. Temporary Support: Provide temporary support of work to be cut.

D. 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.

E. 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 prevent interruption to occupied areas.

F. 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 neatly to minimum 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.
3. Concrete and Masonry: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill. Avoid cutting steel reinforcement.

    a. Locate steel reinforcement using Ground Penetrating Radar or Ferroscan prior to cutting or drilling reinforced concrete and masonry. If existing steel reinforcement is in proposed cut or hole location, contact Architect before proceeding with the Work.

4. Excavating and Backfilling: Comply with requirements in applicable Division 31 Sections where required by cutting and patching operations.
5. Mechanical and Electrical Services: Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.
6. Proceed with patching after construction operations requiring cutting are complete.

G. 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 practicable. Provide materials and comply with installation requirements specified in other Sections, where applicable.

1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate physical 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 minimize evidence of patching and refinishing.

    a. Clean piping, conduit, and similar features before applying paint or other finishing materials.
    b. Restore damaged pipe covering to its original condition.

3. Floors and Walls: Where walls or partitions that are removed extend one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform finish, color, texture, and appearance. Remove in-place floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.

a. Where patching occurs in a painted surface, prepare substrate and apply primer and intermediate paint coats appropriate for substrate over the patch, and apply final paint coat over entire unbroken surface containing the patch. Provide additional coats until patch blends with adjacent surfaces.

4. Ceilings: Patch, repair, or rehang in-place ceilings as necessary to provide an even-plane surface of uniform appearance.
5. Ceramic Tile: Provide ceramic tile and grout to match existing. Remove and replace tile damaged as a result of Work of this Contract. Comply with TCNA's "Handbook for Ceramic Tile Installation" for installation method to match existing. Lay tile in grid pattern to match existing. Make joints between existing and new tile same width so patches are not apparent in finished work.
6. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weathertight condition and ensures thermal and moisture integrity of building enclosure.

H. Cleaning: Clean areas and spaces where cutting and patching are performed. Remove paint, mortar, oils, putty, and similar materials from adjacent finished surfaces.

3.7 OWNER-INSTALLED PRODUCTS

A. Site Access: Provide access to Project site for Owner's construction forces.

B. Coordination: Coordinate construction and operations of the Work with work performed by Owner's construction forces.

1. Construction Schedule: Inform Owner of Contractor's preferred construction schedule for Owner's portion of the Work. Adjust construction schedule based on a mutually agreeable timetable. Notify Owner if changes to schedule are required due to differences in actual construction progress.
2. Preinstallation Conferences: Include Owner's construction forces at preinstallation conferences covering portions of the Work that are to receive Owner's work. Attend preinstallation conferences conducted by Owner's construction forces if portions of the Work depend on Owner's construction.

3.8 PROGRESS CLEANING

A. General: Clean Project site and work areas daily, including common areas. Coordinate progress cleaning for joint-use areas where more than one installer has worked. Enforce requirements strictly. Dispose of materials lawfully.

1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
2. Do not hold materials more than 7 days during normal weather or 3 days if the temperature is expected to rise above 80 deg F (27 deg C).
3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.

4. Coordinate progress cleaning for joint-use areas where Contractor and other contractors are working concurrently.

B. Site: Maintain Project site free of waste materials and debris.

C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.

1. Remove liquid spills promptly.
2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.

D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.

E. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.

F. Exposed Surfaces: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.

G. Waste Disposal: Burying or burning waste materials on-site will not be permitted. Washing waste materials down sewers or into waterways will not be permitted. Comply with Section 01 74 19 "Construction Waste Management and Disposal."

H. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.

I. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.

J. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

3.9 STARTING AND ADJUSTING

A. Coordinate startup and adjusting of equipment and operating components with requirements in Section 01 91 13 "General Commissioning Requirements."

B. Start equipment and operating components to confirm proper operation. Remove malfunctioning units, replace with new units, and retest.

C. Adjust operating components for proper operation without binding. Adjust equipment for proper operation.

D. Test each piece of equipment to verify proper operation. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.

E. Manufacturer's Field Service: If a factory-authorized service representative is required to inspect field-assembled components and equipment installation, comply with qualification requirements in Section 01 40 00 "Quality Requirements."

3.10 PROTECTION OF INSTALLED CONSTRUCTION

A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.

B. Comply with manufacturer's written instructions for temperature and relative humidity.

END OF SECTION 01 73 00

COMPTON COMMUNITY COLLEGE DISTRICT

CUTTING AND PATCHING

PART 1 - GENERAL

1.1 SUMMARY

A. This Section specifies administrative and procedural requirements for cutting and patching, and interface of new work into existing construction and with work being performed under other contracts provided by the College District.

B. Refer to other Sections for specific requirements and limitations applicable to cutting and patching individual parts of the work.

1. Requirements of this Section apply to Sections in Divisions 2 through 16.

1.2 RELATED SECTIONS

A. Section 01 01 00 - Summary of work (Scope of Work).

B. Section 03 30 00 - Cast-in-place Concrete

C. Division 2 through 16 Sections

1.3 SUBMITTALS

A. Cutting and Patching Proposal: Approval of procedures for cutting and patching is required before proceeding, submit a proposal describing procedures well in advance of the time cutting and patching will be performed and request approval to proceed. Include the following information, as applicable, in the proposal:

1. Describe the extent of cutting and patching required and how it is to be performed.

2. Indicate dates when cutting and patching is to be performed.

3. List utilities that will be disturbed or affected, including those that will be relocated and those that will be temporarily out-of-service. Indicate how long service will be disrupted.

4. Refer to Structural Drawing for locations where cutting and patching involves addition of reinforcement to structural

elements. Do not damage or weaken existing structural elements.

5. Approval by the Architect/Engineer to proceed with cutting and patching does not waive the Architect's right to later require complete removal and replacement of a part of the work found to be unsatisfactory.

1.4 QUALITY ASSURANCE

A. Visual Requirements: Do not cut and patch construction exposed on the exterior or in occupied spaces, in a manner that would, in the Architect's/Engineer's opinion, reduce the building's aesthetic qualities, or result in visual evidence of cutting and patching. Remove and replace work cut and patched in a visually unsatisfactory manner.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Use materials that are identical to existing materials. If identical materials are not available or cannot be used where exposed surfaces are involved, use materials that match existing adjacent surfaces to the fullest extent possible with regard to visual effect. Use materials whose installed performance will equal or surpass that of existing materials.

PART 3 - EXECUTION

3.1 INSPECTION

A. Before cutting existing surfaces, examine surfaces to be cut and patched and conditions under which cutting and patching is to be performed. Take corrective action before proceeding, if unsafe or unsatisfactory conditions are encountered.

3.2 PREPARATION

A. Temporary Support: Provide temporary support of work to be cut.

B. Protection: Protect existing construction during cutting and patching to prevent damage. Provide protection from adverse weather

conditions for portions of the Project that might be exposed during cutting and patching operations.

C. Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.

D. Take all precautions necessary to avoid cutting existing pipe, electrical wire and conduit or ductwork serving the building.

3.3 PERFORMANCE

A. General: Employ skilled workmen to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time and complete without delay.

1. Cut existing construction to provide for installation of other components or performance of other construction activities and the subsequent fitting and patching required to restore surfaces to their original condition.

2. Where patching occurs in a smooth painted surface, extend final paint coat over entire surface containing the patch, after the patched area has received primer and second coat.

3. Cut, patch, point-up and repair plaster to accommodate other construction and to repair cracks, dents and imperfections.

4. Cut, patch, restore and repair all gypsum board wall and ceiling surfaces where new pipes, equipment, clocks, switches, conduit, ducts and any new construction items that would damage or cut existing surfaces.

5. Cut patch and repair existing concrete and asphalt paving where new utility lines are installed across existing paving and under existing concrete floor slabs. Site verify extent of cutting and patching required. All existing site improvements may not be indicated on the site plan and floor plans.

6. Cut existing walls, floors, ceilings and roofs or other parts of building structure to accommodate new ducts, conduits and piping, patch and repair existing.

7. Patch existing floors, walls, roofs and ceilings where existing ducts, conduit, equipment, water, gas, sewer, windows, doors etc. that are not used or removed and are not to be replaced. This is considered part of required general patching and is

part of the contract and will not be shown in detail on the Contract drawings. Field verify with existing site and building construction for patching required.

3.4 CLEANING

A. Thoroughly clean areas and spaces where cutting and patching is performed or used as access. Remove completely paint, mortar, oils, putty and items of similar nature. Thoroughly clean piping, conduit and similar features before painting or other finishing is applied. Restore damaged areas to their original condition.

END OF SECTION

COMPTON COMMUNITY COLLEGE DISTRICT

WARRANTIES, GUARANTIES AND BONDS

PART 1 - GENERAL

1.1 WORK INCLUDED

A. This Section specifies general requirements for written warranties, guaranties and bonds required by the Contract Documents.

B. Submittal to, and approval by, the District of the warranties, guaranties and bonds are prerequisites to final payment under the Contract.

1.2 RELATED WORK

A. Related work specified elsewhere:

1. General Conditions –Section 00 72 00

2. Contract Close-out - Section 01 77 00

1.3 TIME PERIOD

A. Deliver manufacturers' warranties, guaranties and bonds required by Contract Documents, with District named as beneficiary. For equipment and machinery, or components thereof, bearing a manufacturer's warranty or guaranty that extends for a longer time period than the Contractor's warranty and guaranty, deliver manufacturer's warranties or guaranties in same manner.

1.4 FORM

A. Written warranties and guaranties, excepting manufacturer's standard printed warranties and guaranties shall be submitted on the Contractor's, Subcontractors, material suppliers', or manufacturers' own letterhead, addressed to District. Warranties and guaranties shall be submitted in duplicate, and in the form shown on the following page, signed by all pertinent parties and by Contractor in every case, with modifications as approved by District to suit the conditions pertaining to the warranty or guaranty.

1.5 SUBMITTAL

A. The Contractor shall collect and assemble written warranties and guaranties from all subs, material suppliers and manufacturers into a bound booklet form, and deliver the bound books to Architect/Engineer for delivery to the District's attorney for final review and approval.

B. Submit required warranty/guaranty on letterhead of Contractor responsible for each type of Work in accordance with attached sample form.

C. The contractor will ensure that the Manufacturers will be scheduled in a timely manner to ensure that the start of the warranty period is well documented.

END OF SECTION

COMPTON COMMUNITY COLLEGE DISTRICT

CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

A. Comply with requirements stated in Conditions of the Contract and in Specifications for administrative procedures in closing out the work.

B. Related Requirements in Other Parts of the Project Manual:

1. Fiscal provisions, legal submittals and additional administrative requirements: Conditions of the Contract.

C. Comply with requirements set forth in General Conditions

1.2 SUBSTANTIAL COMPLETION

A. When Contractor considers the work is substantially complete as defined in the General Conditions, he shall submit to Architect/Engineer:

1. A written notice that the work, or designated portion thereof, is substantially complete.

2. A list of items to be completed or corrected.

3. Complete start-up testing of systems, and instruction of the Owner's operating and maintenance personnel. Discontinue or change over and remove temporary facilities from the site, along with construction tools, mock-ups, and similar elements.

B. When Architect/Engineer concurs that the work is substantially complete, he will:

1. Prepare a letter of Substantial Completion accompanied by Contractor's list of items to be completed or corrected, as verified and amended by the Architect.

2. Submit the Certificate to Owner and Contractor for their written acceptance of the responsibilities assigned to them.

1.3 FINAL INSPECTION

A. When Contractor considers the work is complete, he shall submit written certification that:

1. Contract Documents have been reviewed.

2. Work has been inspected for compliance with Contract Documents.

3. Work has been completed in accordance with Contract Documents.

4. Equipment and systems have been tested in the presence of the Owner's representative and are operational.

5. Work is completed and ready for final inspection.

6. The Architect's/Engineer's final inspection list of items to be completed or corrected, has been completed or otherwise resolved for acceptance, and the list has been endorsed and dated by the Architect/Engineer.

7. Submit consent of surety to final payment.

8. Submit a final liquidated damages settlement statement.

9. Submit evidence of final, continuing insurance coverage complying with insurance requirements.

B. Architect/Engineer will make an inspection to verify the status of completion with reasonable promptness after receipt of such certification.

C. When the Architect/Engineer finds that the work is acceptable under the Contract Documents, he shall request the Contractor to make closeout submittals.

1.4 RECORD DOCUMENT SUBMITTALS

A. General: Do not use record documents for construction purposes; protect from deterioration and loss in a secure, fire-resistive location; provide access to record documents for the Architect's reference during normal working hours.

B. Record Drawings: Maintain a clean, undamaged set of blue or black line white-prints of Contract Drawings and Shop Drawings.

Mark the set to show the actual installation where the installation varies substantially from the Work as originally shown. Mark whichever drawing is most capable of showing conditions fully and accurately; where Shop Drawings are used, record a cross-reference at the corresponding location on the Contract Drawings. Give particular attention to concealed elements that would be difficult to measure and record at a later date.

1. Mark record sets with red erasable pencil; use other colors to distinguish between variations in separate categories of the Work.

2. Mark new information that is important to the Owner, but was not shown on Contract Drawings or Shop Drawings.

3. Note related Change Order numbers where applicable.

4. Organize record drawing sheets into manageable sets, bind with durable paper cover sheets, and print suitable titles, dates and other identification on the cover of each set per Specification 01 78 20 Project Record Documents.

C. Record Specifications: Maintain one complete copy of the Project Manual, including addenda, and one copy of other written construction documents such as Change Orders and modifications issued in printed form during construction. Mark these documents to show substantial variations in actual Work performed in comparison with the text of the Specifications and modifications. Give particular attention to substitutions, selection of options and similar information on elements that are concealed or cannot otherwise be readily discerned later by direct observation. Note related record drawing information and Product Data.

1.5 CLOSEOUT SUBMITTALS

A. Submit the following, where applicable, in accordance with the General Conditions and Specifications:

1. Project record documents.

2. Operation and maintenance data.

3. Warranties, guarantees and bonds.

4. Keys and keying schedule.

5. Spare parts and extra stock.

6. Other items as required by the Specifications.

B. Deliver Certificate of Compliance and Test Report as follows:

1. Sterilization of water systems.

2. Testing of sewer systems.

3. Testing of hot and cold water systems.

4. Testing of gas system.

5. Testing of lighting, power and alarm systems.

6. Testing of HVAC equipment and exhaust fans.

1.6 FINAL APPLICATION FOR PAYMENT

A. Contractor shall submit the final Application for Payment in accordance with procedures and requirements stated in the Conditions of the Contract.

PART 2 – PRODUCTS - (Not Applicable)

PART 3 - EXECUTION

3.1 CLOSEOUT PROCEDURES

A. Operating and Maintenance Instructions: Arrange for each installer of equipment that requires regular maintenance to meet with the Owner's personnel to provide instruction in proper operation and maintenance. If installers are not experienced in procedures, provide instruction by manufacturer's representatives. Include a detailed review of the following items:

1. Maintenance manuals.

2. Record documents.

3. Spare parts and materials.

4. Tools.

5. Identification systems.

6. Control sequences.

7. Hazards.

8. Cleaning.

9. Warranties and bonds.

10. Maintenance agreements and similar continuing commitments.

B. As part of instruction for operating equipment, demonstrate the following procedures:

1. Start-up.

2. Shutdown.

3. Emergency operations.

4. Noise and vibration adjustments.

5. Safety procedures.

6. Economy and efficiency adjustments.

7. Effective energy utilization.

3.2 FINAL CLEANING

A. General: General cleaning during construction is required by the General Conditions and included in Section "Temporary Facilities".

B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to the condition expected in a normal, commercial building cleaning and maintenance program. Comply with manufacturer's instructions.

1. Complete the following cleaning operations before requesting inspection for Final Completion.

a. Remove labels that are not permanent labels.

b. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compound and other substances that are noticeable vision-obscuring materials. Replace chipped or broken glass and other damaged transparent materials.

c. Clean exposed exterior and interior hard-surfaced finishes to a dust-free condition, free of stains, films and similar foreign substances. Restore reflective surfaces to their original reflective condition. Leave concrete floors broom clean. Vacuum carpeted surfaces.

d. Wipe surfaces of mechanical and electrical equipment. Remove excess lubrication and other substances. Clean plumbing fixtures to a sanitary condition. Clean light fixtures and lamps.

e. Clean the site, including landscape development areas, of rubbish, litter and other foreign substances. Sweep paved areas broom clean; remove stains, spills and other foreign deposits. Rake grounds that are neither paved nor planted, to a smooth even-textured surface.

C. Pest Control: Engage an experienced exterminator to make a final inspection, and rid the Project of rodents, insects and other pests.

D. Removal of Protection: Remove temporary protection and facilities installed for protection of the Work during construction.

E. Compliance: Comply with regulations of authorities having jurisdiction and safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on the Owner's property. Do not discharge volatile, harmful or dangerous materials into drainage systems. Remove waste materials from the site and dispose of in a lawful manner.

1. Where extra materials of value remaining after completion of associated Work have become the Owner's property, arrange for disposition of these materials as directed.

END OF SECTION

COMPTON COMMUNITY COLLEGE DISTRICT

PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Maintain at the site for the College District, one record copy of:

1. Drawings
2. Specifications
3. Addenda
4. Change Orders and other Modifications to the Contract
5. Architect/Engineer written instructions
6. Approved Shop Drawings, Product Data and Samples.
7. Field Test Records
8. Construction Photographs.
9. As-built Documents

1.2 RELATED SECTIONS

A. General Conditions – 00 72 00

B. Section 01 31 00 - Project Coordination

C. Section 01 33 00 - Submittals

D. Section 01 72 20 – Field Engineering

E. Section 01 77 00 – Closeout Procedures

1.3 MAINTENANCE OF DOCUMENTS AND SAMPLES

A. Store documents and samples in Contractor's field office apart from documents used for construction.

1. Provide files and racks for storage of documents.

2. Provide locked cabinet or secure storage space for storage of samples.

B. File documents and samples in accordance with CSI/CSC Master Format.

C. Maintain documents in a clean, dry legible condition and in good order. Do not use record documents for construction purposes.

D. Make documents and samples available at all times for inspection by College District.

1.4 MARKING DEVICES

A. Provide felt-tip marking pens for recording information in the color code designated by Owner.

1.5 RECORDING

A. Label each document "PROJECT RECORD" in neat, large printed letters.

B. Record information concurrently with construction progress. Do not conceal any work until required information is recorded.

C. Drawings: Legibly mark to record actual construction:

1. Depth of various elements of foundation in relation to finish first floor datum.

2. Horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.

3. Location of internal utilities and appurtenances concealed in the construction, referenced to visible and accessible features of the structure.

4. Field changes of dimension and detail.

5. Changes made by Addenda, Supplemental Instruction Construction Change Directive or by Change Order.

6. Details not on original contract drawings.

7. Revisions to electrical circuitry and locations of electrical Devices and equipment
8. Identify each record drawing with the written designation of "RECORD DRAWING" in a prominent location.

D. Specifications and Contract Document Modifications: Legibly mark each Section to record:

1. Manufacturer, trade name, catalog number, and Supplier of each Product and item of equipment actually installed.

2. Supplier and Installer's name and contact information.

3. Changes made by Addenda, Supplemental Instructions, and Construction Change Directive or by Change Order.

E. Record Digital Data Files: Immediately before inspection for Substantial Completion, review marked-up record prints with Architect/Engineer, Construction Manager and Project Inspector. When authorized, prepare a full set of corrected digital data files of the Contract Drawings as follows:

1. Format: Same digital data software program, version, and operating system as the original Contract Drawings.

2. Format: Annotated PDF electronic file with comment function enabled.

3. Incorporate changes and additional information previously marked on record prints. Delete, redraw and add new details and notations where applicable.

4. Refer instances of uncertainty to Architect/Engineer (through Construction Manager) for resolution.

5. Architect/Engineer will furnish Contractor one set of digital files of the Contract Drawings, complete on same set, with all Addenda, clarifying Request for Information, Instruction Bulletins, Construction Change Documents, or any other changes, for use in recording information. Digital files shall be in AutoCAD (latest version) and PDF format.

    a. Refer to section 01 33 00 "Submittal Procedures" for requirements related to use of architect's/engineer's digital data files.

b. Architect/Engineer will provide data file layer information. Record mark-ups in separate layers.

F. Record Drawings Labeling: Provide Hard copy and Digital copy (in PDF format) as follows:

1. Provide a Flash Drive for all Digital Record Drawing submittals with a letter of transmittal describing all contents and date of contents on the Flash Drive.

2. Provide a folder in the Digital submittal labeled in capital letters naming the project i.e. CCC-084 STUDENT HOUSING PROJECT.

3. Provide sub-folders labeled in capital letters with the category and date of the as-builts i.e. CCC-084 STUDENT HOUSING – AS-BUILTS (CONTRACTORS NAME).

4. Provide separate files in sub-folders labeled with drawing number and description i.e. FA0.0 Title.

5. Submit documents to Architect/Engineer (through the Construction Manager) with claim for final Application for Payment.

6. Final 5% retention will be held until as-builts are complete and approved by the District.

1.6 SUBMITTALS

A. At the completion of the Project, deliver Record Documents to the Compton Community College District (through the Construction Manager). Architect/Engineer shall review documents for compliance with requirements as described above.

B. Accompany submittal with transmittal letter in duplicate, containing:

1. Date

2. Project title and number

3. Contractor's name and address

4. Title and number of each Record Document

5. Signature of Contractor or his authorized representative

C. Prior to the date of Substantial Completion the Contractor is to meet with the architect/engineer to determine which Samples maintained during construction are to be transferred to the College District. Dispose of all samples not be saved.

PART 2 – PRODUCTS - (Not Applicable)

PART 3 – EXECUTION - (Not Applicable)

END OF SECTION

COMPTON COMMUNITY COLLEGE DISTRICT

OPERATING AND MAINTENANCE DATA

PART 1 - GENERAL

1.1 SUMMARY

A. This Section specifies administrative and procedural requirements for operating and maintenance manuals including the following:

1. Preparation and submittal of operating and maintenance manuals for building operating systems and/or equipment.

2. Instruction of the College District's operating personnel in operation and maintenance of building systems and equipment.

B. Special operating and maintenance data requirements for specific pieces of equipment or building operating systems are included in the appropriate Sections of Divisions 2 through 16.

1. 2 QUALITY ASSURANCE

A. Maintenance Manual Preparation: In preparation of Maintenance Manuals, use personnel thoroughly trained and experienced in operation and maintenance of the equipment or system involved.

1. Where written instructions are required, use personnel skilled in technical writing to the extent necessary for communication of essential data.

2. Where Drawings or diagrams are required, use draftsmen capable of preparing Drawings clearly in an understandable format.

B. Instructions for the College District's Personnel: For instruction of the College District's operating and maintenance personnel, use experienced instructors thoroughly trained and experienced in the operation and maintenance of the building equipment or system involved.

1.3 SUBMITTALS

A. Submittal Schedule: Comply with the following schedule for submittal of operating and maintenance manuals.

1. Before Substantial Completion, when each installation that requires submittal of operating and maintenance manuals is nominally complete, submit two draft copies of each manual to the Architect/Engineer for review. Include a complete index or table of contents of each manual.

B. Form of Submittal: Prepare operating and maintenance manuals in the form of an instructional manual for use by the Owner's operating personnel. Organize into suitable sets of manageable size. Where possible, assemble instructions for similar equipment into a single binder.

1. Binders: For each manual, provide heavy-duty, commercial quality, durable 3-ring vinyl covered loose-leaf binders, in thickness necessary to accommodate contents, sized to receive 8-1/2" by 11" paper. Provide a clear plastic sleeve on the spine, to hold labels describing the contents. Provide pockets in the covers to receive folded sheets.

a. Where two or more binders are necessary to accommodate data, correlate data in each binder into related groupings in accordance with the Project Manual table of contents. Cross-reference other binders where necessary to provide essential information for proper operation or maintenance of the piece of equipment or system.

b. Identify each binder on the front and spine, with the typed or printed title "OPERATION AND MAINTENANCE MANUAL", Project title or name, and subject matter covered. Indicate the volume number for multiple volume sets of manuals.

2. Protective Plastic Jackets: Provide protective transparent plastic jackets designed to enclose diagnostic software for computerized electronic equipment.

3. Text Material: Where written material is required as part of the manual use the manufacturer's standard printed material, or if it is not available, specially prepared data, neatly typewritten, on 8-1/2" by 11", 20 pound white bond paper.

4. Drawings: Where drawings or diagrams are required as part of the manual, provide reinforced punched binder tabs on the drawings and bind in with the text.

a. Where oversize drawings are necessary, fold the drawings to the same size as the text pages and use as a fold-out.

b. If drawings are too large to be used practically as a fold- out, place the drawing, neatly folded, in the front or rear pocket of the binder. Insert a typewritten page indicating the drawing title, description of contents and drawing location at the appropriate location in the manual.

1.04 MANUAL CONTENT

A. In each manual include information specified in the individual Specification Section, and the following information for each major component of building equipment and its controls:

1. General system or equipment description.

2. Design factors and assumptions.

3. Copies of applicable Shop Drawings and Product Data.

4. System or equipment identification, including:

a. Name of manufacturer.

b. Model number.

c. Serial number of each component.

5. Operating instructions.

6. Emergency instructions.

7. Wiring diagrams.

8. Inspection and test procedures.

9. Maintenance procedures and schedules.

10. Precautions against improper use and maintenance.

11. Copies of warranties.

12. Repair instructions including spare parts listing.

13. Sources of required maintenance materials and related services.

14. Manual Index.

B. Organize each manual into separate Sections for each piece of related equipment. As a minimum each manual shall contain a title page, a table of contents, copies of Product Data, supplemented by drawings and written text, and copies of each warranty, bond and service Contract issued.

1. Title Page: Provide a title page in a transparent plastic envelope as the first sheet of each manual. Provide the following information:

a. Subject matter covered by the manual.

b. Name and address of the Project.

c. Date of submittal.

d. Name, address, and telephone number of the Contractor.

e. Name and address of the Architect;

f. Cross reference to related systems in other operating and maintenance manuals.

2. Table of Contents: After the Title Page, include a typewritten table of contents for each volume.

3. General information: Provide a general information Section immediately following the Table of Contents, listing each product included in the manual, identified by product name. Under each product, list the name, address, and telephone number of the Subcontractor or installer, and the maintenance contractor. Clearly delineate the extent of responsibility of each of these entities. In addition, list a local source for replacement parts and equipment.

4. Product Data: Where manufacturer's standard printed data is included in the manuals, include only sheets that are pertinent to the part or product installed. Mark each sheet to identify each part or product included in the installation.

5. Written Text: Where manufacturer's standard printed data is not available, and information is necessary for proper operation and maintenance of equipment or systems, or it is necessary to provide additional information to supplement data included in the manual, prepare written text to provide necessary information. Organize the text in a consistent format under separate headings for different procedures. Where necessary, provide a logical sequence of instruction for each operating or maintenance procedure.

6. Drawings: Provide specially prepared drawings where necessary to supplement manufacturer's printed data to illustrate the relationship of component parts of equipment or systems, or to provide control or flow diagrams. Coordinate these drawings with information contained in Project Record Drawings to assure correct illustration of the completed installation.

7. Warranties, Bonds and Service Contracts: Provide a copy of each warranty, bond or service contract in the appropriate manual for the information of the Owner's operating personnel. Provide written data outlining procedures to be followed in the event of product failure. List circumstances and conditions that would affect validity of the warranty or bond.

1.05 MATERIAL AND FINISHES MAINTENANCE MANUAL

A. Architectural Products: Provide manufacturer's data and instructions on care and maintenance of architectural products, including applied materials and finishes.

1. Care and Maintenance Instructions: Provide information on care and maintenance, including manufacturer's recommendations for types of cleaning agents to be used and methods of cleaning. Provide information regarding cleaning agents and methods that could prove detrimental to the product. Include manufacturer's recommended schedule for cleaning and maintenance.

B. Moisture-Protection and Weather-Exposed Products: Provide complete manufacturer's data with instructions on inspection, maintenance and repair of products exposed to the weather or designed for moisture-protection purposes.

1.06 EQUIPMENT AND SYSTEMS MAINTENANCE MANUAL

A. Manufacturer's Information: For each manufacturer of a component part or piece of equipment provide the following:

1. Printed operating and maintenance instructions.

2. Assembly drawings and diagrams required for maintenance.

3. List of items recommended to be stocked as spare parts.

B. Maintenance Procedures: Provide information detailing essential maintenance procedures, including the following:

1. Routine operations.

2. Trouble-shooting guide.

3. Disassembly, repair and reassembly

4. Alignment, adjusting and checking.

C. Operating Procedures: Provide information on equipment and system operating procedures, including the following:

1. Start-up procedures.

2. Equipment or system break-in.

3. Routine and normal operating instructions.

4. Regulation and control procedures.

5. Instructions on stopping.

6. Shut-down and emergency instructions.

7. Summer and winter operating instructions.

8. Required sequences for electric or electronic systems.

9. Special operating Instructions.

D. Servicing Schedule: Provide a schedule of routine servicing and lubrication requirements, including a list of required lubricants for equipment with moving parts.

E. Controls: Provide a description of the sequence of operation and as-installed control diagrams by the control manufacturer for systems requiring controls.

F. Coordination Drawings: Provide each Contractor's Coordination Drawings.

1. Provide as-installed color-coded piping diagrams, where required for identification.

G. Valve Tags: Provide charts of valve tag numbers, with the location and function of each valve.

H. Circuit Directories: For electric and electronic systems, provide complete circuit directories of panel boards, including the following:

1. Electric service.

2. Controls.

3. Communication.

1.07 INSTRUCTIONS TO COLLEGE DISTRICT PERSONNEL

A. Prior to final inspection, instruct College District personnel in operation, adjustment, and maintenance of products, equipment and systems. Provide instruction at mutually agreed upon times.

1. For equipment that requires seasonal operation, provide similar instruction during other seasons.

2. Use operation and maintenance manuals for each piece of equipment or system as the basis of instruction. Review contents in detail to explain all aspects of operation and maintenance.

PART 2 – PRODUCTS - (Not Applicable)

PART 3 – EXECUTION - (Not Applicable)

END OF SECTION

COMPTON COMMUNITY COLLEGE DISTRICT

COMMISSIONING

PART 1 – GENERAL

1.1 SUMMARY

A. Commissioning is a process for validating and documenting that the facility and its systems are constructed and perform in conformity with the Contract Documents.

B. The objective of the commissioning process is to verify that the performance of the facility and its systems meet or exceed the design intent.

C. Commissioning includes special facility start-up processes used to bring the facility to a fully operational state, free of deficiencies in an efficient and timely manner

D. Training on related systems and equipment operation and maintenance shall be scheduled to commence only after start-up is complete and systems are verified to be 100% complete and functional.

1.2 DESCRIPTION

A. The following applies to all Contract Documents

1. Contractor Startup: Sub-phase of Contractor's work ending with Acceptance of Work, during which Contractor performs a pre-planned program of activities including starting, testing, inspecting, adjusting balancing, correcting deficiencies and other similar activities.

    a. The Construction Manager, Architect/Engineer, Consultants and the DSA Inspector of Record (IOR) shall be present to observe, inspect and identify deficiencies in Building Systems Operations.

2. The completion of startup means the entire Construction Project including startup and fine tuning has been performed to the requirements of the Contract Documents and is verified in writing by the Construction Manager, Architect/Engineer and the Consultants.

3. Fine Tuning: Fine tuning is the responsibility of Contractors after District occupancy and ending one year after District occupancy. During this time the Contractor is responsible for optimizing systems and correcting deficiencies arising under normal operating conditions.

   a. Includes a period after occupancy where systems are optimized under "live" operating conditions and any outstanding construction deficiencies are corrected.

   b. Fine Tuning shall extend from date of District occupancy to one year after occupancy.

1.3 RELATED SECTIONS – (Not Applicable)

1.4 DEFINITION OF TERMS

A. Contractor's Pre-Commissioning Checklists: Includes installation and start-up items as specified to be completed by the appropriate contractors prior to operational verification through the functional testing process.

B. Installation Verification Process: Includes the on-site inspection and review of related system components for conformance to Contract Documents. The Contractor shall verify systems readiness for functional testing procedures prior to the start of functional testing. Deficiencies will be documented by the Inspector for future resolution.

C. Functional Performance Testing Process: Includes the documented testing of system parameters, under actual or simulated operating conditions. Final performance commissioning of systems will begin only after the appropriate Contractor certifies that systems are 100% complete and ready for functional testing. The contractors will be required to schedule, coordinate and perform device tests, calibration and functional performance test procedures.

D. Deficiencies and Resolutions List: Includes a list of noted deficiencies discovered as a result of the commissioning process. This list also includes the current disposition of issues, and the date of final resolution as confirmed by the Construction Manager and Inspector. Deficiencies are defined as those issues where products execution or performance does not satisfy the Project Contract Documents and/or the design intent.

1.5 COMMISSIONING SCHEDULE

A. Provide schedules for Contractor Start-Up work.

B. Incorporate in overall construction schedule.

C. Contractor's activities, which will be performed as specified under Fine Tuning, shall be completed within one year from date of occupancy by the District.

1.6 SUBMITTALS

A. Submit Draft and Final Contractor Start-up Forms as described in this Section. Submit Draft Report for Construction Manager and Architect's review and comment prior to Final Submission.

B. Prepare and submit one copy of report form to be used in preparation of system reports for:

1. Each mechanical system as required

2. Each Electrical & low voltage system as required.

C. Each System Report shall be submitted including the following:

1. Project Name

2. Name of System

3. Manufacturer's equipment start-up reports.

4. Systems' testing, balancing, and adjusting reports.

5. Equipment Report Forms shall include the following: Project name, name of equipment, starting and testing procedures to be performed and observations and test results to be recorded.

1.7 COMMISSIONING DUTIES AND RESPONSIBILITIES

A. Contractors Duties and Responsibilities:

1. Assure the participation and cooperation of Subcontractors and Suppliers under their jurisdictions as required to complete the commissioning process.

2. Complete Commissioning Report Forms. Reports are to be completed in a neat easily readable condition.

3. Complete the respective start-up and check out procedures and insure readiness of equipment and systems prior to the start of the functional performance testing.

   Written confirmation of system readiness for performance testing is required.

4. Provide qualified representatives for the functional performance commissioning process.

5. Assure that all subcontractors, suppliers, test and balance, controls, etc. include in there respective contracts cost necessary to participate in and complete the commissioning process.

B. Duties and responsibilities of others for Commissioning:

1. The commissioning process requires the active participation of the Construction Manager, College District, Mechanical Engineer, Electrical Engineer, and any other related Consultants on the project.

1.8 SYSTEM FAILURES

A. The Contractor shall complete adjustments and other measures required to comply with performance requirements without adjustment of the Contract Price or the Contract Time. After a second failure of a system or an item of equipment to successfully meet the criteria as set forth in the functional performance testing process, the Contractor shall reimburse the District for all costs associated with any additional retesting and/or performance commissioning required due to failure of compliance with performance standards. Costs shall include without limitation salary, benefits, overhead, travel costs and per diem lodging costs of the District's commissioning agent, Construction Manager, Architect, Mechanical Engineer and Electrical Engineer. The District may deduct such costs from the Contract Price.

PART 2 – PRODUCTS - (Not Applicable)

PART 3 – EXECUTION

3.1 MISCELLANEOUS TESTS AND INSPECTIONS

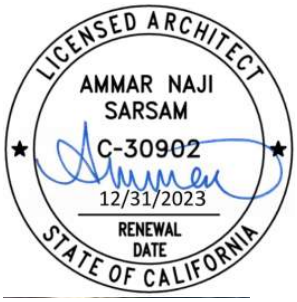
A. Commissioning Agent employed and paid by the District.

END OF SECTION

ARCHITECT

HPI Architecture
115 22nd Street
Newport Beach, CA 92663
Tel. (949) 675-6442
Fax: (949) 675-4543

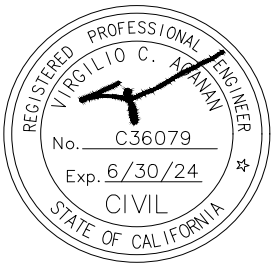
Contacts: Ammar Sarsam, Principal



CIVIL ENGINEER

VCA ENGINEERS, INC.
1041 S. Garfield Ave. #210
Alhambra, CA 91801
Tel. (323) 729-6098
Fax: (323) 729-6043

Contact: Virgil Aoanan



LANDSCAPE ARCHITECT

RLA
8841 Research Drive, Suite 200
Irvine, CA 92618
Tel. (949) 387-1323

Contact: TRAVIS EBBERT

STRUCTURAL ENGINEER

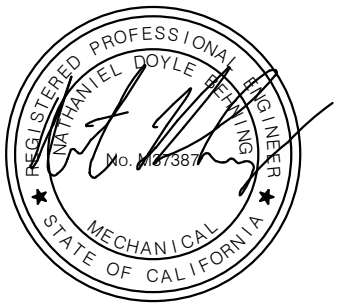
JOHN A. MARTIN & ASSOCIATES (JAMA)
950 S. Grand Ave. Ste. 400
Los Angeles, CA 90015
Tel. (213) 483-6490

Contact: Shane Fitzgerald

MECHANICAL/PLUMBING

P2S, Inc.
5000 East Spring Street, 8th Floor
Long Beach, California 90815
Tel. (562) 497-2999

Contact: Nate Behning

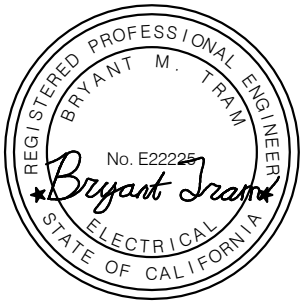


SIGND: 03/22/2023

ELECTRICAL, FIRE ALARM, TECHNOLOGY (DATA/SECURITY/AV), & SOLAR

P2S, Inc.
5000 East Spring Street, 8th Floor
Long Beach, California 90815
Tel. (562) 497-2999

Contact: Bryant Tram



SIGND: 03/22/2023

FIRE PROTECTION ENGINEER

P2S, Inc.
5000 East Spring Street, 8th Floor
Long Beach, California 90815
Tel. (562) 497-2999

Contact: Andres Jimenez

SIGND: 03/22/2023

VOLUME 2 TABLE OF CONTENTS

END OF TABLE OF CONTENTS

SECTION 024116 - DEMOLITION

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes: Furnishing labor, materials and equipment necessary for demolition, dismantling, cutting and alterations as indicated, specified, or required for completion of the Work. Includes items such as the following:

1. Protection of existing improvements to remain.
2. Cleaning existing improvements to remain.
3. Disconnecting and capping utilities.
4. Removing debris, waste materials, and equipment.
5. Removal of items for performance of the Work.
6. Salvageable items to be retained by the Owner.

B. Related Requirements:

1. Division 01 - General Requirements.
2. Section 01 1100 - Summary of Work.
3. Section 01 5000 - Construction Facilities and Temporary Controls.
4. Section 01 7329 - Cutting and Patching.
5. Section 01 7419 - Construction and Demolition Waste Management.
6. Division 22 –- Plumbing.
7. Division 23 –- HVAC.
8. Division 26 –- Electrical.

1.02 SUBMITTALS

A. Shop Drawings: Submit Shop Drawings indicating the extent of items and systems to be removed. Indicate items to be salvaged or items to be protected during demolition. Indicate locations of utility terminations and the extent of abandoned lines to be removed. Include details indicating methods and location of utility terminations.

1.03 QUALITY ASSURANCE

A. Perform the Work of this section by workers skilled in the demolition of buildings and structures. Perform the Work of this section under direct superintendence at all times.

B. Prior to commencement of Work, schedule a walkthrough with the OAR, to confirm Owner property items have been removed from scheduled Work areas. Identify and mark remaining property items and schedule their removal.

C. Coordinate demolition for the correct sequence, limits, and methods. Schedule demolition Work to create least possible inconvenience to the public and facility operations.

D. Related Standard: ANSI/ASSE A10.6.

1.04 PROJECT CONDITIONS

A. Drawings may not indicate in detail all demolition Work to be performed. Examine existing conditions to determine the full extent of required demolition.

B. Repair damage to existing improvements or damage due to excessive demolition.

C. Provide all measures to avoid excessive damage from inadequate or improper means and methods, improper shoring, bracing or support.

D. If conditions are encountered that varies from those indicated, promptly notify the Architect for clarification before proceeding.

PART 2 - PRODUCTS

2.01 HANDLING OF MATERIALS

A. Items scheduled for salvage by the Owner shall be delivered to a location designated by the OAR. Items shall be cleaned, packaged and labeled for storage.

B. Items scheduled for reuse shall be stored on the Project site and protected from damage, theft and other deleterious conditions.

PART 3 - EXECUTION

3.01 GENERAL

A. Protection:

1. Do not commence demolition until safety partitions, barricades, warning signs and other forms of protection are installed. Refer to Section 01 5000 - Construction Facilities and Temporary Controls.
2. Provide safeguards, including warning signs, lights and barricades, for protection of workers, occupants, and the public.

B. If safety of existing construction appears to be endangered, take immediate measures to correct such conditions; cease operations and immediately notify the OAR.

3.02 DEMOLITION

A. Do not throw or drop materials. Furnish ramps or chutes as required by the Work.

B. Remove existing construction only to extent necessary for proper installation of Work and interfacing with existing construction. Cut back finished surfaces to straight, plumb or level lines as required for a smooth transition.

C. Where openings are cut oversize or in improper locations, replace or repair to required condition.

3.03 CUTTING EXISTING CONCRETE

A. Cutting of existing concrete shall be performed by skilled workers familiar with the requirements and space necessary for placing concrete. Perform concrete cutting with concrete cutting wheels and hand chisels. Do not damage concrete intended to remain.

B. Extent of cutting of structural concrete shall be as indicated on Drawings. Cutting of non-structural concrete shall be as indicated on Drawings or as reviewed by the Architect or structural engineer. Replace concrete demolished in excess of amounts indicated.

C. Prior to cutting or coring concrete, determine locations of hidden utilities or other existing improvements and provide necessary measures to protect them from damage.

3.04 REMOVAL OF EXISTING PLUMBING AND ELECTRICAL EQUIPMENT AND SERVICES

A. Remove existing plumbing and electrical equipment fixtures and services not indicated for reuse and not necessary for completion of the Work. Remove abandoned lines and cap unused portions of existing lines.

3.05 REMOVAL OF OTHER MATERIALS

A. Masonry: Cut back to joint lines and remove mortar without damaging units to remain. Allow space for repairs to backing where applicable.

B. Woodwork: Cut or remove to a joint or panel line.

C. Roofing: Remove as required, including accessory components such as insulation and flashings. At penetrations through existing roofing, trim cut edges back to sound roofing with openings restricted to the minimum size necessary to receive Work.

D. Sheet Metal: Remove back to joint, lap, or connection. Secure loose and unfastened ends or edges and provide a watertight condition. Re-seal as required.

E. Glass: Remove broken or damaged glass and clean rebates and stops of glazing channels.

F. Modular materials such as acoustical ceiling panels, resilient tile, or ceramic tile: Remove to a natural joint without leaving damaged or defective Work where joining new Work. After flooring removal, clean substrates to remove setting materials and adhesives.

G. Gypsum Board: Remove to a panel joint line on a stud or support line.

H. Plaster: Saw cut plaster on straight lines, leaving a minimum 2-inch width of firmly attached metal lath for installing new lath and plaster.

I. Remove existing improvements not specifically indicated or required but necessary to perform Work. Cut to clean lines, allowing for installation of Work.

3.06 PATCHING

A. Patch or repair materials to remain when damaged by the performance of the Work of this section. Finish material and appearance of patch and/or repair Work shall match existing.

3.07 CLEANING

A. Clean existing materials to remain with appropriate tools and equipment.

B. Protect existing improvements during cleaning operations.

C. Debris shall be dampened by fog water spray prior to transporting by truck.

D. Debris pick-up area shall be kept broom-clean and shall be washed daily with clean water.

E. Remove waste and debris, other than items to be salvaged. Turn over salvaged items to Owner, or store and protect for reuse where required. Continuously clean up and remove items as demolition Work progresses.

F. Remove rubbish, debris, and waste materials and legally dispose of off the Project site.

END OF SECTION

SECTION 22 1000 - SEWER EJECTOR

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes: Labor, materials, tools, and equipment to install plumbing systems as indicated.

B. Related Sections:

1. Division 01 - General Requirements.
2. Section 07 9200: Joint Sealants.
3. Section 31 2323: Excavation, Backfill for Utilities.
4. Section 33 3000: Site Sanitary Sewer Utilities.

1.02 SUBMITTALS

A. Provide in accordance with Division 01

B. Manufacturer’s technical data for the following:

1. Pipe and fittings
2. Joints
3. Pump Control Panel
4. Variable level Control switches
5. Sewage Ejector
6. Float switch brackets
7. Flanged check valves
8. Flanged rail System
9. Pump lifting cables
10. Fiberglass basin

1.03 QUALITY ASSURANCE

A. Manufacturers of plumbing products must be third-party certified to ANSI/NSF Standard 61-2020, Section 9, and ANSI/NSF 372, to demonstrate compliance with the California Health and Safety Code Section 116875 and 116876, and the federal requirements for lead contribution to drinking water, the Safe Drinking Water Act SDWA.

B. Installed material not meeting specification requirements must be replaced with that meets these specifications without additional cost to owner.

1.04 PRODUCT HANDLING

A. Promptly inspect shipments to ensure material is undamaged and complies with Specifications

B. Cover materials to prevent corrosion or deterioration while allowing sufficient ventilation to avoid condensation. Do not store materials directly on grade. Protect pipe, tube, and fitting ends from damage. End caps shall remain place. Protect fittings by storage inside or by durable, waterproof, above ground packaging.

C. Storage and protection methods must allow inspection to verify products.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Acceptable pump manufacturers: Zoeller or equal

B. Acceptable control manufacturers: Zoeller or equal

C. Pump shall be duplex, screen-less sewage ejector with two pumps and motors mounted on cover-plater and cover-plater shall be gas-tight; furnished with automatic alternator, high water alarm, micro switch liquid level controller starters, fused disconnect switches and factory wired.

D. Pump shall have a grinder.

E. Pump shall be of capacity and motors shall be of electrical service as indicated in Equipment schedules on drawings.

F. Pump Removal System:

1. Removal System shall permit removal and re-installation of pump without disturbing discharge piping and without personnel entering wet well.

2. Lifting cable shall be braided stainless-steel.

3. Pump shall be Furnish and installed with lifting bail to permit attachment of cable to pump.

4. Pump shall be guided by two guide poles Furnish and installed with system.

a. The guide poles shall be mounted on floor elbow and 304 stainless steel upper guide bracket.

5. Pump sliding bracket shall be constructed of heavy-duty bronze.

6. Floor elbow shall be constructed of ASTM A48-83, Class 30, close grain cast iron.

7. Pump sliding bracket shall act as wedge type coupling between pump and floor elbow to insure metal to metal, watertight fit.

8. Systems that require gaskets, diaphragms, or O-rings to ensure watertight fit shall not be acceptable.

G. Pump control: Zoeller or equal, float switches, UL listed, two switches for high water alarms with cover mounting brackets. Control panels shall be NEMA 1, UL listed, and each contain following:

1. Two cross-the-line magnetic starters
2. Two fusible disconnect switches
3. Two HOA switches
4. Two running lights
5. One control circuit transformer
6. One high water alarm relay
7. One alternator
8. One NEMA 1, 4-inch diameter alarm bell for mounting on control panel

2.02 FIBERGLASS BASINS

A. Basin as scheduled on Drawings, Topp or Equal.

B. Basin Covers: Heavy steel covers, sizes as schedule on drawings. Covers shall be duplex type with openings for pumps, manholes, and vent openings. Parts shall be gas-tight.

PART 3 - EXECUTION

3.01 INSTALLATION

A. Install the Sewage ejector pump in accordance with reference standards, manufacturer’s recommendation, and recognized industry practices.

B. Install the fiberglass basin per manufacturer's installation guidelines. Furnish and install bracing during installation per manufacturer's recommendation. Furnish and install concrete anchor pad and grout as indicated on drawings.

3.02 TESTING

A. Each pump shall have a 20 - 30 minute operational test before shipment. The test shall be conducted with the pump submerged in a tank thereby duplicating its actual performance. A computer-generated report shall be available following this test. The report will show pump performance, amp draws, efficiencies and power consumption at various performance points for each pump supplied.

B. Start-up services at the job site by an authorized representative of the supplier shall be required. Start-up report form should be completed in the presence of the installers and returned to the Project Engineer or Supplier.

3.03 WARRANTY

A. Standard warranty shall be 12 months from date of installation or 18 months from date of manufacture, whichever comes first. Additionally, upon receipt an approval of a startup report, a prorated warranty for permanent municipal wastewater lift station installations shall be in effect for up to 60 months or 10,000 hours of operation, whichever comes first.

3.04 EXCAVATION, TRENCHING AND BACKFILLING

A. Perform trenching, excavation, and backfilling required for Work of this section as specified herein and in Section 31 2323: Excavating, Backfilling, and Compacting for Utilities.

3.05 SERVICE CONNECTIONS

A. Determine exact location of required sewer connections and provide proper connections.

3.06 CLEANUP

A. Remove rubbish, debris, and waste materials and legally dispose from the project site.

3.07 PROTECTION

A. Protect Work of this section until Substantial Completion.

END OF SECTION

SECTION 260000 - GENERAL ELECTRICAL REQUIREMENTS

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 SCOPE

A. Basic electrical requirements specifically applicable to Division 26 Sections.

B. Work includes but is not necessarily limited to the following:

1. Labor, materials, services, equipment, and appliances required for completion of tasks as indicated on drawing or in specification or as inherently necessary to provide complete and operational electrical systems including:

    a. All temporary construction power including test power, temporary heat and lighting;
    b. Incidental items not indicated on the drawings nor mentioned in the Specifications that belong to the work described, or are required to provide complete and operable systems, as though called out here in every detail;
    c. Cleaning, cutting, patching, repairing and painting;
    d. Testing and commissioning;
    e. The Contractor shall coordinate this Section with all other Sections of the Specification.

1.3 DRAWINGS AND SPECIFICATIONS

A. Drawings accompanying these Specifications show intent of Work to be done. Specifications shall identify quality and grade of installation and where equipment and hardware is not particularly specified, Contractor shall provide submittals for all products and install them per manufacturers' recommendations, and in a workmanlike manner.

B. Examine Drawings and Specifications for elements in connection with this Work; determine existing and new general construction conditions and be familiar with all limitations caused by such conditions.

C. In the event of a conflict or inconsistency between items indicated on the plans and/or specifications or with code requirements, the note, specification or code which prescribes and establishes the more complete job or the higher standard prevail.

D. Plans are intended to show general arrangement and extent of Work contemplated. Exact location and arrangement of parts shall be determined after the Owner has

reviewed equipment, as Work progresses, to conform in best possible manner with surroundings, and as directed by the Owner's Representative.

E. For purposes of clearness and legibility, the electrical drawings are essentially diagrammatic. The size and location of equipment is shown to scale where possible. The contractor shall verify all conditions, data information as indicated on the drawings and in the specification sections where electrical work interfaces with other trades.

F. Contract Documents are intended to show the scope and general arrangement of the Work under this Contract. Drawings are not intended to be scaled for roughing in measurements or to serve as shop drawings. Where job conditions require minor changes or adjustments in the indicated locations or arrangement of the Work, such changes shall be made without change in the Contract amount.

G. The contractor shall maintain as built drawings to reflect all changes made during construction and any deviations from the electrical drawings. This includes deviations from circuit numbers and any addition, deletion or relocation of fixtures/outlets shown on working drawings.

1.4 UTILITIES

A. Location and sizes of electrical, mechanical and plumbing service facilities are shown in accordance with data secured from existing record drawings and site observations. Data shown are offered as an estimating guide without guarantee of accuracy. Check and verify all data given, and verify exact location of all utility services pertaining to Work prior to excavation or performing Work.

1.5 APPLICABLE REFERENCE STANDARDS, CODES AND REGULATIONS

A. Meet requirements of all state codes having jurisdiction.

B. State of California Code of Regulations:

1. Title 8, Chapter 4. Division of Industrial Safety, Subchapter 5. Electrical Safety Orders (Cal/OSHA):

    a. Low-Voltage Electrical Safety Orders (Sections 2299 - 2599)
    b. High-Voltage Electrical Safety Orders (Sections 2700 - 2989)

2. Title 19, State Fire Marshal Regulations
3. Current California Building Code (CBC), Title 24, Part 2
4. Current California Electrical Code, Title 24, Part 3
5. Current California Mechanical Code, Title 24, Part 4
6. Current California Plumbing Code, Title 24, Part 5
7. Current California Energy Code, Title 24, Part 6
8. Current California Fire Code, Title 24, Part 9
9. Current California Standards Code, Title 24, Part 12

C. Additional Referenced Standards:

1. ANSI American National Standards Institute
2. IEEE Institute of Electrical and Electronic Engineers
3. NEMA National Electrical Manufacturer's Association
4. NFPA National Fire Protection Association Standards
5. UL Underwriters Laboratories

D. Codes and ordinances having jurisdiction over Work are minimum requirements; but, if Contract Documents indicate requirements, which are in excess of those minimum requirements, then requirements of the Contract Documents shall be followed. Nothing in these drawings and specifications shall be construed to permit work not conforming to governing codes or regulations. Should there be any conflicts between Contract Documents or codes or any ordinances having jurisdiction, report these to the Owner's Representative.

E. Obtain permits, and request inspections from authority having jurisdiction.

1.6 PROJECT AND SITE CONDITIONS

A. The arrangement of and connection to equipment shown on the Drawings is based upon information available and is not intended to show exact dimensions peculiar to a specific manufacturer. The Drawings are, in part, diagrammatic and some features of the illustrated equipment installations may require revision to meet actual equipment installation requirements. Structural supports, housekeeping pads, piping connections and adjacent equipment may have to be altered to accommodate the equipment provided. No additional payment will be made for such revisions or alterations.

B. Examine all Drawings and Specifications to be fully cognizant of all work required under this Division.

C. Examine site related work and surfaces before starting work of any Section.

D. Install Work in locations shown on approved Drawings, unless prevented by Project conditions.

E. Prepare drawings showing proposed rearrangement of Work to meet Project conditions, including changes to Work specified in other Sections. Obtain permission from the Owner's Representative before proceeding.

1.7 COOPERATION WITH WORK UNDER OTHER DIVISIONS

A. Cooperate with other trades to facilitate general progress of Work. Allow all other trades every reasonable opportunity for installation of their work.

B. Work under this Division shall follow general building construction closely. Set pipe sleeves and inserts and verify that openings for chases and pipes are provided.

C. Work with other trades in determining exact location of outlets, conduits, pipes, and pieces of equipment to avoid interference with lines required to maintain proper installation of Work.

D. Make such progress in the Work to not delay work of other trades.

1.8 DISCREPANCIES

A. The contractor shall check all drawings furnished to him immediately upon their receipt and shall promptly notify the owner of any discrepancies. Figures marked on drawings shall in general be followed in preference to scale measurements. Large scale drawings in general govern small scale drawings. The contractor shall compare all drawings and verify the figures before laying out the work and will be responsible for any errors which might have been avoided thereby. Where no figures or notations are given, the plans shall be followed

B. Omissions from the Drawings or Specifications or the erroneous description of details of work which are manifestly necessary to carry out the intent of the Drawings and Specifications, or which are customarily performed, shall not relieve the Contractor from performing such omitted or erroneously described details of the work but they shall be performed as if fully and correctly set forth and described in the drawings and specifications.

C. If any part of the Specifications or Drawings appears unclear or contradictory, apply to Owner’s Representative for interpretation and decision as early as possible, including during bidding period. Do not proceed with such work without Owner Representatives decision. Beginning work of any Section constitutes acceptance of conditions.

1.9 CHANGES

A. The Contractor shall be responsible to make and obtain approval from the Owner’s Representative for all necessary adjustments in piping and equipment layouts as required to accommodate the relocations of equipment and/or devices, which are affected by any approved authorized changes or Product substitutions. All changes shall be clearly indicated on the "Record" drawings.

1.10 SUBMITTALS

A. Refer to Division 01 for additional requirements.

B. The manufacturer, contractor or supplier shall include a written statement that the submitted equipment, hardware or accessory complies with the requirement of that particular specification section.

C. The manufacturer shall resubmit the specification section showing compliance with each respective paragraphs and specified items and features in that particular specification section.

D. All exceptions shall be clearly identified by referencing respective paragraph and other requirements along with proposed alternative.

E. Note that prior to acceptance of submittals for review, a submittal schedule shall be submitted to the Owner's Representative.

F. Submit all Division 26 shop drawings and product data grouped and referenced by the specification technical section number in one complete submittal package.

G. Shop Drawings:

1. Include installation details of equipment indicating proposed location, layout and arrangement, accessories, piping, and other items that must be shown to assure a coordinated installation.
2. Indicate adequate clearance for operation, maintenance, and replacement of operating equipment devices.
3. If equipment is rejected, revise drawings to show acceptable equipment and resubmit.
4. Whenever more than one (1) manufacturer's product is specified, the first named product is the basis of design used in the Drawings and the use of alternate-named manufacturer's products or substitutes may require modifications to the design.
5. The Contractor shall be responsible for all equipment ordered and/or installed prior to receipt of shop drawings returned from the Owner's Representative bearing the Owner's Representative stamp of "Reviewed". All corrections or modifications to the equipment as noted on the shop drawings shall be performed and equipment removed from the job site at the request of the Owner's Representative without additional compensation.
6. Manufacturer's Data: For each manufactured item, provide current manufacturer's descriptive literature of cataloged products, certified equipment drawings, diagrams, performance and characteristic curves if applicable, and catalog cuts.
7. Standard Compliance: When materials or equipment provided by the Contractor must conform to the standards of organizations such as American National Standards Institute (ANSI) or UL, submit proof of such conformance to the Owner Representative for approval. If an organization uses a label or listing to indicate compliance with a particular standard, the label or listing will be acceptable evidence, unless otherwise specified. In lieu of the label or listing, submit a certificate from an independent testing organization, which is competent to perform acceptance testing and is approved by the Owner Representative. The certificate shall state that the item has been tested in accordance with the specified organization's test methods and that the item conforms to the specified organization's standard.
8. Certified Test Reports: Before delivery of materials and equipment, certified copies of all test reports specified in individual sections shall be submitted for approval.
9. Certificates of Compliance or Conformance: Submit manufacturer's certifications as required on products, materials, finish, and equipment indicated in the technical sections. Certifications shall be documents prepared specifically for this Contract. Pre-printed certifications and copies of previously submitted documents will not be acceptable. The manufacturer's certifications shall name the appropriate products, equipment, or materials and the publication specified as controlling the quality of

that item. Certification shall not contain statements to imply that the item does not meet requirements specified, such as "as good as"; or "achieve the same end use and results as materials formulated in accordance with the referenced publications"; or "equal or exceed the service and performance of the specified material." Certifications shall simply state that the item conforms to the requirements specified. Certificates shall be printed on the manufacturer's letterhead and shall be signed by the manufacturer's official authorized to sign certificates of compliance or conformance.

H. The Contractor shall submit all passcodes and passwords for any hardware and software required for the operations and troubleshooting in all systems and components no less than fourteen (14) calendar days prior to Final Completion.

1.11 PROJECT RECORD DOCUMENTS

A. Refer to Division 01 for additional requirements.

1. All changes, deviations and information recorded on the “Project Record Drawings” set during Construction shall be redrafted using the latest version of AutoCAD or Revit, where applicable.
2. Submit completed shop drawings to the Owner prior to completion in digital format.
3. Contractor hand-marked or drafted redlined “Project Record Drawings” will not be accepted.

1.12 PRODUCT ALTERNATIVES OR SUBSTITUTIONS

A. Refer to General Conditions and Division 01 for additional requirements.

1.13 OPERATING INSTRUCTIONS

A. Furnish approved operating instructions for systems and equipment indicated in the technical sections for use by operation and maintenance personnel.

1.14 MANUFACTURER'S RECOMMENDATIONS

A. Where installation procedures or any part thereof are required to be in accordance with manufacturer's recommendations, furnish printed copies of the recommendations prior to installation. Installation of the item shall not proceed until recommendations are received. Failure to furnish recommendations shall be cause for rejection of the equipment or material.

1.15 DELIVERY AND STORAGE

A. Refer to Division 01 for additional requirements.

B. Handle, store, and protect equipment and materials in accordance with the manufacturer's recommendations and with the requirements of NFPA 70B P, Appendix I, titled "Equipment Storage and Maintenance During Construction." Replace damaged or defective items with new items.

1.16 GUARANTEE

A. Except as may be specified under other sections in the Specifications, guarantee all equipment furnished under the Specifications for a period of one year from date of project acceptance against defective workmanship and material and improper installation. Upon notification of failure, correct deficiency immediately and without cost to the Owner.

B. Standard warranty of manufacturer shall apply for replacement of parts after expiration of the above period. Manufacturer shall furnish replacement parts to the Owner for their service agency as directed.

PART 2 - PRODUCTS

2.1 COMPETITIVE PRODUCTS

A. Unless otherwise noted, any reference in the Specification to any article, device, product, material, fixture, form, or type of construction by name, make, or catalog number shall be interpreted as establishing a standard of quality and shall not be construed as limiting competition. The Contractor may at his option propose substitutions for such material in accordance with the substitution procedure outlined in the Contract Documents.

2.2 MATERIALS

A. Provide all new materials and equipment, free from any defects, in first-class condition, and suitable for the space provided. Provide materials and equipment approved by UL authority having jurisdiction approved testing agency, wherever standards have been established by that agency.

B. Where two or more units of the same class of material or equipment are required, provide products of a single manufacturer. Component parts of units or equipment need not be products of the same manufacturer.

C. Unless otherwise indicated, provide materials and equipment which are the standard products of manufacturers regularly engaged in the production of such materials and equipment. Provide the manufacturers' latest standard design that conforms to these Specifications.

D. Provide materials and equipment with manufacturers' standard finish system, except where otherwise specified. Provide manufacturers' standard finish color, except where specific color is indicated. If manufacturer has no standard color, finish equipment with ANSI Number 61, light gray color.

E. Environmental and Seismic Conditions: Material and Equipment shall be designed to insure satisfactory operation and operational life in the environmental and seismic conditions which will prevail where they are being installed. Electrical equipment and enclosures shall be designed, constructed and certified to withstand external loading conditions as prescribed by the California Building Code for the locations of the equipment. Supplied equipment shall either be shake table tested and certified or comprehensive seismic calculations shall be provided. All seismic calculations and structural drawings shall bear the seal of a Structural Professional Engineer currently licensed in the State of California. Earthquake design shall be based on the equivalent lateral force analysis procedure per ASCE 7-05 Section 12.8.

PART 3 - EXECUTION

3.1 GENERAL

A. Obtain and pay for all permits and inspections, including any independent testing required to verify standard compliance, and deliver certificates for same to the Owner's Representative.

3.2 WORK RESPONSIBILITIES

A. The drawings indicate diagrammatically the desired locations or arrangement of piping, equipment, etc., and are to be followed as closely as possible. Proper judgment must be exercised in executing the work to secure the best possible installation in the available space and to overcome local difficulties due to space limitations or interference with structural conditions.

B. The Contractor is responsible for the correct placing of Work and the proper location and connection of Work in relation to the work of other trades. Advise appropriate trade as to locations of access panels.

C. In the event changes in the indicated locations or arrangements are necessary, due to developed conditions in the construction or rearrangement of furnishings or equipment, such changes shall be made without extra cost, providing the change is ordered before the conduit runs, etc. and work directly connected to same is installed and no extra materials are required.

D. Where equipment is furnished by others, verify dimensions and the correct locations of this equipment before proceeding with the roughing-in of connections.

E. All scaled and figured dimensions are approximate of typical equipment of the class indicated. Before proceeding with any work, carefully check and verify all dimensions, sizes, etc. with the drawings to see that the equipment will fit into the spaces provided without violation of applicable codes.

F. Should any changes to the Work indicated on the Drawings or described in the Specifications be necessary in order to comply with the above requirements, notify the

Owner immediately and cease work on all parts of the contract, which are affected until approval for any required modifications to the construction has been obtained from the Owner.

G. Be responsible for any cooperative work, which must be altered due to lack of proper supervision or failure to make proper provisions in time. Such changes shall be under direction of the Owner and shall be made to his satisfaction. Perform all Work with competent and skilled personnel.

H. The electrical drawings do not indicate all fittings, hardware, or appurtenances required for a complete operating installation.

I. Wiring diagrams are not intended to indicate the exact course of raceways.

J. One-line and riser diagrams are only schematics and do not show physical arrangements of equipment.

K. All workmanship, including aesthetic as well as electrical aspects of the Work, shall be of the highest quality consistent with the best practices of the trade.

L. Replace or repair, without additional compensation, any Work, which, in the opinion of the Owner, does not comply with these requirements.

3.3 CLEANING & PAINTING OF EQUIPMENT

A. Refer to Division 09 for additional requirements.

B. Factory Applied:

1. Electrical equipment shall have factory-applied painting systems, which shall, as a minimum, meet the requirements of NEMA ICS 6 corrosion-resistance test, except equipment specified to meet requirements of ANSI C37.20 shall have a finish as specified in ANSI C37.20.
2. Refer to individual sections of this Division for more stringent requirements.

C. Field Applied: Paint electrical equipment as required to touch up, to match finish on other equipment in adjacent spaces, or to meet safety criteria.

D. After installation, all metal finishes shall be polished and cleaned of all dirt, rust, cement, plaster, grease, and paint.

END OF SECTION

SECTION 260160 - ELECTRICAL DEMOLITION

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Removal of existing power distribution equipment, transformers, light fixtures, fixture support brackets, electrical conduits /conductors and all other associated accessories as noted on drawings.

B. Contractor shall provide electrical demolition required for work noted on drawings.

C. The Contractor shall dispose of demolished electrical equipment as directed by the University. University has first right of refusal for all equipment.

1.2 APPLICABLE PUBLICATIONS: THE PUBLICATIONS LISTED BELOW FORM A PART OF THIS SPECIFICATION TO THE EXTENT REFERENCED. THE PUBLICATIONS ARE REFERRED TO IN THE TEXT BY THE BASIC DESIGNATION ONLY.

A. Environmental Protection Agency (EPA) Regulations:

1. 40 CFR 261 Regulations Identifying Hazardous Waste
2. 40 CFR 263 Regulations for Hazardous Waste Transporters
3. Hazardous Waste Facilities

B. U.S. Department of Labor, Occupational Safety and Health Administration (OSHA) Regulation:

1. 29 CFR 1910.94 Subpart G, Occupational Health and Environmental Control

C. Department of Transportation (DOT):

1. 49 CFR 178 Regulations for Shipping Container Specifications

PART 2 - PRODUCTS

2.1 MATERIALS AND EQUIPMENT

A. Materials and equipment for patching and extending work: As specified in individual Sections, if applicable.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify field measurements and circuiting arrangements are as shown on Drawings.

B. Verify that abandoned wiring and equipment serve only abandoned facilities.

C. Demolition drawings are based on field observation and existing record documents. Report discrepancies to Engineer before disturbing existing installation.

D. Beginning of demolition means installer accepts existing conditions.

3.2 PREPARATION

A. Disconnect electrical systems in and under walls, concrete, and structures scheduled for removal.

B. Coordinate electrical outages with the College.

C. Provide temporary wiring and connections to maintain existing systems in-service during construction. When work must be performed on energized equipment or circuits, use personnel experienced in such operations.

D. All work shall be carried out in accordance with SCA process.

3.3 DEMOLITION AND EXTENSION OF EXISTING ELECTRICAL WORK.

A. Demolish existing electrical work under provisions of this Section and as indicated on the drawings.

B. Remove abandoned wiring to source of supply unless otherwise indicated.

C. Remove exposed abandoned conduit. Cut conduit flush with walls and floors, and patch surfaces, if required by Architectural drawings.

D. Disconnect and remove abandoned distribution equipment.

E. Repair adjacent construction and finishes damaged during demolition and extension work.

F. Maintain access to existing electrical installations which remain active. Modify installation or provide access panel as appropriate.

3.4 CLEANING AND REPAIR

A. Clean and repair existing materials and equipment which remain or are to be reused.

END OF SECTION

SECTION 260500 - COMMON WORK RESULTS FOR ELECTRICAL

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. Electrical equipment coordination and installation.
2. Sleeves for raceways and cables.
3. Sleeve seals.
4. Grout.
5. Common electrical installation requirements.

1.3 DEFINITIONS

A. EPDM: Ethylene-propylene-diene terpolymer rubber.

B. NBR: Acrylonitrile-butadiene rubber.

1.4 SUBMITTALS

A. General: Submittals shall be furnished by Contractor for each device, equipment, conduits, conductors and cables, light fixtures, controls intended to be used on the project. Submit material list within 2 weeks of Notice to Proceed and obtain review, prior to submission of manufacturer’s data and shop drawings.

B. Submittals: Piecemeal submittals will not be acceptable. Submit in brochure form with all listings referenced to applicable sections and paragraphs in the specifications. Listing items "as specified" without both name of manufacturer and model number or type (designation) is not acceptable.

C. Material List: Contractor shall submit a complete list of materials and equipment proposed for the project including those which are exactly as specified. List to contain only one (1) manufacturer's name and reference to applicable sections and paragraphs of the specifications. List shall be submitted within two (2) weeks of issue of Notice to Proceed. Any material or equipment installed without written approval shall be subject to immediate removal.

D. Equipment Layout Drawings: 1/4" = 1'-0" scale "equipment layout drawings" shall be provided for each equipment item furnished under Division 26. Drawings shall show projected outline of each equipment proposed to be installed, working clearance around the equipment including all clearances for removal of equipment. Indicate any conflicts with other work.

E. Qualification Data: For qualified Installer.

1.5 QUALITY ASSURANCE AND STANDARDS

A. Comply with latest editions of applicable codes, ordinances, regulations and standards of:

1. Insulated Cable Engineers Association (ICEA).
2. Institute of Electrical and Electronics Engineers (IEEE).
3. National Electrical Manufacturers Association (NEMA).
4. American National Standards Institute (ANSI).
5. National Bureau of Standards (NBS).
6. Certified Ballast Manufacturers (CBM).
7. American Society for Testing and Materials (ASTM).
8. Underwriter's Laboratories (UL).
9. California Code of Regulations (Titles 8, 19, 22, 24).
10. National Electrical Code (NEC).
11. National Electrical Safety Code (NECS).
12. National Electrical Testing Agency (NETA).

B. Where requirements differ, the more stringent shall apply. Should any change in drawings or specifications be required to comply with governing regulations, notify the University’s Representative prior to submitting bid.

1. Proof of compliance shall be submitted to the University's Representative for approval.

C. Installer Qualifications: A qualified Installer certified by the State of California

D. All materials and equipment shall be of new and manufactured within twelve (12) months of installation unless otherwise indicated and supplied by manufacturer's authorized distributors. Reconditioned or used equipment shall not be permitted.

E. All materials and equipment shall bear the inspection label of the Underwriter's Laboratories (UL) where applicable. Materials and equipment shall be the latest standard product and shall be of the grade indicated by the trade names given.

F. If a material and equipment with UL listing is not available from any manufacturer, Contractor shall furnish materials and equipment tested and listed by a reputable independent testing organization acceptable to the University.

G. If alternate manufacturer of products other than what are specified in this section are submitted, all necessary documents not limited to cut sheets, technical information, test reports from recognized testing labs and factory test reports shall be submitted to the

satisfaction of the owner/engineer to ensure quality and conformance to the specifications. Additional testing shall be undertaken if it is concluded by the owner/engineer that the submitted test reports are either insufficient or do not include all tests necessary for product acceptance. The tests shall be conducted by a recognized lab acceptable to the owner/engineer and all tests shall be witnessed by owner's/engineer's personnel. All testing procedures and test results shall be satisfactory to the owner/engineer. Contractor shall be responsible for arranging the tests, for transportation, food and lodging for minimum of one owner's/engineer's representative to witness the test at the testing lab. Include all costs for the above in the bid.

1.6 COORDINATION

A. Coordinate arrangement, mounting, and support of electrical equipment:

1. To allow maximum possible headroom unless specific mounting heights that reduce headroom are indicated.
2. To provide for ease of disconnecting the equipment with minimum interference to other installations.
3. To allow right of way for piping and conduit installed at required slope.
4. So connecting raceways, cables, wireways, cable trays, and busways will be clear of obstructions and of the working and access space of other equipment.

B. Coordinate installation of required supporting devices and set sleeves in cast-in-place concrete, masonry walls, and other structural components as they are constructed.

C. Coordinate location of access panels and doors for electrical items that are behind finished surfaces or otherwise concealed. Access doors and panels are specified in Division 08 Section "Access Doors and Frames."

D. Coordinate sleeve selection and application with selection and application of firestopping.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 INSTALLATION

A. General

1. The drawings show general arrangement of equipment and appurtenances. Follow these drawings as closely as the actual construction will permit. Provide all offsets, fittings, and accessories required but not shown on drawings
2. The locations of fixtures, outlets, duct banks and electrical equipment indicated on drawings are approximate location only. Revision and coordination may be necessary at the time the equipment is installed in order to meet field conditions

or other coordination. Such revisions will be done with no additional cost to the University and with the approval of University's Representative.

3. Verify location and mounting height of equipment not dimensionally shown on the plans with University's Representative prior to rough-ins.
4. Examine and compare the contract drawings with contract specifications and report any discrepancies to University's Representative. Obtain written approval from the University prior to start of work.

B. Underground Construction:

1. The work shall proceed in a systematic manner so that a minimum of inconvenience to facility operations and traffic flow will result during the course of construction. Work crews shall confine operations to as small a length of work area per crew as practical. Entire closing of streets and intersections shall not be permitted. All parking lots and fire lanes shall be accessible at all times. As part of the construction schedule to be submitted, the Contractor shall submit a schedule that includes when and where work will occur in each street and street segments.
2. Existing manholes and new cable trenches shall be ventilated to keep out harmful gases and dust during work and inspection. As part of the bid, the Contractor shall provide OSHA approved gasoline driven blowers for ventilation of manholes and trenches during work and inspections.

C. Electrical Service outages:

1. There shall be no interruption of existing electrical service without prior approval by the University's Representative. Written notice of proposed utility outages shall be delivered to the University's Representative at least fourteen (14) days prior to the start of the proposed outage.
2. To allow the University to coordinate the scheduling of critical procedures and manpower for transferring of loads, the contractor shall deliver to the University, through the University Representative, for review, a list of all outages that he needs during the construction period:

   a. The listing shall include, but not be limited to, the following:

      1) Facility to be de-energized.
      2) Time and duration of outage.
      3) Date requested.
      4) Alternate dates.

   b. The timing of outages will be entirely at the direction of the University's Representative.

3.2 SEISMIC ANCHORAGE

A. All free standing electrical equipments shall be anchored to withstand seismic forces in this area.

B. Conduit supports shall be adequately sized and braced to comply with seismic criteria.

3.3 CLEANING AND REPAIR

A. Vacuum clean the interiors of all switchboards, substations, panelboards and transformers upon completion of all work to remove dust and debris. After cleaning, cover all equipment to prevent any construction dust from recurring. Before equipment is energized, vacuum all interiors a second time to assure clean equipment.

END OF SECTION

SECTION 260513 - MEDIUM-VOLTAGE CABLES

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 cables and related cable splices, terminations, and accessories for medium-voltage (2401to 35,000 V) electrical distribution systems.

1.3 DEFINITIONS

A. Jacket: A continuous nonmetallic outer covering for conductors or cables.

B. NETA ATS: International Electrical Testing Association - Acceptance Testing Specification

C. Sheath: A continuous metallic covering for conductors or cables.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of cable-include cable manufacturer’s complete technical data indicating cable construction, shielding, insulation material, thickness of insulation, jacket, cable stranding, and voltage rating of each type of cable specified, splices and terminations. Indicate place and date of manufacture for each cable, cable accessory, splice and termination.

B. Samples: 16-inch lengths for each type of cable specified. Submit samples of cable, splice and termination kit for review minimum fourteen (14) days prior to shipment of cable and splice and termination kits to job site.

C. Section not used:

1.5 INFORMATIONAL SUBMITTALS

A. Qualification Data: For Installer, cable splicer and terminator, testing agency. Submit complete documents for each for the approval by the Owner's Representative. Documents shall include the names, qualifications, experience, training certificates of each person intended to perform the splicing and termination including testing agency data for field testing of medium voltage cables. Each splicer and terminator shall have

minimum ten (10) years' recent experience in installation, splicing and terminating of medium voltage cables similar to those specified on this project. Refer to para 1.6 for additional information.

B. Material Certificates from the manufacturer: For each type of cable, cable accessory and splicer and termination.

C. Source quality-control reports. Certified test reports for:

1. Sample test on insulation: Test shall be done at the factory to verify physical properties, heat distortion, and accelerated water absorption in accordance with ICEA S-93-639.
2. Factory Tests: Complete tests shall be done on each length of cable by the manufacturer's trained testing engineer/technician at the manufacturer's testing facility at the factory in accordance with ICEA S-93-639, and UL-1072. Tests shall include Insulation resistance, power factor, corona level, AC dielectric. Corona test shall be done per AEIC CS8; Section E. Recordings of the tests shall be made on X-Y graph.
3. Furnish six (6) copies of the certified factory test reports to the Owner's Representative complete with X-Y recordings showing the corona test results for review two weeks prior to shipment of cables. Test Report shall include the results of the tests, cable identification, reel number, factory order number, cable length and all cable specifications. Each test report shall be signed by the manufacturer's testing engineer and include the name of the testing engineer/technician, location and date of testing. Test reports shall be submitted minimum two (2) weeks prior to shipment of cables to the job site
4. Cable shall not be installed in any duct or conduit until related all test reports have been reviewed and accepted by the Owner's Representative.

D. Field quality-control reports. Perform field testing of cables per para 3.2. Submit field test report to owner's representative within two (2) weeks of completion of test.

1.6 QUALITY ASSURANCE

A. General Requirements: The cable shall be copper, voltage rating as indicated, 133 percent rated, shielded. Aluminum cable will not be accepted.

B. Materials and installation shall meet or exceed requirements in the following referenced standards.

1. ICEA S-93-639/ NEMA WC 74.
2. AEIC CS8.
3. UL 1072.
4. Applicable IEEE standards.
5. Applicable ASTM standards.
6. Applicable NEMA standards

C. The manufacturer shall have a minimum of ten (10) years of experience in manufacturing medium voltage EPR power cables and shall submit a certified copy of its AEIC CS 6 qualification.

D. Manufacturer shall have ISO 9001 and 9002 Certification. The cable manufacturer shall compound the insulation in its own facility using a closed system to ensure maximum cleanliness. The complete cable shall be manufactured in same manufacturer's manufacturer facility.

E. If alternate manufacturer of products other than what are specified in this section are submitted, all necessary documents not limited to cut sheets, technical information, test reports from recognized testing labs and factory test reports shall be submitted to the satisfaction of the owner/engineer to ensure quality and conformance to the specifications. Additional testing shall be undertaken if it is concluded by the owner/engineer that the submitted test reports are either insufficient or do not include all tests necessary for product acceptance. The tests shall be conducted by a recognized lab acceptable to the owner/engineer and all tests shall be witnessed by owner's/engineer's personnel. All testing procedures and test results shall be satisfactory to the owner/engineer. Contractor shall be responsible for arranging the tests, for transportation, food and lodging for minimum of one owner's/engineer's representative to witness the test at the testing lab. Include all costs for the above in the bid.

F. Testing: Provide the services of a qualified independent testing laboratory to perform the specified field tests. Notify the Owner's Representative 14 days in advance of performance of Work requiring testing.

G. Cables, splices and terminations shall be manufactured within twelve (12) months of installation. Each item shall have a permanent marking on the product or the original manufacturers' package indicating the date of manufacture unless otherwise noted. Cables shall have the dates marked on the outer jacket.

H. Cable, splices and terminations shall be manufactured under a single batch. Furnish a letter from each manufacturer to confirm it.

I. Cable including insulation, shielding tape shall be clean with smooth surface and does not have any surface abnormalities or ridges.

J. Installer: Contractor shall engage cable splicers and terminators, trained and certified by splice/termination material manufacturer, to install, splice, and terminate medium-voltage cable of type and rating specified on this project. Training and certification shall be within the last three (3) years from the date of installation.

K. Testing Agency Qualifications:

1. Testing agency shall be an independent company; shall have been a member of NETA for a minimum of ten (10) years and has permanent in-house testing engineers and technicians involved with testing of medium voltage cables similar to those specified on this project.
2. Testing company shall be located within 50 miles radius of the project.

3. Testing Agency's Field Supervisor: Certified by NETA to supervise on-site testing.
4. Field Testing technician and supervisor shall have minimum ten (10) years' experience in field testing of medium voltage cables of the type and rating similar to the cables to be tested on this project.

1.7 FIELD CONDITIONS

A. Interruption of Existing Electric Service: Do not interrupt electric service to facilities occupied by Owner or others unless permitted in writing under the following conditions and then only after arranging to provide temporary electric service according to requirements indicated:

1. Notify Construction Manager and Owner no fewer than fourteen (14) days in advance of proposed interruption of electric service using "Utility Shut down Request Form" included in division 1
2. Do not proceed with interruption of electric service without Construction Manager and Owner written permission.
3. Provide temporary standby power through a standby diesel quiet type back-up generator complete with fuel and 7/24 monitoring if the power interruption exceeds 2 hours. Coordinate additional requirements with owner/CM (minimum fourteen days in advance).
4. All utility shutdowns will be done by Owner's authorized personnel unless otherwise noted. Coordinate through Owner's Representative.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following manufacturers:

1. Cables:

    a. Existing to Remain

2. Cable Splicing and Terminating Products and Accessories:

    a. 3M; Electrical Markets Division.
    b. G&W Electric Company.
    c. Richards Manufacturing Company
    d. Thomas & Betts Corporation/Elastimold.
    e. TE Connectivity; Raychem Product.

3. Arc- and Fireproofing Tape:

    a. Bishop; Model 43A.
    b. 3M; Model 7700

B. Source Limitations: Obtain cables and accessories from a single source from a single manufacturer thru their local authorized distributor.

2.2 SYSTEM DESCRIPTION

A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

B. Comply with IEEE C2 and NFPA 70.

2.3 CABLES

A. Existing to Remain.

2.4 SEPARABLE INSULATED CONNECTORS

A. Description: Modular system, complying with IEEE 386, with disconnecting, single-pole, cable terminators and with matching, stationary, plug-in, dead-front terminals, designed for sealing against moisture. Rating 15KV. Basic insulation level (BIL) shall be 110KV minimum.

B. Load-Break Cable Terminators: Elbow-type units with 200-A-load make/break and continuous-current rating; coordinated with insulation diameter, conductor size, and material of cable being terminated. Include test point on terminator body that is capacitance coupled.

2.5 SOURCE QUALITY CONTROL

A. Test and inspect cables according to ICEA S-97-682 before shipping.

B. Test strand-filled cables for water-penetration resistance according to ICEA T-31-610, using a test pressure of 5 psig.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install terminations at ends of conductors, and seal multiconductor cable ends with standard kits.

B. Install separable insulated-connector components as follows:

1. Protective Cap: At each terminal junction, with one on each terminal to which no feeder is indicated to be connected.

2. Portable Feed-Through Accessory: At each terminal junction, with one on each terminal.
3. Standoff Insulator: At each terminal junction, with one on each terminal.

3.2 FIELD QUALITY CONTROL

A. Testing Agency: Contractor shall engage an independent qualified testing agency to perform tests and inspections. All costs associated with testing shall be included in the bid. Testing shall be witnessed by Owner’s representative. Provide minimum fourteen (14) days advance notice.

B. Perform the following tests and inspections

1. Perform each visual and mechanical inspection and electrical test stated in latest NETA ATS. Certify compliance with test parameters.
2. After installing medium-voltage cables and before electrical circuitry has been energized, test each cable with connectors/terminations for compliance with requirements.
3. Perform direct-current High Potential test of each new conductor according to NETA ATS, Ch. 7.3.3. Do not exceed cable manufacturer's recommended maximum test voltage.
4. Perform Partial Discharge or VLF test of each existing conductor according to NETA ATS, Ch. 7.3.3 and to test equipment per manufacturer's and NETA recommendations.
5. Perform Dissipation Factor test of each new conductor according to NETA ATS, Ch. 7.3.3 and to test equipment manufacturer's recommendations.

C. Perform AC VLF testing on all existing cables.

D. Prepare test and inspection reports.

3.3 PROTECTION

A. Protect installed cables from entrance of moisture.

END OF SECTION

SECTION 260519 - LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES

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. Building wires and cables rated 600 V and less.
2. Connectors, splices, and terminations rated 600 V and less.

B. Related Requirements:

1. Section 260553 "Identification for Electrical Systems."

1.3 DEFINITIONS

A. ASTM: American Society of Testing Materials.

B. ICEA: Insulated Cable Engineers Association.

C. IEEE: Institute of Electrical & Electronics Engineers.

D. NEMA: National Electrical Manufacturers Association.

E. NETA ATS: InterNational Electrical Testing Association - Acceptance Testing Specification.

F. VFD: Variable frequency drive.

1.4 ACTION SUBMITTALS

A. Product Data: Submit manufacturer’s technical data for each type of product, indicating conductor/cable construction, insulation material, thickness of insulation, jacket, cable stranding, and voltage rating of each type of conductor/cable specified, splices and terminations. Indicate date and place of manufacture for each conductor/cable, cable, splice and termination.

B. Manufacturer’s ISO certification.

C. Section Not Used

D. Product Cable Schedule: Indicate type, use, location, and termination locations.

1.5 INFORMATIONAL SUBMITTALS

A. Qualification Data: For Independent Testing Agency.

B. Field quality-control reports. Perform field testing of cables per para 3.8. Submit six (6) copies of field test reports to owner's representative within two (2) weeks of completion of test.

1.6 QUALITY ASSURANCE

A. General Requirements: The low voltage power conductors and cable shall be copper, minimum 600V rated unless otherwise indicated. Aluminum conductors and cables shall not be accepted unless otherwise indicated.

B. Materials and installation shall meet or exceed requirements in the following referenced standards and shall be listed and labelled by UL.

1. ICEA S-95-658/ NEMA WC 70.
2. AEIC CS8 is a medium voltage cable standard.
3. UL 1072.
4. IEEE.
5. ASTM.
6. NEMA.

C. Conductors and cables shall be of the same manufacturer and shipped to the job site in original unbroken reels.

D. Conductors and cables shall be manufactured with in twelve (12) months of installation. Date of manufacture shall be clearly marked on conductors or conductor reels.

E. Manufacturer shall have minimum ten (10) years experience in the manufacturer of conductors and cables similar to those specified on this project.

F. Manufacturer shall have ISO 9001 and ISO 9002 certification.

G. All conductors and cables shall be new and supplied by a local distributor.

H. If alternate manufacturer of products other than what are specified in this section are submitted, all necessary documents not limited to cut sheets, technical information, test reports from recognized testing labs and factory test reports shall be submitted to the satisfaction of the owner/engineer to ensure quality and conformance to the specifications. Additional testing shall be undertaken if it is concluded by the owner/engineer that the submitted test reports are either insufficient or do not include all tests necessary for product acceptance. The tests shall be conducted by a recognized lab acceptable to the

owner/engineer and all tests shall be witnessed by owner's/engineer's personnel. All testing procedures and test results shall be satisfactory to the owner/engineer. Contractor shall be responsible for arranging the tests, for transportation, food and lodging for minimum of one owner's/engineer's representative to witness the test at the testing lab. Include all costs for the above in the bid.

I. Testing: Provide the services of an independent qualified testing laboratory to perform the specified field tests. Notify the University's Representative fourteen (14) days in advance of performance of work requiring testing.

J. Conductors, cables, splices and terminations shall be manufactured within twelve (12) months of installation. Each item shall have a permanent marking on the product or the original manufacturers' package indicating the date of manufacture unless otherwise noted.

K. Testing Agency Qualifications:

1. Testing agency shall be an independent company; shall have been a member of NETA for a minimum of last ten (10) years and has permanent in-house testing engineers and technicians involved with testing of low voltage electrical power conductors and cables similar to those specified on this project.
2. Testing company shall be located with 50 miles radius of the project.
3. Testing Agency's Field Supervisor: Certified by NETA to supervise on-site testing.
4. Field Testing technician and supervisor shall have minimum ten (10) years' experience in field testing of low voltage power conductors and cables of the type and rating similar to the conductors and cables to be tested on this project.

PART 2 - PRODUCTS

2.1 CONDUCTORS AND CABLES

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following manufacturers:

B. Basis-of-Design Product:

1. General Cable Technologies Corporation.
2. Southwire Incorporated
3. Alpha Wire.
4. Belden Inc.
5. Encore Wire Corporation..

C. Conductor Material: Electrical grade, soft drawn annealed copper, 98 percent conductivity, and fabricated in accordance with ASTM and ICEA standards. Minimum size is number 12 for branch circuits, number 14 stranded for control wiring. Aluminum conductors are not permitted. Copper Conductors: Comply with NEMA WC 70/ICEA S-95-658.

D. Conductor Insulation: Comply with NEMA WC 70/ICEA S-95-658 for Type THHN-2-THWN-2, and Type XHHW-2 for underground and damp/wet/corrosive environments (including pool pump machine rooms).

E. VFD Cable:

1. Comply with UL 1277, UL 1685, and NFPA 70 for Type TC-ER cable.
2. Type TC-ER with oversized crosslinked polyethylene insulation, dual spirally wrapped copper tape shields and three bare symmetrically applied ground wires, and sunlight- and oil-resistant outer PVC jacket.
3. Comply with UL requirements for cables in Classes I and II, Division 2 hazardous location applications.

F. Provide separate neutral with each branch circuit serving outlets. When dedicated neutrals are provided, use color spiral to match associated phase.

2.2 CONNECTORS AND SPLICES

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following manufacturers:

1. Ideal Industries, Inc.
2. Ilsco
3. NSi Industries LLC.
4. O-Z/Gedney; a brand of Emerson Industrial Automation.
5. 3M; Electrical Markets Division.
6. TE Connectivity - Raychem.

B. Description: Factory-fabricated connectors and splices of size, ampacity rating, material, type, and class for application and service indicated.

C. Copper conductors shall be terminated in copper or bronze mechanical connectors or lugs or tool applied compression connections made of copper for all connections except those on wiring devices.

D. Splices in wires No. 10 and smaller shall be made with twist-on splicing connector in accordance with UL486-C. Connections in wires No. 8 and larger shall be made with compression type connectors in accordance with UL486-A and wrapped with insulated tape in accordance with UL501. Insulating tape shall be applied in a minimum of two layers of half wrap or built to match the overall insulation of the wire.

E. Splices in underground pull boxes or corrosive environments shall be made submersible type and made using “3M” Scotch-cast epoxy kits.

F. Pressure type connectors are not permitted.

2.3 SYSTEM DESCRIPTION

A. Electrical Components, Devices, and Accessories: UL Listed and labeled as defined in NFPA 70 and CEC Article 310, by a qualified testing agency, and marked for intended location and application.

B. Comply with NFPA 70.

PART 3 - EXECUTION

3.1 CONDUCTOR MATERIAL APPLICATIONS

A. Feeders: Copper. Solid for No. 10 AWG and smaller; stranded for No. 8 AWG and larger.

B. Branch Circuits: Copper. Solid for No. 12 AWG and smaller; stranded for No. 10 AWG and larger, except VFD cable, which shall be extra flexible stranded.

3.2 CONDUCTOR INSULATION AND MULTICONDUCTOR CABLE APPLICATIONS AND WIRING METHODS

A. Service Entrance: Type XHHW-2, single conductors in raceway

B. Exposed Feeders: Type THHN-2-THWN-2, single conductors in raceway; Type XHHW-2, for wet/damp/corrosive environments.

C. Feeders Concealed in Ceilings, Walls, Partitions, and Crawlspaces: Type THHN-2-THWN-2, single conductors in raceway.

D. Feeders Concealed in Concrete, below Slabs-on-Grade, and Underground: Type XHHW-2, single conductors in raceway

E. Feeders in Cable Tray: TC rated, Type THHN-2-THWN-2, single conductors in raceway, ;Type XHHW-2, single conductors in raceway larger than No. 1/0 AWG for wet/damp/corrosive environments.

F. Exposed Branch Circuits, Including in Crawlspaces: Type THHN-2-THWN-2, single conductors in raceway; Type XHHW-2, single conductors in raceway for wet/damp/corrosive environments.

G. Branch Circuits Concealed in Ceilings, Walls, and Partitions: Type THHN-2-THWN-2, MC Cable.

H. Branch Circuits Concealed in Concrete, below Slabs-on-Grade, and Underground: Type XHHW-2, MC Cable.

I. Branch Circuits in Cable Tray: TC rated Type THHN-2-THWN-2, MC Cable; Type XHHW-2, single conductors in raceway for wet/damp/corrosive environments

J. Cord Drops and Portable Appliance Connections: Type SO, hard service cord with stainless-steel, wire-mesh, strain relief device at terminations to suit application.

K. VFD Output Circuits: Type XHHW-2 in metal conduit with braided shield with dual tape shield.

L. Any serving to or through corrosive environments including pool pump machine rooms: Type XHHW-2 in metal conduit with braided shield with dual tape shield.

3.3 INSTALLATION OF CONDUCTORS AND CABLES

A. All conductors and cables shall be installed in a raceway.

B. Before installing conductors and cables in existing conduits, verify the continuity of each conduit; each surface conduit is properly supported per code and clear of any debris.

C. Complete raceway installation between conductor and cable termination points according to Section 260533 "Raceways and Boxes for Electrical Systems" prior to pulling conductors and cables.

D. Use manufacturer-approved pulling compound or lubricant where necessary; compound used must not deteriorate conductor or insulation. Do not exceed manufacturer's recommended maximum pulling tensions and sidewall pressure values.

E. Use pulling means, including fish tape, cable, rope, and basket-weave wire/cable grips, that will not damage cables or raceway.

F. Install exposed cables parallel and perpendicular to surfaces of exposed structural members and follow surface contours where possible.

G. Support cables according to Section 260529 "Hangers and Supports for Electrical Systems."

3.4 CONNECTIONS

A. 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-486B.

B. Make splices, terminations, and taps that are compatible with conductor material and that possess equivalent or better mechanical strength and insulation ratings than unspliced conductors].

1. Use oxide inhibitor in each splice, termination, and tap for any aluminum equipment terminals.

C. Wiring at Outlets: Install conductor at each outlet, with at least 6 inches (150 mm) of slack.

3.5 IDENTIFICATION

A. Each conductor shall be factory color coded by conductor manufacturer. Identify and color-code conductors and cables according to Section 260553 "Identification for Electrical Systems." Wires shall be identified by surface markings indicating manufacturer's identification, conductor size and metal, voltage rating, UL symbol, type designations and optional rating. Indentations for lettering is not permitted.

B. Identify each spare conductor at each end with identity number and location of other end of conductor and identify as spare conductor.

3.6 SLEEVE AND SLEEVE-SEAL INSTALLATION FOR ELECTRICAL PENETRATIONS

A. Install sleeves and sleeve seals at penetrations of exterior floor and wall assemblies. Comply with requirements in Section 260544 "Sleeves and Sleeve Seals for Electrical Raceways and Cabling."

3.7 FIRESTOPPING

A. Apply firestopping to electrical penetrations of fire-rated floor and wall assemblies to restore original fire-resistance rating of assembly according to Section 078410 "Penetration Firestopping."

3.8 FIELD QUALITY CONTROL

A. Testing Agency: Engage an independent qualified testing agency to perform tests and inspections.

B. Manufacturer's Field Service: Engage a factory-authorized service representative to test and inspect components, assemblies, and equipment installations, including connections.

C. Perform the following tests and inspections:

1. After installing conductors and cables and before electrical circuitry has been energized, test service entrance conductors, feeder conductors and the conductors feeding the following critical equipment and services for compliance with requirements.
2. Perform each visual and mechanical inspection and electrical tests stated in latest NETA Acceptance Testing Specification section 7.3.2 (Inspection and Test Procedures-Cables, Low Voltage-600V Maximum). Certify compliance with test parameters per NETA tables.
3. Infrared Scanning: After Substantial Completion, but not more than 60 days after Final Acceptance, perform an infrared scan of each splice in conductors No. 3 AWG and larger. Remove box and equipment covers so splices are accessible to portable scanner. Correct deficiencies determined during the scan.

a. Follow-up Infrared Scanning: Perform an additional follow-up infrared scan of each splice 11 months after date of Substantial Completion.
b. Instrument: Use an infrared scanning device designed to measure temperature or to detect significant deviations from normal values. Provide calibration record for device.
c. Record of Infrared Scanning: Prepare a certified report that identifies splices checked and that describes scanning results. Include notation of deficiencies detected, remedial action taken, and observations after remedial action.

D. Test and Inspection Reports: Prepare a written report to record the following:

1. Procedures used.
2. Results that comply with requirements. Include color scan images.
3. Results that do not comply with requirements and corrective action taken to achieve compliance with requirements.

E. Cables will be considered defective if they do not pass tests and inspections.

END OF SECTION

SECTION 260526 - GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS

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: Grounding systems and equipment.

B. Section includes grounding systems and equipment, plus the following special applications:

1. Underground distribution grounding.
2. Ground bonding common with lightning protection system.

1.3 DEFINITIONS:

A. NETA ATS: InterNational Electrical Testing Association - Acceptance Testing Specification.

B. NETA MTS: InterNational Electrical Testing Association - Maintenance Testing Specification.

C. NFPA : National Fire Protection Association.

D. IEEE: Institute of Electrical and Electronics Engineers

1.4 ACTION SUBMITTALS

A. Product Data: Submit manufacturer’s technical catalog cuts for each type of product indicated.

B. Shop Drawings: Site drawings to scale including details showing location and size of each field connection of grounding system.

1. Wiring Diagrams: Differentiate between manufacturer installed and field installed wiring.

C. Sustainable Design Submittals:

1. Product Data: For each conductor and cable indicating lead content.

1.5 INFORMATIONAL SUBMITTALS

A. Informational Submittals: Plans drawn to scale (1/4”=1’-0”) showing dimensioned locations of grounding features specified in "Field Quality Control" Article, including the following:

1. Test wells.
2. Ground rods.
3. Ground rings.
4. Grounding conductors, connectors.
5. Grounding arrangements and connections for separately derived systems.
6. Grounding for sensitive electronic equipment.

B. Qualification Data: For qualified independent testing agency and testing agency's field supervisor.

C. Field quality-control reports. Submit written test reports including the following:

1. Test procedures used.
2. Test results that comply with requirements.
3. Results of failed tests and corrective action taken to achieve test results that comply with requirements.

1.6 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For grounding to include in emergency, operation, and maintenance manuals. In addition to items specified in Section 017823 "Operation and Maintenance Data," include the following:

1. Instructions for periodic testing and inspection of grounding features at test wells grounding connections for separately derived systems based on NFPA 70 / CECB.

    a. Tests shall determine if ground-resistance or impedance values remain within specified maximums, and instructions shall recommend corrective action if values do not.
    b. Include recommended testing intervals.

1.7 QUALITY ASSURANCE

A. Testing Agency Qualifications:

1. Testing agency shall be an independent company; shall have been a member of NETA for a minimum of last ten (10) years and has permanent in-house testing engineers and technicians involved with testing of grounding systems similar to those specified on this project.
2. Testing company shall be located with 50 miles radius of the project.
3. Testing Agency's Field Supervisor: Currently certified by NETA to supervise on-site testing.

4. Field Testing technician and supervisor shall have minimum ten (10) years' experience in field testing of rounding systems of the type and rating similar to the systems to be tested on this project.

B. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70 / CEC, by a qualified testing agency, and marked for intended location and application.

C. Comply with UL 467 for grounding and bonding materials and equipment.

PART 2 - PRODUCTS

2.1 GROUNDING ELECTRODES, CONDUCTORS, CONNECTOR, BUS:

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following, or equal:

1. Grounding Connectors, Bars and Rods:

a. Erico - Pentair Electrical Fastening Solutions
b. Burndy – A Hubbell Company.
c. Ideal Industries, Inc.
d. O-Z/Gedney Co. - A brand of Emerson Industrial Automation.
e. Thomas & Betts - A Member of the ABB Group.

2. Grounding Conductors and cables:

a. Southwire
b. American Insulated Wire
c. Okonite

2.2 CONDUCTORS

A. Insulated Conductors: Copper wire or cable insulated for 600 V unless otherwise required by applicable Code or authorities having jurisdiction.

B. Bare Copper Conductors:

1. Solid Conductors: ASTM B 3.
2. Stranded Conductors: ASTM B 8.
3. Tinned Conductors: ASTM B 33.
4. Bonding Cable: 28 kcmil, 14 strands of No. 17 AWG conductor, 1/4 inch (6 mm) in diameter.
5. Bonding Conductor: No. 4 or No. 6 AWG, stranded conductor.
6. Bonding Jumper: Copper tape, braided conductors terminated with copper ferrules; 1-5/8 inches (41 mm) wide and 1/16 inch (1.6 mm) thick.

7. Tinned Bonding Jumper: Tinned-copper tape, braided conductors terminated with copper ferrules; 1-5/8 inches (41 mm) wide and 1/16 inch (1.6 mm) thick.

C. Bare Grounding Conductor and Conductor Protector for Wood Poles:

1. No. 4 AWG minimum, soft-drawn copper.
2. Conductor Protector: Half-round PVC or wood molding; if wood, use pressure-treated fir, cypress, or cedar.

D. Grounding Bus: Predrilled rectangular bars of annealed copper, 1/4 by 4 inches (6.3 by 100 mm) in cross section, with 9/32-inch (7.14-mm) holes spaced 1-1/8 inches (28 mm) apart. Stand-off insulators for mounting shall comply with UL 891 for use in switch-boards, 600 V. Lexan or PVC, impulse tested at 5000 V.

E. Lead Content: Less than 300 parts per million

2.3 CONNECTORS

A. Listed and labeled by UL for applications in which used and for specific types, sizes, and combinations of conductors and other items connected.

B. Bolted Connectors for Conductors, Rods and Pipes: Copper or copper alloy, pressure type with at least two bolts.

1. Pipe Connectors: Clamp type, sized for pipe.

C. Welded Connectors: Exothermic-welding kits of types recommended by kit manufac-turer for materials being joined and installation conditions.

D. Bus-bar Connectors: Mechanical type, cast silicon bronze, solderless compression or exothermic-type wire terminals, and long-barrel, two-bolt connection to ground bus bar.

E. Lead Content: Less than 300 parts per million

2.4 GROUNDING ELECTRODES

A. Ground Rods: Copper-clad; 3/4 inch by 10 feet (19 mm by 3 min diameter.

PART 3 - EXECUTION

3.1 APPLICATIONS

A. Conductors: Install solid conductor for No. 10 AWG and smaller, and stranded conduc-tors for No. 8 AWG and larger unless otherwise indicated.

B. Underground Grounding Conductors: Install bare tinned-copper conductor, No. 2/0 AWG minimum.

1. Bury at least 24 inches (600 mm) below grade.
2. Duct-Bank Grounding Conductor: Bury 12 inches (300 mm) above duct bank when indicated as part of duct-bank installation.

C. Grounding Bus: Install in electrical and telephone equipment rooms, in rooms housing service equipment or IT rooms, and elsewhere as indicated.

1. Install bus on insulated spacers 2 inches (50 mm) minimum from wall, 6 inches (150 mm) above finished floor unless otherwise indicated.
2. Where indicated on both sides of doorways, route bus up to top of door frame, across top of doorway, and down to specified height above floor; connect to horizontal bus.

D. Conductor Terminations and Connections:

1. Pipe and Equipment Grounding Conductor Terminations: Bolted connectors.
2. Underground Connections: Welded connectors except at test wells and as otherwise indicated.
3. Connections to Ground Rods at Test Wells: Bolted connectors.
4. Connections to Structural Steel: Welded connectors.

3.2 GROUNDING UNDERGROUND DISTRIBUTION SYSTEM COMPONENTS

A. Comply with IEEE C2 grounding requirements.

B. Pad-Mounted Transformers: Install two ground rods and ground ring around the pad. Ground pad-mounted equipment and noncurrent-carrying metal items associated with substations by connecting them to underground cable and grounding electrodes. Install tinned-copper conductor not less than No. 1/0 AWG for ground ring and for taps to equipment grounding terminals. Bury ground ring not less than 6 inches (150 mm) from the foundation.

3.3 EQUIPMENT GROUNDING

A. Install insulated equipment grounding conductors with all feeders and branch circuits in the same conduit containing phase and neutral conductors. Comply with NFPA 70 / CEC, Article 250, for types, sizes, and quantities of equipment grounding conductors, unless specific types, larger sizes, or more conductors than required by NFPA 70 / CEC are indicated.

B. Install insulated equipment grounding conductors with the following items, in addition to those required by NFPA 70 / CEC. :

1. Feeders and branch circuits.
2. Lighting circuits.
3. Receptacle circuits.
4. Single-phase motor and appliance branch circuits.
5. Three-phase motor and appliance branch circuits.

6. Flexible raceway runs.
7. Armored and metal-clad cable runs.
8. Busway Supply Circuits: Install insulated equipment grounding conductor from grounding bus in the switchgear, switchboard, or distribution panel to equipment grounding bar terminal on busway.
9. Computer and Rack-Mounted Electronic Equipment Circuits: Install insulated equipment grounding conductor in branch-circuit runs from equipment-area power panels and power-distribution units.

C. Air-Duct Equipment Circuits: Install insulated equipment grounding conductor to duct-mounted electrical devices operating at 120 V and more, including air cleaners, heaters, dampers, humidifiers, and other duct electrical equipment. Bond conductor to each unit and to air duct and connected metallic piping.

D. Water Heater, Heat-Tracing, and Antifrost Heating Cables: Install a separate insulated equipment grounding conductor to each electric water heater and heat-tracing cable. Bond conductor to heater units, piping, connected equipment, and components.

E. Isolated Equipment Enclosure Circuits: For designated equipment supplied by a branch circuit or feeder, isolate equipment enclosure from supply circuit raceway with a nonmetallic raceway fitting listed for the purpose. Install fitting where raceway enters enclosure and install a separate insulated equipment grounding conductor. Isolate conductor from raceway and from panelboard grounding terminals. Terminate at equipment grounding conductor terminal of the applicable derived system or service unless otherwise indicated.

F. Signal and Communication Equipment: In addition to grounding and bonding required by NFPA 70 / CEC, provide a separate grounding system complying with requirements in TIA/ATIS J-STD-607-A.

1. For telephone, alarm, voice and data, and other communication equipment, provide No. 4 AWG minimum insulated grounding conductor in raceway from grounding electrode system to each service location, terminal cabinet, wiring closet, and central equipment location.
2. Service and Central Equipment Locations and Wiring Closets: Terminate grounding conductor on a 1/4-by-4-by-12-inch (6.3-by-100-by-300-mm) grounding bus.
3. Terminal Cabinets: Terminate grounding conductor on cabinet grounding terminal.
4. All metallic conduits and cable tray shall be continuously bonded to maintain low resistance ground path and bonded back to the central equipment by the use of bonding jumpers where needed.

G. Metallic Fences or Other Metal Structures: Comply with requirements of IEEE C2. Bond metallic fences and other metal structures located within 8 feet (2.5 m) vertically or 16 feet (5 m) horizontally of exposed conductors or equipment.

1. Grounding Conductor: Bare**, tinned**-copper, not less than **No. 8** AWG.
2. Gates: Shall be bonded to the gate support post with a flexible bonding jumper. Bond each gate support post to the grounding electrode system in the area.

3. Provide bond across fence openings with 2 AWG bonding jumper buried 18 inches (460 mm) minimum below finished grade. Extend local grounding electrode system to cover swing of gates.
4. Barbed Wire: Strands shall be bonded to the grounding conductor.

3.4 INSTALLATION

A. Grounding Conductors: Route along shortest and straightest paths possible unless otherwise indicated or required by Code. Avoid obstructing access or placing conductors where they may be subjected to strain, impact, or damage.

B. Ground Rods: Drive rods until tops are 2 inches (50 mm) below finished floor or final grade unless otherwise indicated.

1. Interconnect ground rods with grounding electrode conductor below grade using exothermic welds, except at test wells and as otherwise indicated. Make connections without exposing steel or damaging coating if any.
2. For grounding electrode system, install ground rods at least three rods (unless otherwise indicated on the drawings), spaced at least one-rod length from each other and located at least the same distance from other grounding electrodes, and connect to the service grounding electrode conductor.

C. Test Wells: Ground rod driven through drilled hole in bottom of handhole. Handholes are specified in Section 260543 "Underground Ducts and Raceways for Electrical Systems," and shall be at least 12 inches (300 mm) deep, with cover.

1. Test Wells: Install at least one test well for each service unless otherwise indicated. Install at the ground rod electrically closest to service entrance. Set top of test well flush with finished grade or floor.
2. Test Wells near light poles: Coordinate location with landscape drawings and install one at each pole. Test well shall be open bottom and installed on a 12”H bed of gravel or crushed stone (1” size).

D. Bonding Straps and Jumpers: Install in locations accessible for inspection and maintenance except where routed through short lengths of conduit.

1. Bonding to Structure: Bond straps directly to basic structure, taking care not to penetrate any adjacent parts.
2. Bonding to Equipment Mounted on Vibration Isolation Hangers and Supports: Install bonding so vibration is not transmitted to rigidly mounted equipment.
3. Use exothermic-welded connectors for outdoor locations; if a disconnect-type connection is required, use a bolted clamp.

E. Grounding and Bonding for Piping:

1. Metal Water Service Pipe: Install insulated copper grounding conductors, in conduit, from building's main service equipment, or grounding bus, to main metal water service entrances to building. Connect grounding conductors to main metal water service pipes; use a bolted clamp connector or bolt a lug-type connector to a pipe

flange by using one of the lug bolts of the flange. Where a dielectric main water fitting is installed, connect grounding conductor on street side of fitting. Bond metal grounding conductor conduit or sleeve to conductor at each end.

2. Separately Derived System (SDS): All multiple branch metal water piping laterals originating from outside the area being served by the SDS and which serve the same area being served by the SDS shall be bonded to the common grounding electrode (GE) or the common grounding electrode conductor (GEC). The bonding connection shall be made at each level that the metal water piping serves. When multiple SDS's are installed or an SDS serves multiple levels of a structure, a copper common GEC shall be installed for the SDS as permitted in NFPA 70 / CEC article 250.30 (D)3 and sized per article 250.30 (A) and (B).
3. Water Meter Piping: Use braided-type bonding jumpers to electrically bypass water meters. Connect to pipe with a bolted connector.
4. Bond each aboveground portion of gas piping system downstream from equipment shutoff valve.

F. Bonding Interior Metal Ducts: Bond metal air ducts to equipment grounding conductors of associated fans, blowers, electric heaters, and air cleaners. Install tinned bonding jumper to bond across flexible duct connections to achieve continuity.

G. Grounding for Steel Building Structure: Install a driven ground rod at base of each corner column and at intermediate exterior columns at distances not more than 60 feet (18 m) apart.

H. Ground Ring: Install a grounding conductor, electrically connected to each building structure ground rod and to each steel column, extending around the perimeter of building. Refer to pool plans and specifications for additional bonding to system.

1. Install tinned-copper conductor not less than No. 4/0 AWG for ground ring and for taps to building steel.
2. Bury ground ring not less than 24 inches (600 mm) from building's foundation.

3.5 LABELING

A. Comply with requirements in Section 260553 "Identification for Electrical Systems" for instruction signs. The label or its text shall be green.

B. Install labels at the telecommunications bonding conductor and grounding equalizer and at the grounding electrode conductor where exposed.

1. Label Text: "If this connector or cable is loose or if it must be removed for any reason, notify the facility manager."

3.6 FIELD QUALITY CONTROL

A. Testing Agency: Engage an independent qualified testing agency to perform tests and inspections. Refer to section

B. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect, test, and adjust components, assemblies, and equipment installations, including connections.

C. Perform tests and inspections.

1. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect components, assemblies, and equipment installations, including connections, and to assist in testing.

D. Tests and Inspections:

1. After installing grounding system but before permanent electrical circuits have been energized, test for compliance with requirements.
2. Inspect physical and mechanical condition. Verify tightness of accessible, bolted, electrical connections with a calibrated torque wrench according to manufacturer's written instructions.
3. Test completed grounding system at each location where a maximum ground-resistance level is specified, at service disconnect enclosure grounding terminal, at ground test wells, and at individual ground rods. Make tests at ground rods before any conductors are connected.

    a. Measure ground resistance no fewer than two full days after last trace of precipitation and without soil being moistened by any means other than natural drainage or seepage and without chemical treatment or other artificial means of reducing natural ground resistance.
    b. Perform tests by fall-of-potential method according to IEEE 81.

4. Prepare dimensioned Drawings locating each test well, ground rod and ground-rod assembly, and other grounding electrodes. Identify each by letter in alphabetical order, and key to the record of tests and observations. Include the number of rods driven and their depth at each location and include observations of weather and other phenomena that may affect test results. Describe measures taken to improve test results.

E. Grounding system will be considered defective if it does not pass tests and inspections.

F. Prepare test and inspection reports.

G. Report measured ground resistances that exceed the following values:

1. Power and Lighting Equipment or System with Capacity of 500 kVA and Less: 1 ohms.
2. Power and Lighting Equipment or System with Capacity of 500 to 1000 kVA: 1 ohms.
3. Power Distribution Units or Panelboards Serving Electronic Equipment: 1 ohm(s).
4. Substations and Pad-Mounted Equipment: 5 ohms.
5. Manhole Grounds: 10 ohms.

H. Excessive Ground Resistance: If resistance to ground exceeds specified values, notify Architect promptly and include recommendations to reduce ground resistance.

END OF SECTION

SECTION 260543 - UNDERGROUND DUCTS AND RACEWAYS FOR ELECTRICAL SYSTEMS

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. This Section includes the following:

1. Conduit, ducts, and duct accessories for direct-buried and concrete-encased duct bank(s)
2. Handholes and boxes.

B. Related Requirements:

1. Section 260526 “Grounding and Bonding of Electrical Systems”.

1.3 DEFINITION

A. RNC: Rigid nonmetallic conduit.

B. PVC coated GRS: PVC coated Galvanized rigid steel conduit

C. PVC: Poly Vinyl Chloride

D. NETA: InterNational Testing Association

1.4 ACTION SUBMITTALS

A. Product Data: For the following:

1. Duct-bank materials, including separators and miscellaneous components.
2. Ducts and conduits and their accessories, including elbows, end bells, bends, fittings, and solvent cement.
3. Accessories for manholes, handholes, boxes, and other utility structures.
4. Warning tape.
5. Warning planks.
6. Pull ropes.

B. Shop Drawings for Factory-Fabricated Handholes and Boxes Other Than Precast Concrete: Include dimensioned plans, sections, and elevations, and fabrication and installation details, including the following:

1. Duct entry provisions, including locations and duct sizes.
2. Cover design. Include details of factory engraved markings as specified.
3. Grounding details.
4. Cable racks, inserts. Include dimensioned locations of cable rack inserts, and pulling-in and lifting irons.

1.5 INFORMATIONAL SUBMITTALS

A. Product Certificates: For concrete and steel used in precast concrete manholes and handholes, as required by ASTM C 858. Certificates shall be signed by manufacturer's structural engineer. Include name and date.

B. Qualification Data: For professional engineer and testing agency.

C. Source quality-control test reports.

D. Field quality-control test reports.

1.6 QUALITY ASSURANCE

A. Testing Agency Qualifications: Qualified according to ASTM E 329 for testing indicated.

B. Comply with ANSI C2.

C. Comply with NFPA 70.

D. Each conduit shall bear manufacturer's trademark and UL label. Conduits and fittings shall be of a single manufacturer. Multiple manufactures for the same material are not acceptable.

E. Comply with California Electric Code (CEC).

1.7 DELIVERY, STORAGE, AND HANDLING

A. Deliver ducts to project site with ends capped. Store nonmetallic ducts with supports to prevent bending, warping, and deforming.

B. Deliver precast concrete manholes, handholes and other underground utility structures when the site is ready for installation. Store precast concrete and other factory-fabricated underground utility structures at project site (if necessary) as recommended by manufacturer to prevent physical damage. Arrange so identification markings are visible.

C. Lift and support precast concrete units only at designated lifting or supporting points.

1.8 PROJECT CONDITIONS

A. Interruption of Existing Electrical Service: Do not interrupt electrical service to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary electrical service according to requirements indicated:

1. Notify Architect, Construction, and Manager Owner no fewer than fourteen (14) days in advance of proposed interruption of electrical service.
2. Do not proceed with interruption of electrical service without Architect, Construction, and Manager Owner's written permission.
3. Existing electrical service shall be shut down by owner’s authorized personnel. Coordinate with owner in advance.

1.9 COORDINATION

A. Coordinate layout and installation of ducts, handholes, and boxes with final arrangement of other utilities, site grading, and surface features as determined in the field.

B. Coordinate elevations of ducts and duct-bank entrances into manholes, handholes, and boxes with final locations and profiles of ducts and duct banks as determined by coordination with other utilities, underground obstructions, and surface features. Revise locations and elevations from those indicated as required to suit field conditions and to ensure that duct runs drain to manholes and handholes, and as approved by Architect.

1.10 EXTRA MATERIALS

A. Furnish extra materials described below that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

B. Furnish cable-support stanchions, arms, insulators, and associated fasteners in quantities equal to 5 percent of quantity of each item installed (minimum six of each type).

PART 2 - PRODUCTS

2.1 CONDUIT

A. Plastic-Coated Rigid Steel Conduit: Galvanized. Comply with ANSI C80.1. Plastic-Coated Rigid Steel Conduit and Fittings: Rigid steel conduit and fittings with an extruded polyvinyl chloride jacket, minimum 40 mils. The jacket shall have high tensile strength, shall be highly resistant to corrosion and shall not oxidize or deteriorate or shrink when exposed to sunlight and weather. The jacket shall be flame retardant and shall not support combustion. The interior of the conduit shall have a urethane coating, minimum 2 mils.

B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Allied Tube and Conduit
2. Republic Conduit
3. Western Tube

C. RNC: Heavy wall design; NEMA TC 2, Type EPC-40-PVC UL 651, with matching fittings by same manufacturer as the conduit, complying with NEMA TC 3 and UL 514B. Make all fittings watertight with solvent-weld recommended by the conduit manufacturer and specifically manufactured for the purpose.

D. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Cantex, Inc.
2. Thomas & Betts-Carlon
3. Lamson & Sessions -Carlon Division
4. JM Eagle
5. Allied Tube and Conduit

2.2 NONMETALLIC DUCTS AND DUCT ACCESSORIES

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Allied Tube and Conduit
2. Cantex, Inc.
3. Lamson & Sessions; Carlon Electrical Products.

B. Duct Accessories:

1. Duct Separators: Factory-fabricated rigid PVC interlocking spacers, sized for type and sizes of ducts with which used, and selected to provide minimum duct spacings indicated while supporting ducts during concreting or backfilling.
2. Warning Tape: Underground-line warning tape specified in Section 260553 "Identification for Electrical Systems."
3. Concrete Warning Planks: Nominal 12 by 24 by 3 inches (300 by 600 by 76 mm) in size, manufactured from 6000-psi (41-MPa) concrete.

    a. Color: Red dye added to concrete during batching.
    b. Mark each plank with "ELECTRIC" in 2-inch- (50-mm-) high, 3/8-inch- (10-mm-) deep letters.

2.3 PRECAST CONCRETE HANDHOLES AND BOXES

A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Christy Concrete Products.
2. Oldcastle Precast Group.
3. Jensen Precast

C. Comply with ASTM C 858 for design and manufacturing processes.

D. Description: Factory-fabricated, reinforced-concrete, monolithically poured walls and bottom unless open-bottom enclosures are indicated. Frame and cover shall form top of enclosure and shall have traffic load rating consistent with that of handhole or box.

1. Frame and Cover: Weatherproof cast-iron frame, with cast-iron cover with recessed cover hook eyes and tamper-resistant, captive, cover-securing bolts.
2. Frame and Cover: Weatherproof steel frame, with steel cover with recessed cover hook eyes and tamper-resistant, captive, cover-securing bolts.
3. Cover Finish: Nonskid finish shall have a minimum coefficient of friction of 0.50.
4. Cover Legend: Molded lettering, "ELECTRIC." and "(As indicated for each service)".
5. Configuration: Units shall be designed for flush burial and have closed / integral closed bottom, unless otherwise indicated.
6. Extensions and Slabs: Designed to mate with bottom of enclosure. Same material as enclosure.

    a. Extension shall provide increased depth of 12 inches (300 mm).
    b. Slab: Same dimensions as bottom of enclosure and arranged to provide closure.

7. Windows: Precast openings in walls, arranged to match dimensions and elevations of approaching ducts and duct banks plus an additional 12 inches (300 mm) vertically and horizontally to accommodate alignment variations.

    a. Windows shall be located no less than 6 inches (150 mm) from interior surfaces of walls, floors, or frames and covers of handholes, but close enough to corners to facilitate racking of cables on walls.
    b. Window opening shall have cast-in-place, welded wire fabric reinforcement for field cutting and bending to tie in to concrete envelopes of duct banks.
    c. Window openings shall be framed with at least two additional No. 4 steel reinforcing bars in concrete around each opening.

8. Duct Entrances in Handhole Walls: Cast end-bell or duct-terminating fitting in wall for each entering duct.

a. Type and size shall match fittings to duct or conduit to be terminated.
b. Fittings shall align with elevations of approaching ducts and be located near interior corners of handholes to facilitate racking of cable.

9. Handholes 12 inches wide by 24 inches long (300 mm wide by 600 mm long) and larger shall have inserts for cable racks and pulling-in irons installed before concrete is poured.

2.4 HANDHOLES AND BOXES OTHER THAN PRECAST CONCRETE

A. Description: Comply with SCTE 77.

1. Color: Gray.
2. Configuration: Units shall be designed for flush burial and have closed bottom, unless otherwise indicated.
3. Cover: Weatherproof, secured by tamper-resistant locking devices and having structural load rating consistent with enclosure.
4. Cover Finish: Nonskid finish shall have a minimum coefficient of friction of 0.50.
5. Cover Legend: Molded lettering, "ELECTRIC." and As indicated for each service.
6. Direct-Buried Wiring Entrance Provisions: Knockouts equipped with insulated bushings or end-bell fittings, selected to suit box material, sized for wiring indicated, and arranged for secure, fixed installation in enclosure wall.
7. Duct Entrance Provisions: Duct-terminating fittings shall mate with entering ducts for secure, fixed installation in enclosure wall.
8. Handholes 12 inches wide by 24 inches long (300 mm wide by 600 mm long) and larger shall have factory-installed inserts for cable racks and pulling-in irons.

B. Polymer Concrete Handholes and Boxes with Polymer Concrete Cover: Molded of sand and aggregate, bound together with a polymer resin, and reinforced with steel or fiberglass or a combination of the two.

1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
2. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
3. Basis-of-Design Product: Subject to compliance with requirements, provide the product indicated on Drawings or a comparable product by one of the following:

a. Armorcast Products Company.
b. Carson Industries LLC.
c. CDR Systems Corporation.
d. NewBasis.
e. Oldcastle

C. Fiberglass Handholes and Boxes with Polymer Concrete Frame and Cover: Sheet-molded, fiberglass-reinforced, polyester resin enclosure joined to polymer concrete top ring or frame.

1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
2. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
3. Basis-of-Design Product: Subject to compliance with requirements, provide the product indicated on Drawings or a comparable product by one of the following:

    a. Armorcast Products Company.
    b. Carson Industries LLC.
    c. Christy Concrete Products.
    d. Synertech Moulded Products, Inc.; a division of Oldcastle Precast.
    e. Newbasis

2.5 SOURCE QUALITY CONTROL

A. Test and inspect precast concrete utility structures according to ASTM C 1037.

B. Nonconcrete Handhole and Pull-Box Prototype Test: Test prototypes of manholes and boxes for compliance with SCTE 77. Strength tests shall be for specified tier ratings of products supplied.

1. Tests of materials shall be performed by a independent testing agency.
2. Strength tests of complete boxes and covers shall be by either an independent testing agency or the manufacturer. A qualified registered professional engineer shall certify tests by manufacturer.
3. Testing machine pressure gages shall have current calibration certification complying with ISO 9000 and ISO 10012, and traceable to NIST standards.

PART 3 - EXECUTION

3.1 UNDERGROUND DUCT APPLICATION

A. Ducts for Electrical Cables Over 600 V: RNC, NEMA Type EPC-40-PVC, in concrete-encased duct bank, unless otherwise indicated.

B. Ducts for Electrical Feeders 600 V and Less: RNC, NEMA Type EPC-40-PVC, in direct-buried duct bank, unless otherwise indicated.

C. Ducts for Electrical Branch Circuits: RNC, NEMA Type EPC-40-PVC, in direct-buried duct bank, unless otherwise indicated.

D. Underground Ducts for Telephone, Communications, or Data Utility Service Cables: RNC, NEMA Type PVC, in concrete-encased duct bank, unless otherwise indicated.

E. Underground Ducts for Telephone, Communications, or Data Utility Service Cables: RNC, NEMA Type EPC-40-PVC, installed in concrete-encased duct bank, unless otherwise indicated.

F. Underground Ducts Crossing Paved Paths Walks and Driveways, loading docks: RNC, NEMA Type EPC-40-PVC, encased in reinforced concrete.

3.2 UNDERGROUND ENCLOSURE APPLICATION

A. Handholes and Boxes for 600 V and Less:

1. Units in Roadways and Other Deliberate Traffic Paths: Precast concrete. AASHTO HB 17, H-20 structural load rating.
2. Units in Driveway, Parking Lot, and Off-Roadway Locations, Subject to Occasional, Nondeliberate Loading by Heavy Vehicles: Precast concrete, AASHTO HB 17, H-20 structural load rating.
3. Units in Sidewalk and Similar Applications with a Safety Factor for Nondeliberate Loading by Vehicles: Precast concrete, AASHTO HB 17, H-10 structural load rating.
4. Units Subject to Light-Duty Pedestrian Traffic Only: Fiberglass-reinforced polyester resin, structurally tested according to SCTE 77 with 3000-lbf (13 345-N) vertical loading.

3.3 EARTHWORK

A. Excavation and Backfill: Comply with Section 312333 "Trenching and Backfilling’ but do not use heavy-duty, hydraulic-operated, compaction equipment.

B. Restore surface features at areas disturbed by excavation and reestablish original grades, unless otherwise indicated. Replace removed sod immediately after backfilling is completed.

C. Restore areas disturbed by trenching, storing of dirt, cable laying, and other work. Restore vegetation and include necessary topsoiling, fertilizing, liming, seeding, sodding, sprigging, and mulching.

3.4 DUCT INSTALLATION

A. Slope: Pitch ducts a minimum slope of 1:300 down toward manholes and handholes and away from buildings and equipment. Slope ducts from a high point in runs between two manholes to drain in both directions.

B. Curves and Bends: Use 5-degree angle couplings for small changes in direction. Use manufactured long sweep bends with a minimum radius of 48 inches (1220 mm), both horizontally and vertically, at other locations, unless otherwise indicated. For underground ducts containing MV and HV cables, use manufactured long sweep bends with a minimum radius 25 feet (7.5 m) both horizontally and vertically. Number of bends

on ducts for HV and MV systems, telephone and signal systems shall not exceed two (2) 90 degrees.

C. Joints: Use solvent-cemented joints in ducts and fittings and make watertight according to manufacturer's written instructions. Stagger couplings so those of adjacent ducts do not lie in same plane.

D. Duct Entrances to Manholes and Concrete and Polymer Concrete Handholes: Use end bells, spaced approximately 10 inches (250 mm) o.c. for 5-inch (125-mm) ducts, and vary proportionately for other duct sizes.

1. Begin change from regular spacing to end-bell spacing 10 feet (3 m) from the end bell without reducing duct line slope and without forming a trap in the line.
2. Direct-Buried Duct Banks: Install an expansion and deflection fitting in each conduit in the area of disturbed earth adjacent to manhole or handhole.
3. Grout end bells into structure walls from both sides to provide watertight entrances.

E. Building Wall Penetrations: Make a transition from underground duct to rigid PVC coated steel conduit at least 10 feet (3 m) outside the building wall without reducing duct line slope away from the building, and without forming a trap in the line. Use fittings manufactured for duct-to-conduit transition. Install conduit penetrations of building walls as specified in Section 260544 "Sleeves and Sleeve Seals for Electrical Raceways and Cabling."

F. Do not install conduits underneath a building except where the service/feeder/branch circuit conduits enter the building.

G. Sealing: Provide temporary closure at terminations of ducts that have cables pulled. Seal spare ducts at terminations. Use sealing compound and plugs to withstand at least 15-psig (1.03-MPa) hydrostatic pressure.

H. Pulling Cord: Install minimum 1/8 inch thick test nylon cord with minimum 250 pounds per foot tensile strength in ducts, including spares.

I. Direct-Buried Duct Banks:

1. Support ducts on duct separators coordinated with duct size, duct spacing, and outdoor temperature.
2. Space separators close enough to prevent sagging and deforming of ducts, with not less than 5 spacers per 20 feet (6 m) of duct. Secure separators to earth and to ducts to prevent displacement during backfill and yet permit linear duct movement due to expansion and contraction as temperature changes. Stagger spacers approximately 6 inches (150 mm) between tiers.
3. Excavate trench bottom to provide firm and uniform support for duct bank. Prepare trench bottoms as specified in Section 312333 "Trenching and Backfilling" for pipes less than 6 inches (150 mm) in nominal diameter.
4. Install backfill as specified in Section 312333 "Trenching and Backfilling."
5. After installing first tier of ducts, backfill and compact. Start at tie-in point and work toward end of duct run, leaving ducts at end of run free to move with expansion and contraction as temperature changes during this process. Repeat procedure

after placing each tier. After placing last tier, hand-place backfill to 4 inches (100 mm) over ducts and hand tamp. Firmly tamp backfill around ducts to provide maximum supporting strength. Use hand tamper only. After placing controlled backfill over final tier, make final duct connections at end of run and complete backfilling with normal compaction as specified in Section 312000 "Earth Moving."

6. Install ducts with a minimum of 3 inches (75 mm) between ducts for like services and 12 inches (300 mm) between power and signal ducts.
7. Depth: Install top of duct bank at least 36 inches (900 mm) below finished grade, unless otherwise indicated.
8. Set elevation of bottom of duct bank below the frost line.
9. Install manufactured duct elbows for stub-ups at poles and equipment and at building entrances through the floor, unless otherwise indicated. Encase elbows for stub-up ducts throughout the length of the elbow.
10. Install manufactured PVC coated rigid steel conduit elbows for stub-ups at poles and equipment and at building entrances through the floor.

    a. Couple PVC coated steel conduits to ducts with adapters designed for this purpose, and encase coupling with 3 inches (75 mm) of concrete.
    b. For equipment mounted on outdoor concrete bases, extend PVC coated steel conduit horizontally a minimum of 60 inches (1500 mm) from edge of equipment pad or foundation. Install insulated grounding bushings on terminations at equipment.

11. Warning Planks: Bury warning planks approximately 12 inches (300 mm) above direct-buried ducts and duct banks, placing them 24 inches (600 mm) o.c. Align planks along the width and along the centerline of duct bank. Provide an additional plank for each 12-inch (300-mm) increment of duct-bank width over a nominal 18 inches (450 mm). Space additional planks 12 inches (300 mm) apart, horizontally.

3.5 INSTALLATION OF CONCRETE HANDHOLES, AND BOXES

A. Precast Concrete Handhole Installation:

1. Comply with ASTM C 891, unless otherwise indicated.
2. Install units level and plumb and with orientation and depth coordinated with connecting ducts to minimize bends and deflections required for proper entrances.
3. Unless otherwise indicated, support units on a level bed of 12 inches thick crushed stone or gravel, graded from 1-inch (25-mm) sieve to No. 4 (4.75-mm) sieve and compacted to same density as adjacent undisturbed earth.

B. Elevations:

1. Install handholes with bottom below the frost line, below grade.
2. Handhole Covers: In paved areas and trafficways, set surface flush with finished grade. Set covers of other handholes 1 inch (25 mm) above finished grade.
3. Where indicated, cast handhole cover frame integrally with handhole structure.

C. Drainage: Install drains in bottom of manholes where indicated. Coordinate with drainage provisions indicated.

D. Field-Installed Bolting Anchors Concrete Handholes: Do not drill deeper than 2 inches (50 mm) for handholes, for anchor bolts installed in the field. Use a minimum of two anchors for each cable stanchion.

3.6 INSTALLATION OF HANDHOLES AND BOXES OTHER THAN PRECAST CONCRETE

A. Install handholes and boxes level and plumb and with orientation and depth coordinated with connecting ducts to minimize bends and deflections required for proper entrances. Use box extension if required to match depths of ducts, and seal joint between box and extension as recommended by the manufacturer.

B. Unless otherwise indicated, support units on a level bed of 12 inches thick crushed stone or gravel, graded from 1/2-inch (12.7-mm) sieve to No. 4 (4.75-mm) sieve and compacted to same density as adjacent undisturbed earth.

C. Elevation: In paved areas and trafficways, set so cover surface will be flush with finished grade. Set covers of other handholes 1 inch (25 mm) above finished grade.

D. Install handholes and boxes with bottom below the frost line, below grade.

E. Install removable hardware, including pulling eyes, cable stanchions, cable arms, and insulators, as required for installation and support of cables and conductors and as indicated. Select arm lengths to be long enough to provide spare space for future cables, but short enough to preserve adequate working clearances in the enclosure.

F. Field-cut openings for ducts and conduits according to enclosure manufacturer's written instructions. Cut wall of enclosure with a tool designed for material to be cut. Size holes for terminating fittings to be used, and seal around penetrations after fittings are installed.

G. For enclosures installed in asphalt paving and subject to occasional, nondeliberate, heavy-vehicle loading, form and pour a concrete ring encircling, and in contact with, enclosure and with top surface screeded to top of box cover frame. Bottom of ring shall rest on compacted earth.

1. Concrete: 4000 psi (20 kPa), 28-day strength, complying with Section 033000 "Cast-in-Place Concrete," with a troweled finish.
2. Dimensions: 10 inches wide by 12 inches deep (250 mm wide by 300 mm deep).

3.7 GROUNDING

A. Ground underground ducts and utility structures according to Section 260526 "Grounding and Bonding for Electrical Systems."

3.8 FIELD QUALITY CONTROL

A. During construction, partially completed duct lines shall be protected from the entrance of debris such as mud, sand and dirt by means of suitable conduit plugs. As each section

of a duct line is completed from manhole to vault, a testing mandrel not less than 12 inches long with a diameter 1/4-inch less than the size of the duct, shall be drawn through each duct, after which a brush having the diameter of the duct, and have stiff bristles shall be drawn through until the conduit is clear of all particles of earth, sand, gravel and other foreign materials. Conduit plugs shall then be immediately installed. Underground conduits, which terminate inside the building below grade, or which slope so that water might flow into building, shall be sealed at termination after installation of wires.

B. Perform the following tests and inspections and prepare test reports:

1. Demonstrate capability and compliance with requirements on completion of installation of underground ducts and utility structures.
2. Pull aluminum or wood test mandrel through duct to prove joint integrity and test for out-of-round duct. Provide mandrel equal to 80 percent fill of duct. If obstructions are indicated, remove obstructions and retest.
3. Test manhole and handhole grounding to ensure electrical continuity of grounding and bonding connections. Measure and report ground resistance as specified in Section 260526 "Grounding and Bonding for Electrical Systems."

C. Correct deficiencies and retest as specified above to demonstrate compliance.

3.9 CLEANING

A. Pull leather-washer-type duct cleaner, with graduated washer sizes, through full length of ducts. Follow with rubber duct swab for final cleaning and to assist in spreading lubricant throughout ducts.

B. Clean internal surfaces of manholes, including sump. Remove foreign material.

END OF SECTION

SECTION 260553 - IDENTIFICATION FOR ELECTRICAL SYSTEMS

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. Identification for raceways.
2. Identification of power and control cables.
3. Identification for conductors.
4. Underground-line warning tape.
5. Warning labels and signs.
6. Instruction signs.
7. Equipment identification labels.
8. Miscellaneous identification products.

1.3 ACTION SUBMITTALS

A. Product Data: For each electrical identification product indicated.

B. Samples: For each type of label and sign to illustrate size, colors, lettering style, mounting provisions, and graphic features of identification products.

C. Identification Schedule: An index of nomenclature of electrical equipment and system components used in identification signs and labels.

1.4 QUALITY ASSURANCE

A. Comply with ANSI A13.1.

B. Comply with NFPA 70.

C. Comply with 29 CFR 1910.144 and 29 CFR 1910.145.

D. Comply with ANSI Z535.4 for safety signs and labels.

E. Adhesive-attached labeling materials, including label stocks, laminating adhesives, and inks used by label printers, shall comply with UL 969.

1.5 COORDINATION

A. Coordinate identification names, abbreviations, colors, and other features with requirements in other Sections requiring identification applications, Drawings, Shop Drawings, manufacturer's wiring diagrams, and the Operation and Maintenance Manual; and with those required by codes, standards, and 29 CFR 1910.145. Use consistent designations throughout Project.

B. Coordinate installation of identifying devices with completion of covering and painting of surfaces where devices are to be applied.

C. Coordinate installation of identifying devices with location of access panels and doors.

D. Install identifying devices before installing acoustical ceilings and similar concealment.

PART 2 - PRODUCTS

2.1 POWER AND CONTROL RACEWAY IDENTIFICATION MATERIALS

A. Comply with ANSI A13.1 for minimum size of letters for legend and for minimum length of color field for each raceway size.

B. Colors for Raceways Carrying Circuits at 600 V or Less:

1. Black letters on an orange field.
2. Legend: Indicate voltage and system or service type.

C. Colors for Raceways Carrying Circuits at More Than 600 V:

1. Black letters on an orange field.
2. Legend: "DANGER CONCEALED HIGH VOLTAGE WIRING."

D. Vinyl Labels for Raceways Carrying Circuits at 600 V or Less: Preprinted, flexible label laminated with a clear, weather- and chemical-resistant coating and matching wraparound clear adhesive tape for securing ends of legend label.

E. Snap-Around Labels for Raceways Carrying Circuits at 600 V or Less: Slit, pretensioned, flexible, preprinted, color-coded acrylic sleeve, with diameter sized to suit diameter of raceway or cable it identifies and to stay in place by gripping action.

F. Snap-Around, Color-Coding Bands for Raceways Carrying Circuits at 600 V or Less: Slit, pretensioned, flexible, solid-colored acrylic sleeve, 2 inches (50 mm) long, with diameter sized to suit diameter of raceway or cable it identifies and to stay in place by gripping action.

G. Metal Tags: Brass or aluminum, 2 by 2 by 0.05 inch (50 by 50 by 1.3 mm), with stamped legend, punched for use with self-locking cable tie fastener.

2.2 POWER AND CONTROL CABLE IDENTIFICATION MATERIALS

A. Comply with ANSI A13.1 for minimum size of letters for legend and for minimum length of color field for each cable size.

B. Vinyl Labels: Preprinted, flexible label laminated with a clear, weather- and chemical-resistant coating and matching wraparound clear adhesive tape for securing ends of legend label.

C. Self-Adhesive, Self-Laminating Polyester Labels: Preprinted, 3-mil- (0.08-mm-) thick flexible label with acrylic pressure-sensitive adhesive that provides a clear, weather- and chemical-resistant, self-laminating, protective shield over the legend. Labels sized to fit the cable diameter such that the clear shield overlaps the entire printed legend.

D. Heat-Shrink Preprinted Tubes: Flame-retardant polyolefin tube with machine-printed identification label. Sized to suit diameter of and shrinks to fit firmly around cable it identifies. Full shrink recovery at a maximum of 200 deg F (93 deg C). Comply with UL 224.

E. Snap-Around Labels: Slit, pretensioned, flexible, preprinted, color-coded acrylic sleeve, with diameter sized to suit diameter of cable it identifies and to stay in place by gripping action.

F. Snap-Around, Color-Coding Bands: Slit, pretensioned, flexible, solid-colored acrylic sleeve, 2 inches (50 mm) long, with diameter sized to suit diameter of cable it identifies and to stay in place by gripping action.

2.3 CONDUCTOR IDENTIFICATION MATERIALS

A. Color-Coding Conductor Tape: Colored, self-adhesive vinyl tape not less than 3 mils (0.08 mm) thick by 1 to 2 inches (25 to 50 mm) wide.

B. Self-Adhesive, Self-Laminating Polyester Labels: Preprinted, 3-mil- (0.08-mm-) thick flexible label with acrylic pressure-sensitive adhesive that provides a clear, weather- and chemical-resistant, self-laminating, protective shield over the legend. Labels sized to fit the conductor diameter such that the clear shield overlaps the entire printed legend.

C. Snap-Around Labels: Slit, pretensioned, flexible, preprinted, color-coded acrylic sleeve, with diameter sized to suit diameter of conductor it identifies and to stay in place by gripping action.

D. Snap-Around, Color-Coding Bands: Slit, pretensioned, flexible, solid-colored acrylic sleeve with diameter sized to suit diameter of conductor it identifies and to stay in place by gripping action.

E. Heat-Shrink Preprinted Tubes: Flame-retardant polyolefin tube with machine-printed identification label. Sized to suit diameter of and shrinks to fit firmly around conductor it identifies. Full shrink recovery at a maximum of 200 deg F (93 deg C). Comply with UL 224.

F. Marker Tapes: Vinyl or vinyl-cloth, self-adhesive wraparound type, with circuit identification legend machine printed by thermal transfer or equivalent process.

2.4 FLOOR MARKING TAPE

A. 2-inch- (50-mm-) wide, 5-mil (0.125-mm) pressure-sensitive vinyl tape, with yellow and black stripes and clear vinyl overlay.

2.5 UNDERGROUND-LINE WARNING TAPE

A. Tape:

1. Recommended by manufacturer for the method of installation and suitable to identify and locate underground electrical utility lines.
2. Printing on tape shall be permanent and shall not be damaged by burial operations.
3. Tape material and ink shall be chemically inert, and not subject to degrading when exposed to acids, alkalis, and other destructive substances commonly found in soils.

B. Color and Printing:

1. Comply with ANSI Z535.1 through ANSI Z535.5.
2. Inscriptions for Red-Colored Tapes: ELECTRIC LINE, HIGH VOLTAGE.

C. Tag: Type I:

1. Pigmented polyolefin, bright-colored, continuous-printed on one side with the inscription of the utility, compounded for direct-burial service.
2. Thickness: 4 mils (0.1 mm).
3. Weight: 18.5 lb/1000 sq. ft. (9.0 kg/100 sq. m).
4. 3-Inch (75-mm) Tensile According to ASTM D 882: 30 lbf (133.4 N), and 2500 psi (17.2 MPa).

2.6 WARNING LABELS AND SIGNS

A. Comply with NFPA 70 and 29 CFR 1910.145.

B. Self-Adhesive Warning Labels: Factory-printed, multicolor, pressure-sensitive adhesive labels, configured for display on front cover, door, or other access to equipment unless otherwise indicated.

C. Baked-Enamel Warning Signs:

1. Preprinted aluminum signs punched or drilled for fasteners, with colors, legend, and size required for application.
2. 1/4-inch (6.4-mm) grommets in corners for mounting.
3. Nominal size, 7 by 10 inches (180 by 250 mm).

D. Metal-Backed, Butyrate Warning Signs:

1. Weather-resistant, nonfading, preprinted, cellulose-acetate butyrate signs with 0.0396-inch (1-mm) galvanized-steel backing; and with colors, legend, and size required for application.
2. 1/4-inch (6.4-mm) grommets in corners for mounting.
3. Nominal size, 10 by 14 inches (250 by 360 mm).

E. Warning label and sign shall include, but are not limited to, the following legends:

1. Multiple Power Source Warning: "DANGER - ELECTRICAL SHOCK HAZARD - EQUIPMENT HAS MULTIPLE POWER SOURCES."
2. Workspace Clearance Warning: "WARNING - OSHA REGULATION - AREA IN FRONT OF ELECTRICAL EQUIPMENT MUST BE KEPT CLEAR FOR 36 INCHES (915 MM)."

2.7 INSTRUCTION SIGNS

A. Engraved, laminated acrylic or melamine plastic: minimum 1/16 inch (1.6 mm) thick for signs up to 20 sq. inches (129 sq. cm) and 1/8 inch (3.2 mm) thick for larger sizes, coordinate with General Electrical specification section 26 00 00.

1. Engraved legend with black letters on white face.
2. Punched or drilled for mechanical fasteners.
3. Framed with mitered acrylic molding and arranged for attachment at applicable equipment.

B. Adhesive Film Label: Machine printed, in black, by thermal transfer or equivalent process. Minimum letter height shall be 3/8 inch (10 mm).

C. Adhesive Film Label with Clear Protective Overlay: Machine printed, in black, by thermal transfer or equivalent process. Minimum letter height shall be 3/8 inch (10 mm). Overlay shall provide a weatherproof and UV-resistant seal for label.

2.8 EQUIPMENT IDENTIFICATION LABELS

A. Adhesive Film Label: Machine printed, in black, by thermal transfer or equivalent process. Minimum letter height shall be 3/8 inch (10 mm).

B. Adhesive Film Label with Clear Protective Overlay: Machine printed, in black, by thermal transfer or equivalent process. Minimum letter height shall be 3/8 inch (10 mm). Overlay shall provide a weatherproof and UV-resistant seal for label.

C. Self-Adhesive, Engraved, Laminated Acrylic or Melamine Label: Adhesive backed, with white letters on a dark-gray background. Minimum letter height shall be 3/8 inch (10 mm).

D. Engraved, Laminated Acrylic or Melamine Label: Punched or drilled for screw mounting. White letters on a dark-gray background. Minimum letter height shall be 3/8 inch (10 mm).

2.9 CABLE TIES

A. UV-Stabilized Cable Ties: Fungus inert, designed for continuous exposure to exterior sunlight, self extinguishing, one piece, self locking, Type 6/6 nylon.

1. Minimum Width: 3/16 inch (5 mm).
2. Tensile Strength at 73 deg F (23 deg C), According to ASTM D 638: 12,000 psi (82.7 MPa).
3. Temperature Range: Minus 40 to plus 185 deg F (Minus 40 to plus 85 deg C).
4. Color: Black.

B. Plenum-Rated Cable Ties: Self extinguishing, UV stabilized, one piece, self locking.

1. Minimum Width: 3/16 inch (5 mm).
2. Tensile Strength at 73 deg F (23 deg C), According to ASTM D 638: 7000 psi (48.2 MPa).
3. UL 94 Flame Rating: 94V-0.
4. Temperature Range: Minus 50 to plus 284 deg F (Minus 46 to plus 140 deg C).
5. Color: Black.

2.10 MISCELLANEOUS IDENTIFICATION PRODUCTS

A. Paint: Comply with requirements in painting Sections for paint materials and application requirements. Select paint system applicable for surface material and location (exterior or interior).

B. Fasteners for Labels and Signs: Self-tapping, stainless-steel screws or stainless-steel machine screws with nuts and flat and lock washers.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Verify identity of each item before installing identification products.

B. Location: Install identification materials and devices at locations for most convenient viewing without interference with operation and maintenance of equipment.

C. Apply identification devices to surfaces that require finish after completing finish work.

D. Self-Adhesive Identification Products: Clean surfaces before application, using materials and methods recommended by manufacturer of identification device.

E. Attach signs and plastic labels that are not self-adhesive type with mechanical fasteners appropriate to the location and substrate.

F. Attach plastic raceway and cable labels that are not self-adhesive type with clear vinyl tape with adhesive appropriate to the location and substrate.

G. System Identification Color-Coding Bands for Raceways and Cables: Each color-coding band shall completely encircle cable or conduit. Place adjacent bands of two-color markings in contact, side by side. Locate bands at changes in direction, at penetrations of walls and floors, at 50-foot (15-m) maximum intervals in straight runs, and at 25-foot (7.6-m) maximum intervals in congested areas.

H. Aluminum Wraparound Marker Labels and Metal Tags: Secure tight to surface of conductor or cable at a location with high visibility and accessibility.

I. Cable Ties: For attaching tags. Use general-purpose type, except as listed below:

1. Outdoors: UV-stabilized nylon.
2. In Spaces Handling Environmental Air: Plenum rated.

J. Underground-Line Warning Tape: During backfilling of trenches install continuous underground-line warning tape directly above line at 6 to 8 inches (150 to 200 mm) below finished grade. Use multiple tapes where width of multiple lines installed in a common trench or concrete envelope exceeds 16 inches (400 mm) overall.

K. Painted Identification: Comply with requirements in painting Sections for surface preparation and paint application.

3.2 IDENTIFICATION SCHEDULE

A. Concealed Raceways, Duct Banks, More Than 600 V, within Buildings: Tape and stencil 4-inch- (100-mm-) wide black stripes on 10-inch (250-mm) centers over orange background that extends full length of raceway or duct and is 12 inches (300 mm) wide. Stencil legend "DANGER CONCEALED HIGH VOLTAGE WIRING" with 3-inch- (75-mm-) high black letters on 20-inch (500-mm) centers. Stop stripes at legends. Apply to the following finished surfaces:

1. Floor surface directly above conduits running beneath and within 12 inches (300 mm) of a floor that is in contact with earth or is framed above unexcavated space.
2. Wall surfaces directly external to raceways concealed within wall.
3. Accessible surfaces of concrete envelope around raceways in vertical shafts, exposed in the building, or concealed above suspended ceilings.

B. Accessible Raceways, Armored and Metal-Clad Cables, More Than 600 V: Self-adhesive vinyl labels. Install labels at 10-foot (3-m) maximum intervals.

C. Accessible Raceways and Cables within Buildings: Identify the covers of each junction and pull box of the following systems with self-adhesive vinyl labels with the wiring system legend and system voltage. System legends shall be as follows:

1. Emergency Power.
2. Power.

D. Power-Circuit Conductor Identification, 600 V or Less: For conductors in vaults, pull and junction boxes, manholes, and handholes, use color-coding conductor tape to identify the phase.

1. Color-Coding for Phase Identification, 600 V or Less: Use colors listed below for ungrounded service, feeder, and branch-circuit conductors.

a. Color shall be factory applied or field applied for sizes larger than No. 8 AWG, if authorities having jurisdiction permit.
b. Colors for 208/120-V Circuits:

1) Phase A: Black.
2) Phase B: Red.
3) Phase C: Blue.

c. Colors for 480/277-V Circuits:

1) Phase A: Brown.
2) Phase B: Orange.
3) Phase C: Yellow.

d. Field-Applied, Color-Coding Conductor Tape: Apply in half-lapped turns for a minimum distance of 6 inches (150 mm) from terminal points and in boxes where splices or taps are made. Apply last two turns of tape with no tension to prevent possible unwinding. Locate bands to avoid obscuring factory cable markings.

E. Power-Circuit Conductor Identification, More than 600 V: For conductors in vaults, pull and junction boxes, manholes, and handholes, use nonmetallic plastic tag holder with adhesive-backed phase tags, and a separate tag with the circuit designation.

F. Install instructional sign including the color-code for grounded and ungrounded conductors using adhesive-film-type labels.

G. Control-Circuit Conductor Identification: For conductors and cables in pull and junction boxes, manholes, and handholes, use self-adhesive, self-laminating polyester labels with the conductor or cable designation, origin, and destination.

H. Control-Circuit Conductor Termination Identification: For identification at terminations provide heat-shrink preprinted tubes with the conductor designation.

I. Conductors to Be Extended in the Future: Attach marker tape to conductors and list source.

J. Auxiliary Electrical Systems Conductor Identification: Identify field-installed alarm, control, and signal connections.

1. Identify conductors, cables, and terminals in enclosures and at junctions, terminals, and pull points. Identify by system and circuit designation.
2. Use system of marker tape designations that is uniform and consistent with system used by manufacturer for factory-installed connections.
3. Coordinate identification with Project Drawings, manufacturer's wiring diagrams, and the Operation and Maintenance Manual.

K. Locations of Underground Lines: Identify with underground-line warning tape for power, lighting, communication, and control wiring and optical fiber cable.

1. Limit use of underground-line warning tape to direct-buried cables.
2. Install underground-line warning tape for both direct-buried cables and cables in raceway.

L. Workspace Indication: Install floor marking tape to show working clearances in the direction of access to live parts. Workspace shall be as required by NFPA 70 and 29 CFR 1926.403 unless otherwise indicated. Do not install at flush-mounted panelboards and similar equipment in finished spaces.

M. Warning Labels for Indoor Cabinets, Boxes, and Enclosures for Power and Lighting: Self-adhesive warning labels.

1. Comply with 29 CFR 1910.145.
2. Identify system voltage with black letters on an orange background.
3. Apply to exterior of door, cover, or other access.
4. For equipment with multiple power or control sources, apply to door or cover of equipment including, but not limited to, the following:

    a. Controls with external control power connections.

N. Operating Instruction Signs: Install instruction signs to facilitate proper operation and maintenance of electrical systems and items to which they connect. Install instruction signs with approved legend where instructions are needed for system or equipment operation.

O. Equipment Identification Labels: On each unit of equipment, install unique designation label that is consistent with wiring diagrams, schedules, and the Operation and Maintenance Manual. Apply labels to disconnect switches and protection equipment, central or master units, control panels, control stations, terminal cabinets, and racks of each system. Systems include power, lighting, control, communication, signal, monitoring, and alarm systems unless equipment is provided with its own identification.

1. Labeling Instructions:

    a. Indoor Equipment: Engraved, laminated acrylic or melamine label. Unless otherwise indicated, provide a single line of text with 1/2-inch- (13-mm-) high letters on 1-1/2-inch- (38-mm-) high label; where two lines of text are required, use labels 2 inches (50 mm) high.
    b. Outdoor Equipment: Engraved, laminated acrylic or melamine label. Stenciled legend 4 inches (100 mm) high.

c. Elevated Components: Increase sizes of labels and letters to those appropriate for viewing from the floor.
d. Unless provided with self-adhesive means of attachment, fasten labels with appropriate mechanical fasteners that do not change the NEMA or NRTL rating of the enclosure.

2. Equipment to Be Labeled:

a. Panelboards: Typewritten directory of circuits in the location provided by panelboard manufacturer. Panelboard identification shall be engraved, laminated acrylic or melamine label.
b. Enclosures and electrical cabinets.
c. Access doors and panels for concealed electrical items.
d. Switchgear.
e. Switchboards.
f. Transformers: Label that includes tag designation shown on Drawings for the transformer, feeder, and panelboards or equipment supplied by the secondary.
g. Substations.
h. Emergency system boxes and enclosures.
i. Enclosed switches.
j. Enclosed circuit breakers.
k. Variable-speed controllers.
l. Push-button stations.
m. Battery-inverter units.
n. Battery racks.
o. Monitoring and control equipment.
p. Cover plates and pull box covers.

END OF SECTION

SECTION 260573 - SHORT CIRCUIT, COORDINATION AND ARC FLASH STUDIES

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. This Section includes computer-based, fault-current, overcurrent protective device coordination studies and arc flash study. Protective devices shall be set based on results of the protective device coordination study.

1. Coordination of series-rated devices is permitted where indicated on Drawings.

1.3 DEFINITIONS

A. 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. Existing to remain items shall remain functional throughout the construction period.

B. Field Adjusting Agency: An independent electrical testing agency with full-time employees and the capability to adjust devices and conduct testing indicated and that is a member company of NETA.

C. One-Line Diagram: A diagram that shows, by means of single lines and graphic symbols, the course of an electric circuit or system of circuits and the component devices or parts used therein.

D. Power System Analysis Software Developer: An entity that commercially develops, maintains, and distributes computer software used for power system studies.

E. Power System Analysis Specialist: Professional engineer in charge of performing the study and documenting recommendations, licensed in the state where Project is located.

F. Protective Device: A device that senses when an abnormal current flow exists and then removes the affected portion of the circuit from the system.

G. SCCR: Short-circuit current rating.

H. Service: The conductors and equipment for delivering electric energy from the serving utility to the wiring system of the premises served.

I. Single-Line Diagram: See "One-Line Diagram."

1.4 ACTION SUBMITTALS

A. COORDINATION STUDIES

1. Product Data: For computer software program to be used for studies.
2. Other Action Submittals: The following submittals shall be made after the approval process for system protective devices has been completed. Submittals may be in digital form if requested by the architect/engineer.
3. Coordination-study input data, including completed computer program input data sheets.
4. Study and Equipment Evaluation Reports.
5. Coordination-Study Report.

B. SHORT CURCUIT STUDIES

1. For computer software program to be used for studies.
2. Submit the following after the approval of system protective devices submittals. Submittals shall be in digital form.

    a. Short-circuit study input data, including completed computer program input data sheets.
    b. Short-circuit study and equipment evaluation report; signed, dated, and sealed by a qualified professional engineer.
    c. Revised one-line diagram, reflecting field investigation results and results of short-circuit study.

C. ARC FLASH STUDIES

1. Product Data: For computer software program to be used for studies.
2. Study Submittals: Submit the following submittals after the approval of system protective devices submittals. Submittals shall be in digital form:
3. Arc-flash study input data, including completed computer program input data sheets.
4. Arc-flash study report; signed, dated, and sealed by Power Systems Analysis Specialist.

1.5 INFORMATIONAL SUBMITTALS

A. Qualification Data: For power systems analysis specialist.

B. Product Certificates: For coordination-study, fault-current-study computer software programs, certifying compliance with IEEE 399.

C. Product Certificates: For arc-flash hazard analysis software, certifying compliance with IEEE 1584 and NFPA 70E.

D. Power Systems Analysis Software Developer

E. Qualification Data: For Field Adjusting Agency

1.6 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For overcurrent protective devices to include in emergency, operation, and maintenance manuals.

1. The following are from the Coordination Study Report:

a. Final one-line diagram.
b. Final protective device coordination study.
c. Coordination study data files.
d. List of all protective device settings.
e. Time-current coordination curves.
f. Power system data.

2. The following are from the Short-Circuit Study Report:

a. Final one-line diagram.
b. Final Short-Circuit Study Report.
c. Short-circuit study data files.
d. Power system data

3. The following are from the Arc Flash Hazard Report:

a. Provide maintenance procedures in equipment manuals according to requirements in NFPA 70E.
b. Operation and Maintenance Procedures: In addition to items specified in Section 017823 "Operation and Maintenance Data," provide maintenance procedures for use by Owner's personnel that comply with requirements in NFPA 70E.

1.7 QUALITY ASSURANCE

A. Studies shall use computer programs that are distributed nationally and are in wide use. Software algorithms shall comply with requirements of standards and guides specified in this Section. Manual calculations are not acceptable.

B. Power Systems Analysis Specialist Qualifications: An entity experienced in the application of computer software used for studies, having performed successful studies of similar magnitude on electrical distribution systems using similar devices.

1. Professional engineer, licensed in the state where Project is located, shall be responsible for the study. All elements of the study shall be performed under the direct supervision and control of engineer.

C. Comply with IEEE 242 for short-circuit currents and coordination time intervals.

D. Comply with IEEE 399 for general study procedures.

E. Field Adjusting Agency Qualifications:

1. Employer of a NETA ETT-Certified Technician Level III or NICET Electrical Power Testing Level III certification responsible for all field adjusting of the Work.
2. A member company of NETA.
3. Acceptable to authorities having jurisdiction

PART 2 - PRODUCTS

2.1 COMPUTER SOFTWARE DEVELOPERS

A. Computer Software Developers: Subject to compliance with requirements, provide products by one of the following:

1. Operation Technology, Inc. (ETAP)
2. SKM Systems Analysis, Inc.(Power Tools)

2.2 COMPUTER SOFTWARE PROGRAM REQUIREMENTS

A. Comply with IEEE 399, IEEE 1584 and NFPA 70E.

B. Analytical features of fault-current-study, device coordination study and arc flash study computer software program shall include "mandatory," "very desirable," and "desirable" features as listed in IEEE 399.

C. Computer software program shall be capable of plotting and diagramming time-current-characteristic curves as part of its output. Computer software program shall report device settings and ratings of all overcurrent protective devices and shall demonstrate selective coordination by computer-generated, time-current coordination plots.

1. Optional Features:

a. Arcing faults.
b. Simultaneous faults.
c. Explicit negative sequence.
d. Mutual coupling in zero sequence.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine Project overcurrent protective device submittals for compliance with electrical distribution system coordination requirements and other conditions affecting performance. Devices to be coordinated are indicated on Drawings.

1. Proceed with coordination study only after relevant equipment submittals have been assembled. Overcurrent protective devices that have not been submitted and approved prior to coordination study may not be used in study.

3.2 POWER SYSTEM DATA

A. Gather and tabulate the following input data to support coordination study:

1. Product Data for overcurrent protective devices specified in other electrical Sections and involved in overcurrent protective device coordination studies. Use equipment designation tags that are consistent with electrical distribution system diagrams, overcurrent protective device submittals, input and output data, and recommended device settings.
2. Impedance of utility service entrance.
3. Electrical Distribution System Diagram: In hard-copy and electronic-copy formats, showing the following:

    a. Circuit-breaker and fuse-current ratings and types.
    b. Relays and associated power and current transformer ratings and ratios.
    c. Transformer kilovolt amperes, primary and secondary voltages, connection type, impedance, and X/R ratios.
    d. Generator kilovolt amperes, size, voltage, and source impedance.
    e. Cables: Indicate conduit material, sizes of conductors, conductor material, insulation, and length.
    f. Busway ampacity and impedance.
    g. Motor horsepower and code letter designation according to NEMA MG 1.

4. Data sheets to supplement electrical distribution system diagram, cross-referenced with tag numbers on diagram, showing the following:

    a. Special load considerations, including starting inrush currents and frequent starting and stopping.
    b. Transformer characteristics, including primary protective device, magnetic inrush current, and overload capability.
    c. Motor full-load current, locked rotor current, service factor, starting time, type of start, and thermal-damage curve.
    d. Generator thermal-damage curve.
    e. Ratings, types, and settings of utility company's overcurrent protective devices.

f. Special overcurrent protective device settings or types stipulated by utility company.
g. Time-current-characteristic curves of devices indicated to be coordinated.
h. Manufacturer, frame size, interrupting rating in amperes rms symmetrical, ampere or current sensor rating, long-time adjustment range, short-time adjustment range, and instantaneous adjustment range for circuit breakers.
i. Manufacturer and type, ampere-tap adjustment range, time-delay adjustment range, instantaneous attachment adjustment range, and current transformer ratio for overcurrent relays.
j. Panelboards, switchboards, motor-control center ampacity, and interrupting rating in amperes rms symmetrical.

3.3 FAULT-CURRENT STUDY

A. Calculate the maximum available short-circuit current in amperes rms symmetrical at circuit-breaker positions of the electrical power distribution system. The calculation shall be for a current immediately after initiation and for a three-phase bolted short circuit at each of the following:

1. Switchgear and switchboard bus.
2. Medium-voltage controller.
3. Motor-control center.
4. Distribution panelboard.
5. Branch circuit panelboard.

B. Study electrical distribution system from normal and alternate power sources throughout electrical distribution system for Project. Include studies of system-switching configurations and alternate operations that could result in maximum fault conditions.

C. Calculate momentary and interrupting duties on the basis of maximum available fault current according to IEEE 551.

D. Calculations to verify interrupting ratings of overcurrent protective devices shall comply with IEEE 141 and IEEE 242.

1. Transformers:

a. ANSI C57.12.10.
b. ANSI C57.12.22.
c. ANSI C57.12.40.
d. IEEE C57.12.00.
e. IEEE C57.96.

2. Medium-Voltage Circuit Breakers: IEEE C37.010.
3. Low-Voltage Circuit Breakers: IEEE 1015 and IEEE C37.20.1.
4. Low-Voltage Fuses: IEEE C37.46.

E. Study Report:

1. Show calculated X/R ratios and equipment interrupting rating (1/2-cycle) fault currents on electrical distribution system diagram.
2. Show interrupting (5-cycle) and time-delayed currents (6 cycles and above) on medium-voltage breakers as needed to set relays and assess the sensitivity of overcurrent relays.

F. Equipment Evaluation Report:

1. For 600-V overcurrent protective devices, ensure that interrupting ratings are equal to or higher than calculated 1/2-cycle symmetrical fault current.
2. For devices and equipment rated for asymmetrical fault current, apply multiplication factors listed in the standards to 1/2-cycle symmetrical fault current.
3. Verify adequacy of phase conductors at maximum three-phase bolted fault currents; verify adequacy of equipment grounding conductors and grounding electrode conductors at maximum ground-fault currents. Ensure that short-circuit withstand ratings are equal to or higher than calculated 1/2-cycle symmetrical fault current.

3.4 COORDINATION STUDY

A. Perform coordination study using approved computer software program. Prepare a written report using results of fault-current study. Comply with IEEE 399.

1. Calculate the maximum and minimum 1/2-cycle short-circuit currents.
2. Calculate the maximum and minimum interrupting duty (5 cycles to 2 seconds) short-circuit currents.
3. Calculate the maximum and minimum ground-fault currents.

B. Comply with IEEE 141 recommendations for fault currents and time intervals.

C. Transformer Primary Overcurrent Protective Devices:

1. Device shall not operate in response to the following:

a. Inrush current when first energized.
b. Self-cooled, full-load current or forced-air-cooled, full-load current, whichever is specified for that transformer.
c. Permissible transformer overloads according to IEEE C57.96 if required by unusual loading or emergency conditions.

2. Device settings shall protect transformers according to IEEE C57.12.00, for fault currents.

D. Motors served by voltages more than 600 V shall be protected according to IEEE 620.

E. Conductor Protection: Protect cables against damage from fault currents according to ICEA P-32-382, ICEA P-45-482, and conductor melting curves in IEEE 242. Demonstrate that equipment withstands the maximum short-circuit current for a time equivalent to the tripping time of the primary relay protection or total clearing time of the

fuse. To determine temperatures that damage insulation, use curves from cable manufacturers or from listed standards indicating conductor size and short-circuit current.

F. Coordination-Study Report: Prepare a written report indicating the following results of coordination study:

1. Tabular Format of Settings Selected for Overcurrent Protective Devices:

   a. Device tag.
   b. Relay-current transformer ratios; and tap, time-dial, and instantaneous-pickup values.
   c. Circuit-breaker sensor rating; and long-time, short-time, and instantaneous settings.
   d. Fuse-current rating and type.
   e. Ground-fault relay-pickup and time-delay settings.

2. Coordination Curves: Prepared to determine settings of overcurrent protective devices to achieve selective coordination. Graphically illustrate that adequate time separation exists between devices installed in series, including power utility company's upstream devices. Prepare separate sets of curves for the switching schemes and for emergency periods where the power source is local generation. Show the following information:

   a. Device tag.
   b. Voltage and current ratio for curves.
   c. Three-phase and single-phase damage points for each transformer.
   d. No damage, melting, and clearing curves for fuses.
   e. Cable damage curves.
   f. Transformer inrush points.
   g. Maximum fault-current cutoff point.

G. Completed data sheets for setting of overcurrent protective devices.

3.5 ARC-FLASH HAZARD ANALYSIS

A. Comply with NFPA 70E and its Annex D for hazard analysis study.

B. Preparatory Studies: Perform the Short-Circuit and Protective Device Coordination studies prior to starting the Arc-Flash Hazard Analysis.

1. Short-Circuit Study Output: As specified in "Short-Circuit Study Output Reports" Paragraph in "Short-Circuit Study Report Contents" Article in Section 260573.
2. Coordination Study Report Contents: As specified in "Coordination Study Report Contents" Article in Section 260573.

C. Calculate maximum and minimum contributions of fault-current size.

1. Maximum calculation shall assume a maximum contribution from the utility and shall assume motors to be operating under full-load conditions.
2. Calculate arc-flash energy at 85 percent of maximum short-circuit current according to IEEE 1584 recommendations.
3. Calculate arc-flash energy at 38 percent of maximum short-circuit current according to NFPA 70E recommendations.
4. Calculate arc-flash energy with the utility contribution at a minimum and assume no motor contribution.

D. Calculate the arc-flash protection boundary and incident energy at locations in electrical distribution system where personnel could perform work on energized parts.

E. Include medium-and low-voltage equipment locations, except equipment rated 240 V ac or less fed from transformers less than 125 kVA.

F. Calculate the limited, restricted, and prohibited approach boundaries for each location.

G. Incident energy calculations shall consider the accumulation of energy over time when performing arc-flash calculations on buses with multiple sources. Iterative calculations shall take into account the changing current contributions, as the sources are interrupted or decremented with time. Fault contribution from motors and generators shall be decremented as follows:

1. Fault contribution from induction motors shall not be considered beyond three to five cycles.
2. Fault contribution from synchronous motors and generators shall be decayed to match the actual decrement of each as closely as possible (for example, contributions from permanent magnet generators will typically decay from 10 per unit to three per unit after 10 cycles).

H. Arc-flash energy shall generally be reported for the maximum of line or load side of a circuit breaker. However, arc-flash computation shall be performed and reported for both line and load side of a circuit breaker as follows:

1. When the circuit breaker is in a separate enclosure.
2. When the line terminals of the circuit breaker are separate from the work location.

I. Base arc-flash calculations on actual overcurrent protective device clearing time. Cap maximum clearing time at two seconds based on IEEE 1584, Section B.1.2.

3.6 ARC-FLASH STUDY REPORT CONTENT

A. Executive summary of study findings.

B. Study descriptions, purpose, basis, and scope. Include case descriptions, definition of terms, and guide for interpretation of results.

C. One-line diagram, showing the following:

1. Protective device designations and ampere ratings.
2. Conductor types, sizes, and lengths.
3. Transformer kilovolt ampere (kVA) and voltage ratings, including derating factors and environmental conditions.
4. Motor and generator designations and kVA ratings.
5. Switchgear, switchboard, motor-control center, panelboard designations, and ratings.

D. Study Input Data: As described in "Power System Data" Article.

E. Short-Circuit Study Output Data: As specified in "Short-Circuit Study Output Reports" Paragraph in "Short-Circuit Study Report Contents" Article in Section 260573.13 "Short-Circuit Studies."

F. Protective Device Coordination Study Report Contents: As specified in "Coordination Study Report Contents" Article in Section 260573.16 "Coordination Studies."

G. Arc-Flash Study Output Reports:

1. Interrupting Duty Report: Three-phase and unbalanced fault calculations, showing the following for each equipment location included in the report:

    a. Voltage.
    b. Calculated symmetrical fault-current magnitude and angle.
    c. Fault-point X/R ratio.
    d. No AC Decrement (NACD) ratio.
    e. Equivalent impedance.
    f. Multiplying factors for 2-, 3-, 5-, and 8-cycle circuit breakers rated on a symmetrical basis.
    g. Multiplying factors for 2-, 3-, 5-, and 8-cycle circuit breakers rated on a total basis.

H. Incident Energy and Flash Protection Boundary Calculations:

1. Arcing fault magnitude.
2. Protective device clearing time.
3. Duration of arc.
4. Arc-flash boundary.
5. Restricted approach boundary.
6. Limited approach boundary.
7. Working distance.
8. Incident energy.
9. Hazard risk category.
10. Recommendations for arc-flash energy reduction.

I. Fault study input data, case descriptions, and fault-current calculations including a definition of terms and guide for interpretation of computer printout.

3.7 ARC-FLASH WARNING LABELS

A. Comply with requirements in Section 260553 "Identification for Electrical Systems" for self-adhesive equipment labels. Produce a 3.5-by-5-inch (76-by-127-mm) self-adhesive equipment label for each work location included in the analysis.

B. Label shall have an orange header with the wording, "WARNING, ARC-FLASH HAZARD," and shall include the following information taken directly from the arc-flash hazard analysis:

1. Location designation.
2. Nominal voltage.
3. Protection boundaries.
    a. Arc-flash boundary.
    b. Restricted approach boundary.
    c. Limited approach boundary.
4. Arc flash PPE category.
5. Required minimum arc rating of PPE in Cal/cm squared.
6. Available incident energy.
7. Working distance.
8. Available fault current
9. Engineering report number, revision number, and issue date.

C. Labels shall be machine printed, with no field-applied markings.

D. Apply a label to each piece of equipment addresses by the study.

END OF SECTION

SECTION 261219 - PAD-MOUNTED LIQUID-FILLED MEDIUM-VOLTAGE TRANSFORMERS

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. This Section includes the following types of transformers with medium-voltage primaries:

1. Pad-mounted, liquid-filled transformers.

1.3 DEFINITIONS

A. NETA ATS: Acceptance Testing Specification.

B. BIL: Basic Impulse Insulation Level.

C. Bushing: An insulating structure including a central conductor, or providing a central passage for a conductor, with provision for mounting on a barrier, conducting or otherwise, for the purpose of insulating the conductor from the barrier and conducting current from one side of the barrier to the other.

D. Bushing Elbow: An insulated device used to connect insulated conductors to separable insulated connectors on dead-front, pad-mounted transformers and to provide a fully insulated connection. This is also called an "elbow connector."

E. Bushing Insert: That component of a separable insulated connector that is inserted into a bushing well to complete a dead-front, load break or no-load break, separable insulated connector (bushing).

F. Bushing Well: A component of a separable insulated connector, either permanently welded or clamped to an enclosure wall or barrier, having a cavity that receives a replaceable component (bushing insert) to complete the separable insulated connector (bushing).

G. Elbow Connector: See "bushing elbow" above.

1.4 ACTION SUBMITTALS

A. Product Data: Manufacturer’s technical data indicating rated nameplate data, capacities, weights, dimensions, minimum clearances, installed devices, fuses and features,

location of each field connection, and performance for each type and size of transformer indicated.

B. Shop Drawings: Diagram for power, signal and control wiring.

C. Type and size of fuses shall be verified by the coordination study.

1.5 INFORMATIONAL SUBMITTALS

A. Coordination Drawings: Floor plans, drawn to scale (1/4”=1’-0”) on which the following items are shown and coordinated with each other, based on input from installers of the items involved:

1. Underground primary and secondary conduit stub-up location.
2. Dimensioned concrete base, outline of transformer, and required clearances.
3. Ground rod and grounding cable locations.

B. Manufacturer Seismic Qualification Certification: Submit certification that transformer assembly and components will withstand seismic forces defined in Section 260548 "Vibration and Seismic Controls for Electrical Systems." Include the following:

1. Basis for Certification: Indicate whether withstand certification is based on actual test of assembled components or on calculation.

a. The term "withstand" means "the unit will remain in place without separation of any parts from the device when subjected to the seismic forces specified."

2. Seismic Importance Factor: 1.25.
3. Deflection Amplification Factor: 5.
4. Response Modification Coefficient: 5.
5. Dimensioned Outline Drawings of Equipment Unit: Identify center of gravity and locate and describe mounting and anchorage provisions.
6. Detailed description of equipment anchorage devices on which the certification is based and their installation requirements.

C. Qualification Data: For testing agency.

D. Source quality-control test reports. Certified written reports signed by factory testing engineer or technician including their name and review comments from the testing engineer. Each report shall include date, location of tests and actual test data. Submit within two (2) weeks of factory tests prior to shipment of the unit.

E. Field quality-control test reports. Submit within two (2) weeks of completion of field tests.

F. Follow-up service reports.

1.6 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For transformer and accessories to include in emergency, operation, and maintenance manuals.

1.7 QUALITY ASSURANCE

A. If alternate manufacturer of products other than what are specified in this section are submitted, all necessary documents not limited to cut sheets, technical information, test reports from recognized testing labs and factory test reports shall be submitted to the satisfaction of the owner/engineer to ensure quality and conformance to the specifications. Additional testing shall be undertaken if it is concluded by the owner/engineer that the submitted test reports are either insufficient or do not include all tests necessary for product acceptance. The tests shall be conducted by a recognized lab acceptable to the owner/engineer and all tests shall be witnessed by owner's/engineer's personnel. All testing procedures and test results shall be satisfactory to the owner/engineer. Contractor shall be responsible for arranging the tests, for transportation, food and lodging for minimum of one owner's/engineer's representative to witness the test at the testing lab. Include all costs for the above in the bid.

B. Contractor shall ensure that the manufacturer has a minimum of 15 years experience in the production of medium voltage transformers similar to the type and size specified in this project.

C. Manufacturer shall have ISO 9001 and 9002 Certification.

D. Manufacturer shall have ability to readily provide replacement parts for a minimum period of ten years, from the date of completion of the project. Provide a letter from the manufacturer confirming the above statement.

E. Transformer shall be manufactured within 12 months of installation and shall be provided with a 3 year warranty.

F. Electrical Components, Devices, Accessories including complete assembly: UL Listed and labeled as defined in NFPA 70/CEC, Article 100.

G. Transformer shall comply with:

1. Institute of Electrical and Electronic Engineers, IEEE C2, IEEE C57.12.10, IEEE C57.12.70, and IEEE C57.12.80.
2. American National Standard Institute, ANSI C57.12.28.
3. National Fire Protection Association (NFPA)/CEC.
4. State of California Code of Regulations (CCR).

H. Testing Agency Qualifications:

1. Testing agency shall be an independent company with the experience and capability to conduct field testing indicated; shall have been a member of International Testing Association (NETA) for a minimum of last ten (10) years.
2. The company shall have permanent in-house testing engineers and technicians on its staff
3. Testing company shall be located with 50 miles radius of the project.
4. Testing Agency's Field Supervisor: Currently certified by NETA to supervise on-site testing to supervise on-site testing specified in Part 3.
5. Filed testing technician and supervisor shall have minimum ten (10) years experience in field testing of medium voltage transformers similar to the type and rating specified on this project.

I. Product Options: Drawings indicate size, profiles, and dimensional requirements of transformers and are based on the specific system indicated.

1.8 DELIVERY, STORAGE, AND HANDLING

A. Store transformers protected from weather and dust, so condensation will not form on or in units. Provide temporary heating according to manufacturer's written instructions.

1.9 PROJECT CONDITIONS

A. Service Conditions: IEEE C37.121, usual service conditions except for the following:

1. Exposure to significant solar radiation.
2. Altitudes above 3300 feet (1000 m).
3. Exposure to fumes, vapors, or dust.
4. Exposure to explosive environments.
5. Exposure to hot and humid climate or to excessive moisture, including steam, salt spray, and dripping water.
6. Exposure to seismic shock or to abnormal vibration, shock, or tilting.
7. Exposure to excessively high or low temperatures.
8. Unusual transportation or storage conditions.
9. Unusual grounding-resistance conditions.
10. Unusual space limitations.

1.10 COORDINATION

A. Coordinate size and location of concrete bases. Cast anchor-bolt inserts into bases. Concrete, reinforcement, and formwork requirements are specified with concrete.

B. Coordinate installation of louvers, doors, spill retention areas, and sumps. Coordinate installation so no piping or conduits are installed in space allocated for medium-voltage transformers except those directly associated with transformers.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Square D; Schneider Electric
2. Cooper Industries; Cooper Power Systems Division.
3. Eaton-Cutler-Hammer.
4. GE Electrical Distribution & Control.
5. Hammond Manufacturing; Transformer Group.
6. Siemens Energy & Automation, Inc..
7. ABB

2.2 PAD-MOUNTED, LIQUID-FILLED TRANSFORMERS

A. Description: ANSI C57.12.13, IEEE C57.12.00, pad-mounted, 2-winding transformers. Stainless-steel tank base, cabinet, and sills.

B. Capacities and Characteristics:

1. Power Rating (kVA): per plans.
2. Voltage Ratings: per plans

C. Minimum Tested Impedance (Percent at 85 deg C): per manufacturer.

D. Insulating Liquid: Less flammable, edible-seed-oil based, and UL listed as complying with NFPA 70 requirements for fire point of not less than 300 deg C when tested according to ASTM D 92. Liquid shall be biodegradable and nontoxic.

E. Insulating Liquid: Less flammable, silicone-based dielectric, and UL listed as complying with NFPA 70 requirements for fire point of not less than 300 deg C when tested according to ASTM D 92. Liquid shall have low toxicity and be nonhazardous.

F. Insulation Temperature Rise: 65 deg C when operated at rated kVA output in a 40 deg C ambient temperature. Transformer shall be rated to operate at rated kilovolt ampere in an average ambient temperature of 30 deg C over 24 hours with a maximum ambient temperature of 40 deg C without loss of service life expectancy.

G. Winding material: Copper

H. Winding Connections: The connection of windings and terminal markings shall comply with IEEE C57.12.70.

I. Basic Impulse Level: 95 kV.

J. Efficiency: Comply with 10 CFR 431, Subpart K.

K. Full-Capacity Voltage Taps: Four 2.5 percent taps, 2 above and 2 below rated high voltage; with externally operable tap changer for de-energized use and with position indicator and padlock hasp.

L. High-Voltage Switch: 400A, make-and-latch rating of 10-kA RMS, symmetrical, arranged for radial feed with 3-phase, 2-position, gang-operated, load-break switch that is oil immersed in transformer tank with hook-stick operating handle in primary compartment.

M. Primary Fuses: 150-kV fuse assembly with fuses complying with IEEE C37.47. Rating of current-limiting fuses shall be 50-kA RMS at specified system voltage.

1. Current-limiting type in dry-fuse holder wells, mechanically interlocked with liquid-immersed switch in transformer tank to prevent disconnect under load.
2. Bay-O-Net liquid-immersed fuses in series with liquid-immersed current-limiting fuses. Bay-O-Net fuses shall be externally replaceable without opening transformer tank.

N. Surge Arresters: Distribution class, one for each primary phase; complying with IEEE C62.11 and NEMA LA 1; support from tank wall within high-voltage compartment. Transformers shall have three arresters for radial-feed circuits.

O. High-Voltage Terminations and Equipment: Dead front with universal-type bushing wells for dead-front bushing-well inserts, complying with IEEE 386 and including the following:

1. Bushing-Well Inserts: One for each high-voltage bushing well.
2. Surge Arresters: Dead-front, elbow-type, metal-oxide-varistor units. Provide separate bushing for each arrester.
3. Parking Stands: One for each high-voltage bushing well.
4. Portable Insulated Bushings: Arranged for parking insulated, high-voltage, load-break cable terminators; one for each primary feeder conductor terminating at transformer.

P. Low Voltage Terminations and Equipment: Molded epoxy, with blade type spade terminals with NEMA standard hole spacing arranged for vertical take off. Low-voltage neutral shall be an insulated bushing, grounded to tank by a removable ground strap. Location as shown on Drawings. Size of phase and neutral terminations shall be based on the load side conductors shown on the drawings.

1. Drain Valve: 1 inch (25 mm), with sampling device.
2. Dial-type thermometer.
3. Liquid-level gage.
4. Pressure-vacuum gage.
5. Pressure Relief Device: Self-sealing with an indicator.
6. Mounting provisions for low-voltage current transformers.
7. Mounting provisions for low-voltage potential transformers.
8. Busway terminal connection at low-voltage compartment.
9. Alarm contacts for gages and thermometer listed above.

Q. Enclosure: Enclosure shall be made of stainless steel with front accessible double doors padlockable. It shall have separate compartments for high voltage and low voltage terminations. Enclosure exterior finish shall be factory applied powder coated standard munsel green finish over a rust inhibiting primer on treated metal surface. Furnish a minimum of three (3) years warranty against corrosion. Comply with IEEE C57.12.28 for pad-mounted enclosures that contain energized electrical equipment in excess of 600 V that may be exposed to the public.

R. Tap Changer: External handle, for de-energized operation.

2.3 CONTROL NETWORK

A. Controllers: Support serial MS/TP and Ethernet IP communications, and able to communicate directly via RS-485 serial networks and Ethernet 10Base-T networks as a native device.

2.4 IDENTIFICATION DEVICES

A. Nameplates: Engraved, laminated-plastic or metal nameplate for each transformer, mounted with corrosion-resistant screws. Nameplates and label products are specified in Section 260553 "Identification for Electrical Systems." Provide a separate name plate on the inside door indicating fuse size and type.

2.5 SOURCE QUALITY CONTROL

A. Factory Tests: Perform design and routine tests according to standards specified for components. Conduct transformer tests according to ANSI C57.12.50.

B. Factory Tests: Perform the following factory-certified tests on each transformer:

1. Resistance measurements of all windings on rated-voltage connection and on tap extreme connections.
2. Ratios on rated-voltage connection and on tap extreme connections.
3. Polarity and phase relation on rated-voltage connection.
4. No-load loss at rated voltage on rated-voltage connection.
5. Excitation current at rated voltage on rated-voltage connection.
6. Impedance and load loss at rated current on rated-voltage connection and on tap extreme connections.
7. Applied potential.
8. Induced potential.
9. Temperature Test: Test at lowest kilovolt-ampere rating and highest kilovolt-ampere rating.

    a. Temperature test is not required if record of temperature test on an essentially duplicate unit is available.

10. Owner will witness all required factory tests. Notify Architect at least 30 days before date of tests and indicate their approximate duration.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas and conditions for compliance with requirements for medium-voltage transformers.

B. Examine roughing-in of conduits and grounding systems to verify the following:

1. Wiring entries comply with layout requirements.
2. Entries are within conduit-entry tolerances specified by manufacturer and no feeders will have to cross section barriers to reach load or line lugs.

C. Examine walls, floors, roofs, and concrete bases for suitable mounting conditions where transformers will be installed.

D. Verify that ground connections are in place and that requirements in Section 260526 "Grounding and Bonding for Electrical Systems" have been met. Maximum ground resistance shall be 5 ohms at location of transformer.

E. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. Install transformers on concrete bases.

1. Anchor transformers to concrete bases according to manufacturer's written instructions, seismic codes at Project, and requirements in Section 260529 "Hangers and Supports for Electrical Systems."
2. Install exterior pad mount transformer on a concrete pad with a pull box underneath. Pull Box shall be open bottom and have concrete barrier separating primary and secondary incoming cable sections. Refer to the mounting detail shown on the drawings. Provide rocks or gravel 1” size at the bottom.
3. Construct concrete bases of dimensions indicated, but not less than 4 inches (100 mm) larger in both directions than supported unit and 4 inches (100 mm) high.
4. Use 4000-psi (20.7-MPa), 28-day compressive-strength concrete and reinforcement as specified in Section 033000 "Cast-in-Place Concrete."
5. Install dowel rods to connect concrete bases to concrete floor. Unless otherwise indicated, install dowel rods on 18-inch (450-mm) centers around full perimeter of base.
6. Install epoxy-coated anchor bolts, for supported equipment, that extend through concrete base and anchor into structural concrete floor.

7. Place and secure anchorage devices. Use supported equipment manufacturer's setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.

B. Maintain minimum clearances and workspace at equipment according to manufacturer's written instructions and NFPA 70.

3.3 IDENTIFICATION

A. Identify field-installed wiring and components and provide warning signs as specified in Section 260553 "Identification for Electrical Systems."

3.4 CONNECTIONS

A. Ground equipment according to Section 260526 "Grounding and Bonding for Electrical Systems."

B. Connect wiring according to Section 260519 "Low-Voltage Electrical Power Conductors and Cables."

C. Terminate medium-voltage cables in incoming section of transformers according to Section 260513 "Medium-Voltage Cables."

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.

3.5 FIELD QUALITY CONTROL

A. Manufacturer's Field Service: Engage a factory-authorized service representative to inspectfield-assembled components and equipment installation, including connections and to assist in field testing. Report results in writing.

B. Testing Agency: Engage an independent qualified testing and inspecting agency to perform the following field tests and inspections and prepare test reports. Refer to section 260080 for additional information on testing.

C. Perform the following field tests and inspections and prepare test reports:

1. After installing transformers but before primary is energized, verify that grounding system at substation is tested at specified value or less.
2. After installing transformers and after electrical circuitry has been energized, test for compliance with requirements.
3. Perform visual and mechanical inspection and electrical test stated in NETA ATS. Certify compliance with test parameters.
4. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.

D. Remove and replace malfunctioning units and retest as specified above.

E. Test Reports: Prepare written reports to record the following:

1. Test procedures used.
2. Test results that comply with requirements.
3. Test results that do not comply with requirements and corrective actions taken to achieve compliance with requirements.

3.6 FOLLOW-UP SERVICE

A. Voltage Monitoring and Adjusting: If requested by Owner, perform the following voltage monitoring after Substantial Completion but not more than six months after Final Acceptance:

1. During a period of normal load cycles as evaluated by Owner, perform seven days of three-phase voltage recording at secondary terminals of each transformer. Use voltmeters with calibration traceable to National Institute of Science and Technology standards and with a chart speed of not less than 1 inch (25 mm) per hour. Voltage unbalance greater than 1 percent between phases, or deviation of any phase voltage from nominal value by more than plus or minus 5 percent during test period, is unacceptable.
2. Corrective Actions: If test results are unacceptable, perform the following corrective actions, as appropriate:

    a. Adjust transformer taps.
    b. Prepare written request for voltage adjustment by electric utility.

3. Retests: After corrective actions have been performed, repeat monitoring until satisfactory results are obtained.
4. Report: Prepare written report covering monitoring and corrective actions performed.

B. Infrared Scanning: After Substantial Completion, but not more than 60 days after Final Acceptance, perform infrared scan of terminations in each transformer.

1. Follow-up Infrared Scanning: Perform an additional follow-up infrared scan of terminations in each transformer 11 months after date of Substantial Completion.
2. Instrument: Use an infrared-scanning device designed to measure temperature or to detect significant deviations from normal values. Provide calibration record for device.
3. Record of Infrared Scanning: Prepare a certified report that identifies transformer checked and that describes infrared-scanning results. Include notation of deficiencies detected, remedial action taken, and observations after remedial action."

3.7 DEMONSTRATION

A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain systems.

END OF SECTION

SECTION 262726 - WIRING DEVICES

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. Receptacles, receptacles with integral GFCI, and associated device plates.
2. Twist-locking receptacles.
3. Isolated-ground receptacles.
4. Tamper-resistant receptacles.
5. Weather-resistant receptacles.
6. Snap switches and wall-box dimmers.
7. Solid-state fan speed controls.
8. Wall-switch and exterior occupancy sensors.
9. Communications outlets.
10. Toggle switches, 120/277 V,20 A.
11. Decorator-style devices, 20 A.
12. Pendant cord-connector devices.
13. Cord and plug sets.
14. Floor service outlets, poke-through assemblies, service poles, and multioutlet assemblies.

1.3 DEFINITIONS

A. AFCI: Arc-fault circuit interrupter.

B. EMI: Electromagnetic interference.

C. GFCI: Ground-fault circuit interrupter.

D. Pigtail: Short lead used to connect a device to a branch-circuit conductor.

E. RFI: Radio-frequency interference.

F. SPD: Surge Protective Device.

G. UTP: Unshielded twisted pair.

1.4 ADMINISTRATIVE REQUIREMENTS

A. Coordination:

1. Receptacles for Owner-Furnished Equipment: Match plug configurations.
2. Cord and Plug Sets: Match equipment requirements.

1.5 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Shop Drawings: List of legends and description of materials and process used for premarking wall plates.

C. Samples: One for each type of device and wall plate specified, in each color specified.

1.6 INFORMATIONAL SUBMITTALS

A. Field quality-control reports.

1.7 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For wiring devices to include in all manufacturers' packing-label warnings and instruction manuals that include labeling conditions.

1.8 MAINTENANCE MATERIAL SUBMITTALS

A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Service/Power Poles: One for every 10.
2. Floor Service-Outlet Assemblies: One for every 10, but no fewer than one.
3. Poke-Through, Fire-Rated Closure Plugs: One for every five floor service outlets installed, but no fewer than two.

1.9 QUALITY ASSURANCE

A. Source Limitations: Obtain each type of wiring device through one source from a single manufacturer. Switches, receptacles and cover plates shall be of the same manufacturer.

B. Comply with National Electrical Manufacturer’s Association (NEMA) standards. Furnish products listed and classified by Underwriter's Laboratories Inc. as suitable for purpose specified and shown.

C. Manufacturer shall have a minimum of ten (10) years experience in the production of wiring devices specified and shall have ISO 9001 and 9002 certifications.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers' Names: Shortened versions (shown in parentheses) of the following manufacturers' names are used in other Part 2 articles:

1. Hubbell Incorporated; Wiring Device-Kellems (Hubbell).
2. Leviton Mfg. Company Inc. (Leviton).
3. Pass & Seymour/Legrand (Pass & Seymour).

B. Source Limitations: Obtain each type of wiring device and associated wall plate from single source from single manufacturer.

2.2 GENERAL WIRING-DEVICE REQUIREMENTS

A. Wiring Devices, Components, and Accessories: UL Listed and labeled and marked for intended location and application.

B. Comply with NFPA 70.

C. All controlled receptacle outlets shall be blue in color.

D. Devices that are manufactured for use with modular plug-in connectors may be substituted under the following conditions:

1. Connectors shall comply with UL2459 and shall be made with stranding building wire.
2. Devices shall comply with the requirements in this Section.

2.3 STRAIGHT-BLADE RECEPTACLES

A. Convenience Receptacles, 125V, 20A: Comply with NEMA WD1, NEMAWD6 Configuration 5-20R, UL498, and FSW-C-596.

1. Products: Subject to compliance with requirements, provide one of the following manufacturers:

a. Hubbell; HBL5361 (single), HBL5362 (duplex).
b. Leviton; 5361 (single), 5362 (duplex).
c. Pass & Seymour; 5361 (single), 5362 (duplex).

2. Description: Grounded, industrial extra heavy duty specifications grade, back- and side-wired, single-piece grounding brass strap with integral ground, impact-

resistant thermoplastic nylon cover and body, smooth face, with separate grounding screw and NEMA 5-20R plug configurations.

B. Tamper-Resistant Convenience Receptacles, 125 V, 20 A: Comply with NEMA WD 1, NEMA WD 6 Configuration 5-20R, UL 498 Supplement sd, and FS W-C-596.

C. Weather-Resistant Duplex Receptacle, 125 V, 20 A:

1. Description: Two pole, three wire, and self-grounding. Integral shutters that operate only when a plug is inserted in the receptacle. Square face.
2. Configuration: NEMA WD 6, Configuration 5-20R.
3. Standards: Comply with UL 498.

D. Controlled Duplex Receptacles, 125 V, 20A

1. Description: Two pole, three wire and self-grounding.
2. Configuration: NEMA WD 6, Configuration 5-20R.
3. Standards: Comply with UL 498.
4. Marking: Shall have permanent marking per CEC 130.5 (d).
5. USB Receptacles: Dual and quad, USB Type A, 5 V dc, and 2.1 A per receptacle (minimum).
6. Standards: Comply with UL 1310 and USB 3.0 devices.

2.4 GFCI RECEPTACLES

A. General Description:

1. Straight blade, feed-through type.
2. Comply with NEMA WD 1, NEMA WD 6, UL 498, UL 943 Class A, and FS W-C-596.
3. Include indicator light that shows when the GFCI has malfunctioned and no longer provides proper GFCI protection.
4. Include self test feature so that the outlet is automatically tested every fifteen minutes.
5. Outlets used in coastal environments shall be suitable for such applications and shall be properly protected against the ambient conditions.

B. Duplex GFCI Convenience Receptacles, 125 V, 20 A:

1. Products: Subject to compliance with requirements, provide one of the following manufacturers Hubbell; GFR5352L.
2. Pass & Seymour; 2095.
3. Leviton; 7590.

C. Tamper-Resistant GFCI Convenience Receptacles, 125 V, 20 A:

1. Products: Subject to compliance with requirements, provide one of the following manufacturers :

a. Hubbell; GFTR20.
b. Pass & Seymour; 2095TR.

2.5 TWIST-LOCKING RECEPTACLES

A. Single Convenience Receptacles, 125 V, 20 A: Comply with NEMA WD 1, NEMA WD 6 Configuration L5-20R, and UL 498.

1. Products: Subject to compliance with requirements, provide one of the following manufacturers :

a. Hubbell; HBL2310.
b. Leviton; 2310.
c. Pass & Seymour; L520-R.

B. Isolated-Ground, Single Convenience Receptacles, 125 V, 20 A:

a. Products: Subject to compliance with requirements, provide one of the following manufacturers Hubbell; IG2310.
b. Leviton; 2310-IG.
c. Pass & Seymour; IG4700.

2. Description:

a. Comply with NEMA WD 1, NEMA WD 6 Configuration L5-20R, and UL 498.
b. Equipment grounding contacts shall be connected only to the green grounding screw terminal of the device and with inherent electrical isolation from mounting strap. Isolation shall be integral to receptacle construction and not dependent on removable parts.

2.6 PENDANT CORD-CONNECTOR DEVICES

A. Description:

1. Matching, locking-type plug and receptacle body connector.
2. NEMA WD 6 Configurations L5-20P and L5-20R, heavy-duty grade, and FS W-C-596.
3. Body: Nylon, with screw-open, cable-gripping jaws and provision for attaching external cable grip.
4. External Cable Grip: Woven wire-mesh type made of high-strength, galvanized-steel wire strand, matched to cable diameter, and with attachment provision designed for corresponding connector.

2.7 CORD AND PLUG SETS

A. Description:

1. Match voltage and current ratings and number of conductors to requirements of equipment being connected.
2. Cord: Rubber-insulated, stranded-copper conductors, with Type SOW-A jacket; with green-insulated grounding conductor and ampacity of at least 130 percent of the equipment rating.
3. Plug: Nylon body and integral cable-clamping jaws. Match cord and receptacle type for connection.

2.8 TOGGLE SWITCHES

A. Comply with NEMA WD 1, UL 20, and FS W-S-896.

B. Switches, 120/277 V, 20 A:

1. Products: Subject to compliance with requirements, provide one of the following manufacturers :

a. Single Pole:
b. Hubbell; HBL1221.
1) Leviton; 1221-2.
2) Pass & Seymour; CSB20AC1.

c. Two Pole:
d. Hubbell; HBL1222.
3) Leviton; 1222-2.
4) Pass & Seymour; CSB20AC2.

e. Three Way:
f. Hubbell; HBL1223.
5) Leviton; 1223-2.
6) Pass & Seymour; CSB20AC3.

g. Four Way:
h. Hubbell; HBL1224.
7) Leviton; 1224-2.
8) Pass & Seymour; CSB20AC4.

C. Single-Pole, Double-Throw, Momentary-Contact, Center-off Switches: 120/277 V, 20 A; for use with mechanically held lighting contactors.

1. Products: Subject to compliance with requirements, provide one of the following :

a. Hubbell; HBL2057.
b. Leviton; 1257.
c. Pass & Seymour; 1251.

D. General:

1. Wall switches shall be specification grade, fully enclosed, quiet-type tumbler switches rated 20 amperes, 120/277-volt, AC rated, bakelite or composition, back

and side wired, bumper pad, full rating for inductive or non-inductive loads and incandescent or fluorescent lighting loads.

2. Single Pole Switches: Hubbell #1221, Arrow #1991, Pass & Seymour 20AC1.or equal
3. Three-way Quiet Switches: Hubbell #1223, Arrow #1993, Pass & Seymour 20AC3 or equal.
4. Wall switch and pilot lights shall be flush mounted combination wall type with switch and pilot light equipped with a 6-watt, 125-volt candelabra base lamp. The pilot light shall have a green jewel with brass rim flush mounted in the wall plate.
5. All switches shall be of the same manufacture.
6. Normal switch color is white. Switches controlling circuits connected to emergency power source shall be red.
7. All switches shall have terminal screws to take up to #10 AWG conductors.

2.9 DECORATOR-STYLE DEVICES

A. Convenience Receptacles: Square face, 125 V, 20 A; comply with NEMA WD 1, NEMA WD 6 Configuration 5-20R, and UL 498.

1. Products: Subject to compliance with requirements, provide one of the following manufacturers Hubbell; DR20.
2. Leviton; 16252.
3. Pass & Seymour; 26252.

B. Tamper-Resistant Convenience Receptacles: Square face, 125 V, 20 A; comply with NEMA WD 1, NEMA WD 6 Configuration 5-20R, and UL 498.

1. Products: Subject to compliance with requirements, provide one of the following manufacturers :

    a. Hubbell; DR20TR.
    b. Pass & Seymour; TR26252.

2. Description: Labeled to comply with NFPA 70, "Receptacles, Cord Connectors, and Attachment Plugs (Caps)" Article, "Tamper-Resistant Receptacles in Dwelling Units" Section.

C. Tamper-Resistant and Weather-Resistant Convenience Receptacles: Square face, 125 V, 20 A; comply with NEMA WD 1, NEMA WD 6 Configuration 5-20R, and UL 498.

1. Products: Subject to compliance with requirements, provide one of the following manufacturers :

    a. Hubbell; DR20TR.
    b. LevitonTRW20.
    c. Pass & Seymour; TRW26252.

2. Description: Labeled to comply with NFPA 70, "Receptacles, Cord Connectors, and Attachment Plugs (Caps)" Article, "Tamper-Resistant Receptacles in Dwelling Units" Section, when installed in wet and damp locations.

D. GFCI, Tamper-Resistant and Weather-Resistant Convenience Receptacles: Square face, 125 V, 20 A; comply with NEMA WD 1, NEMA WD 6 Configuration 5-20R, UL 498, and UL 943 Class A.

1. Products: Subject to compliance with requirements, provide one of the following manufacturers :

a. Hubbell; GFTR20.
b. Pass & Seymour; 2094TRWR.

2. Description: Labeled to comply with NFPA 70, "Receptacles, Cord Connectors, and Attachment Plugs (Caps)" Article, "Tamper-Resistant Receptacles in Dwelling Units" Section.

E. Toggle Switches, Square Face, 120/277 V, 20 A: Comply with NEMA WD 1, UL 20, and FS W-S-896.

1. Products: Subject to compliance with requirements, provide one of the following manufacturers :

a. Hubbell; DS120 (single pole), DS320 (three way).
b. Leviton; 5621-2 (single pole), 5623-2 (three way).
c. Pass & Seymour; 2621 (single pole), 2623 (three way).

F. Lighted Toggle Switches, Square Face, 120 V, 20 A: Comply with NEMA WD 1 and UL 20.

1. Products: Subject to compliance with requirements, provide one of the following manufacturers :

a. Cooper; 7631 (single pole), 7633 (three way).
b. Hubbell; DS120IL (single pole), DS320 (three way).
c. Leviton; 5631-2 (single pole), 5633-2 (three way).
d. Pass & Seymour; 2625 (single pole), 2626 (three way).

2. Description: With neon-lighted handle, illuminated when switch is "off."

G. General:

1. Single and duplex convenience receptacles shall be U-grounded type, 125 volts, side and back wired with binding screws only with double wipe contacts and spring steel back up clips. Rating 20 amperes, 125V with straight blade grounding type. Model #5362 of Hub-bell, Pass & Seymour Arrow Hart or equal.
2. Receptacles shall be red on emergency circuits, orange on isolated ground system, blue when connected to motion sensor in office or white for the rest.

3. The grounding contact shall be one piece and internally connected to the frame with ground terminal for external ground.
4. Special receptacles shall be as indicated on plans by NEMA configuration.
5. Ground fault receptacles shall be 20 amperes, 125 volt, duplex, three wire grounding with pilot light and test and reset buttons. Suitable for feed-through wiring, color to be select-ed, Hubbell 5362 GF Series, Pass & Seymour 2091 SIL Series or equal.
6. Isolated ground type receptacles shall be IG 5362 Hubbell, Pass & Seymour or Arrow Hart and shall conform to UL Standard #498 and NEC/NFPA requirements, ANSI #C73.
7. Poke-thru receptacle shall be flush, 5/8" thick, die-cast aluminum, for power and commu-nication UL listed and classified for 2 hours fire rated Walker 1500 series, Hubbell #PT7-FX or equal.
8. Wiring devices in exposed weatherproof boxes shall be the devices specified in this sec-tion, and shall be installed in "FS" or "FD" series condulets with weatherproof cast metal covers, and gaskets as required.
9. All receptacles shall be of the same manufacture.
10. Each receptacle installed outdoors, within 72" of sinks, in wet or damp areas, on roof, outdoors, below grade (pit), janitor, closets, and bathrooms, shall have automatic 5 ma, individual ground fault (GFI) protection.
11. Floor Outlets: Where floor outlets are shown, boxes shall be Walkerduct #800 CI Series, Steel City Series #78, Hubbell #B-2537, or equal. Where 120, 208 or 240 volts are used, standard NEMA receptacles, suitable for the service, shall be used.

2.10 WALL PLATES

A. Provide plates for all switches, receptacles, junction boxes, telephone and other outlets.

B. Provide engraved or etched plates for all lock switches, pilot switches, switches from which equipment or circuit controlled cannot be readily seen, three or more switches un-der a common plate and for switches as indicated.

C. stainless steel plates shall be American Iron and Steel Institute (AISI) Type 302, with beveled edges, 0.040" thick with satin smooth finish. "Smoothie," Hubbell #97071 Series or equal.

D. Plastic cover plate shall be ivory / white, high impact thermoplastic, high strength, scratch-resistant, smooth and self-extinguishing, Hubbell "PI" Series, Pass & Seymour RP Series or equal.

E. Where outlets are indicated to be weatherproof, provide an AISI Type 302 stainless with double hinged covers, Pass & Seymour #WPD-8 or equal.

F. Galvanized steel plates shall be square or rectangular and hot dipped galvanized or sherardized, beveled edges and 0.040" thick. Galvanized steel plates shall be used in utility area. Refer to Section 260553 for labeling of plates.

G. Cover plates on pressed steel outlet boxes in furred areas, attics, etc., or exposed in mechanical equipment rooms shall be of the same material as the outlet box.

H. Cover plates in locations concealed from public view shall have the circuit numbers and source feed point hand labeled with marking black pen (permanent marker). See Section 260553 for labeling.

I. Provide stainless steel cover plates in the kitchen and adjacent to stainless steel panels, unless noted otherwise.

J. Provide plates equipped with close fitting openings for the exact device to be used. Provide plates for telephone outlets equipped with bushed openings.

K. Single and combination types shall match corresponding wiring devices.

1. Plate-Securing Screws: Metal with head color to match plate finish.
2. Material for Finished Spaces: Smooth, high-impact thermoplastic 0.035-inch- (1-mm-) thick, satin-finished, Type 302 stainless steelMaterial for Unfinished Spaces: Galvanized steel.
3. Material for Damp Locations: AISI Type 302 stainless with double hinged covers with spring-loaded lift cover, and listed and labeled for use in wet and damp locations.

L. Wet-Location, Weatherproof Cover Plates: NEMA 250, complying with Type 3R, weather-resistant AISI Type 302 stainless with double hinged covers with lockable cover.

M. Antimicrobial Cover Plates:

1. Contact surfaces treated with a coating that kills 99.9 percent of certain common bacteria within two hours when regularly and properly cleaned.
2. Tarnish resistant.

2.11 FLOOR SERVICE FITTINGS

A. Type: Modular, flush-type, dual-service units suitable for wiring method used.

B. Compartments: Barrier separates power from voice and data communication cabling.

C. Service Plate: Round, solid brass with satin finish.

D. Power Receptacle: NEMA WD 6 Configuration 5-20R, gray finish, unless otherwise indicated.

2.12 POKE-THROUGH ASSEMBLIES

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following manufacturers

1. Hubbell Incorporated; Wiring Device-Kellems.
2. Pass & Seymour/Legrand.
3. Square D/Schneider Electric.

4. Thomas & Betts Corporation.
5. Wiremold/Legrand.

B. Description:

1. Factory-fabricated and -wired assembly of below-floor junction box with multichanneled, through-floor raceway/firestop unit and detachable matching floor service-outlet assembly.
2. Comply with UL 514 scrub water exclusion requirements.
3. Size: Selected to fit nominal 4-inch (100-mm) cored holes in floor and matched to floor thickness.
4. Fire Rating: Unit is listed and labeled for fire rating of floor-ceiling assembly.
5. Closure Plug: Arranged to close unused 4-inch (100-mm) cored openings and reestablish fire rating of floor.
6. Wiring Raceways and Compartments: For a minimum of four No. 12 AWG conductors and a minimum of four, four-pair cables.

2.13 PREFABRICATED MULTIOUTLET ASSEMBLIES

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following manufacturers

1. Hubbell Incorporated; Wiring Device-Kellems.
2. Wiremold/Legrand.

B. Description:

1. Two-piece surface metal raceway, with factory-wired multioutlet harness.
2. Components shall be products from single manufacturer designed for use as a complete, matching assembly of raceways and receptacles.

C. Raceway Material: Metal, with manufacturer's standard finish.

D. Multioutlet Harness:

1. Receptacles: 15-A, 125-V, NEMA WD 6 Configuration 5-15R receptacles complying with NEMA WD 1, UL 498, and FS W-C-596.
2. Receptacle Spacing: per plans and pre-manufactured furniture assemblies.
3. Wiring: No. 12 AWG solid, Type THHN copper, circuits per plans.

2.14 FINISHES

A. Device Color:

1. Wiring Devices Connected to Normal Power System: White or per Architect unless otherwise indicated or required by NFPA 70 or device listing.
2. Wiring Devices Connected to Emergency Power System: Red.
3. SPD Devices: Gray.

4. Motion sensor switched devices: Blue
5. Isolated-Ground Receptacles: Orange.

B. Wall Plate Color: For plastic covers, match device color.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Comply with NECA 1, including mounting heights listed in that standard, unless otherwise indicated.

B. Coordination with Other Trades:

1. Protect installed devices and their boxes. Do not place wall finish materials over device boxes and do not cut holes for boxes with routers that are guided by riding against outside of boxes.
2. Keep outlet boxes free of plaster, drywall joint compound, mortar, cement, concrete, dust, paint, and other material that may contaminate the raceway system, conductors, and cables.
3. Install device boxes in brick or block walls so that the cover plate does not cross a joint unless the joint is troweled flush with the face of the wall.
4. Install wiring devices after all wall preparation, including painting, is complete.

C. Conductors:

1. Do not strip insulation from conductors until right before they are spliced or terminated on devices.
2. Strip insulation evenly around the conductor using tools designed for the purpose. Avoid scoring or nicking of solid wire or cutting strands from stranded wire.
3. The length of free conductors at outlets for devices shall meet provisions of NFPA 70, Article 300, without pigtails.
4. Existing Conductors:

    a. Cut back and pigtail or replace all damaged conductors.
    b. Straighten conductors that remain and remove corrosion and foreign matter.
    c. Pig tailing existing conductors is permitted, provided the outlet box is large enough.

D. Device Installation:

1. Replace devices that have been in temporary use during construction and that were installed before building finishing operations were complete.
2. Keep each wiring device in its package or otherwise protected until it is time to connect conductors.
3. Do not remove surface protection, such as plastic film and smudge covers, until the last possible moment.

4. Connect devices to branch circuits using pigtails that are not less than 6 inches (152 mm) in length.
5. When there is a choice, use side wiring with binding-head screw terminals. Wrap solid conductor tightly clockwise, two-thirds to three-fourths of the way around terminal screw.
6. Use a torque screwdriver when a torque is recommended or required by manufacturer.
7. When conductors larger than No. 12 AWG are installed on 20-A circuits, splice No. 12 AWG pigtails for device connections.
8. Tighten unused terminal screws on the device.
9. When mounting into metal boxes, remove the fiber or plastic washers used to hold device-mounting screws in yokes, allowing metal-to-metal contact.

E. Receptacle Orientation:

1. Install ground pin of vertically mounted receptacles down, and on horizontally mounted receptacles to the left.
2. Install hospital-grade receptacles in patient-care areas with the ground pin at the top.

F. Device Plates: Do not use oversized or extra-deep plates. Repair wall finishes and remount outlet boxes when standard device plates do not fit flush or do not cover rough wall opening.

G. Arrangement of Devices: Unless otherwise indicated, mount flush, with long dimension vertical and with grounding terminal of receptacles on top. Group adjacent switches under single, multigang wall plates.

H. Adjust locations of floor service outlets and service poles to suit arrangement of partitions and furnishings.

3.2 GFCI RECEPTACLES

A. Install non-feed-through-type GFCI receptacles where protection of downstream receptacles is not required.

3.3 IDENTIFICATION

A. Comply with Section 260553 "Identification for Electrical Systems."

B. Identify each receptacle with panelboard identification and circuit number. Use hot, stamped, or engraved machine printing with white red-filled lettering on face of plate, and durable wire markers or tags inside outlet boxes.

C. Essential Electrical System: Mark receptacles supplied from the essential electrical system to allow easy identification using a self-adhesive label.

3.4 FIELD QUALITY CONTROL

A. Perform the following tests and inspections:

1. In healthcare facilities, prepare reports that comply with recommendations in NFPA 99.
2. Test Instruments: Use instruments that comply with UL 1436.
3. Test Instrument for Convenience Receptacles: Digital wiring analyzer with digital readout or illuminated digital-display indicators of measurement.

B. Tests for Convenience Receptacles:

1. Line Voltage: Acceptable range is 105 to 132 V.
2. Percent Voltage Drop under 20-A Load: A value of 6 percent or higher is unacceptable.
3. Ground Impedance: Values of up to 2 ohms are acceptable.
4. GFCI Trip: Test for tripping values specified in UL 1436 and UL 943.
5. Using the test plug, verify that the device and its outlet box are securely mounted.
6. Tests shall be diagnostic, indicating damaged conductors, high resistance at the circuit breaker, poor connections, inadequate fault current path, defective devices, or similar problems. Correct circuit conditions remove malfunctioning units and replace with new ones, and retest as specified above.

C. Test straight-blade convenience outlets in patient-care areas for the retention force of the grounding blade according to NFPA 99. Retention force shall be not less than 4 oz. (115 g).

D. Wiring device will be considered defective if it does not pass tests and inspections.

E. Prepare test and inspection reports. Submit reports within two (2) weeks of completion of tests.

END OF SECTION

SECTION 262816 - ENCLOSED SWITCHES AND CIRCUIT BREAKERS

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. Fusible switches.
2. Nonfusible switches.
3. Shunt trip switches.
4. Molded-case circuit breakers (MCCBs).
5. Molded-case switches.
6. Enclosures.

1.3 DEFINITIONS

A. NC: Normally closed.

B. NO: Normally open.

C. SPDT: Single pole, double throw.

1.4 PERFORMANCE REQUIREMENTS

A. Seismic Performance: Enclosed switches and circuit breakers shall withstand the effects of earthquake motions determined according to ASCE/SEI 7.

1. The term "withstand" means "the unit will remain in place without separation of any parts from the device when subjected to the seismic forces specified and the unit will be fully operational after the seismic event."

1.5 ACTION SUBMITTALS

A. Product Data: For each type of enclosed switch, circuit breaker, accessory, and component indicated. Include dimensioned elevations, sections, weights, and manufacturers' technical data on features, performance, electrical characteristics, ratings, accessories, and finishes.

1. Enclosure types and details for types other than NEMA 250, Type 1.
2. Current and voltage ratings.
3. Short-circuit current ratings (interrupting and withstand, as appropriate).
4. Include evidence of NRTL listing for series rating of installed devices.
5. Detail features, characteristics, ratings, and factory settings of individual overcurrent protective devices, accessories, and auxiliary components.
6. Include time-current coordination curves (average melt) for each type and rating of overcurrent protective device; include selectable ranges for each type of overcurrent protective device.

B. Shop Drawings: For enclosed switches and circuit breakers. Include plans, elevations, sections, details, and attachments to other work.

1. Wiring Diagrams: For power, signal, and control wiring.

1.6 INFORMATIONAL SUBMITTALS

A. Qualification Data: For qualified testing agency.

B. Seismic Qualification Certificates: For enclosed switches and circuit breakers, accessories, and components, from manufacturer.

1. Basis for Certification: Indicate whether withstand certification is based on actual test of assembled components or on calculation.
2. Dimensioned Outline Drawings of Equipment Unit: Identify center of gravity and locate and describe mounting and anchorage provisions.
3. Detailed description of equipment anchorage devices on which the certification is based and their installation requirements.

C. Field quality-control reports.

1. Test procedures used.
2. Test results that comply with requirements.
3. Results of failed tests and corrective action taken to achieve test results that comply with requirements.

D. Manufacturer's field service report.

1.7 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For enclosed switches and circuit breakers to include in emergency, operation, and maintenance manuals. In addition to items specified in Section 017823 "Operation and Maintenance Data," include the following:

1. Manufacturer's written instructions for testing and adjusting enclosed switches and circuit breakers.

2. Time-current coordination curves (average melt) for each type and rating of overcurrent protective device; include selectable ranges for each type of overcurrent protective device.

1.8 MAINTENANCE MATERIAL SUBMITTALS

A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Fuses: Equal to 10 percent of quantity installed for each size and type, but no fewer than three of each size and type.
2. Fuse Pullers: Two for each size and type.

1.9 QUALITY ASSURANCE

A. Testing Agency Qualifications: Member company of NETA or an NRTL.

1. Testing Agency's Field Supervisor: Currently certified by NETA to supervise on-site testing.

B. Source Limitations: Obtain enclosed switches and circuit breakers, overcurrent protective devices, components, and accessories, within same product category, from single source from single manufacturer.

C. Product Selection for Restricted Space: Drawings indicate maximum dimensions for enclosed switches and circuit breakers, including clearances between enclosures, and adjacent surfaces and other items. Comply with indicated maximum dimensions.

D. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

E. Comply with NFPA 70.

1.10 PROJECT CONDITIONS

A. Environmental Limitations: Rate equipment for continuous operation under the following conditions unless otherwise indicated:

1. Ambient Temperature: Not less than minus 22 deg F and not exceeding 104 deg F.
2. Altitude: Not exceeding 6600 feet.

B. Interruption of Existing Electric Service: Do not interrupt electric service to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary electric service according to requirements indicated:

1. Notify Construction Manager and Owner no fewer than seven days in advance of proposed interruption of electric service.
2. Indicate method of providing temporary electric service.
3. Do not proceed with interruption of electric service without Construction Manager's and Owner's written permission.
4. Comply with NFPA 70E.

1.11 COORDINATION

A. Coordinate layout and installation of switches, circuit breakers, and components with equipment served and adjacent surfaces. Maintain required workspace clearances and required clearances for equipment access doors and panels.

PART 2 - PRODUCTS

2.1 FUSIBLE SWITCHES

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Eaton Electrical Inc.; Cutler-Hammer Business Unit.
2. General Electric Company; GE Consumer & Industrial - Electrical Distribution.
3. Siemens Energy & Automation, Inc.
4. Square D; a brand of Schneider Electric.

B. Type HD, Heavy Duty, Single Throw, 600-V ac, 1200 A and Smaller: UL 98 and NEMA KS 1, horsepower rated, with clips or bolt pads to accommodate indicated fuses, lockable handle with capability to accept three padlocks, and interlocked with cover in closed position.

C. Accessories:

1. Equipment Ground Kit: Internally mounted and labeled for copper ground conductors.
2. Neutral Kit: Internally mounted; insulated, capable of being grounded and bonded; labeled for copper and aluminum neutral conductors.
3. Isolated Ground Kit: Internally mounted; insulated, capable of being grounded and bonded; labeled for copper and aluminum neutral conductors.
4. Class R Fuse Kit: Provides rejection of other fuse types when Class R fuses are specified.
5. Auxiliary Contact Kit: Two NO/NC (Form "C") auxiliary contact(s), arranged to activate before switch blades open.
6. Hookstick Handle: Allows use of a hookstick to operate the handle.
7. Lugs: Mechanical type, suitable for number, size, and conductor material.

2.2 NONFUSIBLE SWITCHES

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Eaton Electrical Inc.; Cutler-Hammer Business Unit.
2. General Electric Company; GE Consumer & Industrial - Electrical Distribution.
3. Siemens Energy & Automation, Inc.
4. Square D; a brand of Schneider Electric.

B. Type HD, Heavy Duty, Single Throw, 600-V ac, 1200 A and Smaller: UL 98 and NEMA KS 1, horsepower rated, lockable handle with capability to accept three padlocks, and interlocked with cover in closed position.

C. Accessories:

1. Equipment Ground Kit: Internally mounted and labeled for copper ground conductors.
2. Neutral Kit: Internally mounted; insulated, capable of being grounded and bonded; labeled for copper and aluminum neutral conductors.
3. Isolated Ground Kit: Internally mounted; insulated, capable of being grounded and bonded; labeled for copper and aluminum neutral conductors.
4. Auxiliary Contact Kit: Two NO/NC (Form "C") auxiliary contact(s), arranged to activate before switch blades open.
5. Hookstick Handle: Allows use of a hookstick to operate the handle.
6. Lugs: Mechanical type, suitable for number, size, and conductor material.

2.3 ENCLOSURES

A. Enclosed Switches and Circuit Breakers: NEMA AB 1, NEMA KS 1, NEMA 250, and UL 50, to comply with environmental conditions at installed location.

1. Indoor, Dry and Clean Locations: NEMA 250, Type 1.
2. Outdoor Locations: NEMA 250, Type 3R.
3. Other Wet or Damp, Indoor Locations: NEMA 250, Type 4.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine elements and surfaces to receive enclosed switches and circuit breakers for compliance with installation tolerances and other conditions affecting performance of the Work.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. Install individual wall-mounted switches and circuit breakers with tops at uniform height unless otherwise indicated.

B. Comply with mounting and anchoring requirements specified in Section 260548 "Vibration and Seismic Controls for Electrical Systems."

C. Temporary Lifting Provisions: Remove temporary lifting eyes, channels, and brackets and temporary blocking of moving parts from enclosures and components.

D. Install fuses in fusible devices.

E. Comply with NFPA 70 and NECA 1.

3.3 IDENTIFICATION

A. Comply with requirements in Section 260553 "Identification for Electrical Systems."

1. Identify field-installed conductors, interconnecting wiring, and components; provide warning signs.
2. Label each enclosure with engraved metal or laminated-plastic nameplate.

3.4 FIELD QUALITY CONTROL

A. Testing Agency: Engage a qualified testing agency to perform tests and inspections.

B. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect, test, and adjust components, assemblies, and equipment installations, including connections.

C. Perform tests and inspections.

1. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect components, assemblies, and equipment installations, including connections, and to assist in testing.

D. Acceptance Testing Preparation:

1. Test insulation resistance for each enclosed switch and circuit breaker, component, connecting supply, feeder, and control circuit.
2. Test continuity of each circuit.

E. Tests and Inspections:

1. Perform each visual and mechanical inspection and electrical test stated in NETA Acceptance Testing Specification. Certify compliance with test parameters.
2. Correct malfunctioning units on-site, where possible, and retest to demonstrate compliance; otherwise, replace with new units and retest.

3. Perform the following infrared scan tests and inspections and prepare reports:

    a. Initial Infrared Scanning: After Substantial Completion, but not more than 60 days after Final Acceptance, perform an infrared scan of each enclosed switch and circuit breaker. Remove front panels so joints and connections are accessible to portable scanner.
    b. Follow-up Infrared Scanning: Perform an additional follow-up infrared scan of each enclosed switch and circuit breaker 11 months after date of Substantial Completion.
    c. Instruments and Equipment: Use an infrared scanning device designed to measure temperature or to detect significant deviations from normal values. Provide calibration record for device.

4. Test and adjust controls, remote monitoring, and safeties. Replace damaged and malfunctioning controls and equipment.

F. Enclosed switches and circuit breakers will be considered defective if they do not pass tests and inspections.

G. Prepare test and inspection reports, including a certified report that identifies enclosed switches and circuit breakers and that describes scanning results. Include notation of deficiencies detected, remedial action taken, and observations after remedial action.

3.5 ADJUSTING

A. Adjust moving parts and operable components to function smoothly and lubricate as recommended by manufacturer.

B. Set field-adjustable circuit-breaker trip ranges as specified in Section 260573 "Overcurrent Protective Device Coordination Study."

END OF SECTION

SECTION 270500 - REQUIREMENTS FOR COMMUNICATIONS INSTALLATIONS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Provide a standard defining the structured communications cabling systems to be installed within customer facility. The goal is to accomplish this in the most economic and systematic fashion possible, and in a manner compliant with the latest codes, cabling standards and industry best practices.
2. Scope of Work Compliance.
3. Contractor Qualifications.
4. Warranty.
5. Safety.
6. Working Conditions.

1.2 GENERAL TERMS AND CONDITIONS.

A. General Contractor is responsible for all required Division 27 scope of work and shall ensure all communication sub-tier contractors adhere to the qualifications set forth in all project Division 27 specifications including project experience and certifications.

B. Prices quoted shall be all-inclusive and represent a complete fully-engineered system installation at the Project site as contemplated by and detailed in the drawing package and in accompanying specifications.

C. Omissions in the specification of any provision herein described shall not be construed as to relieve the contractor of any responsibility or obligation requisite to the complete and satisfactory delivery, installation, operation and support of any and all systems, equipment or services. Correction of any omission on the part of the contractor, either due to misinterpretation of this specification or any other conditions of the project, shall be the responsibility of the Contractor and shall not result in any contract modification or additional costs to Owner.

D. Where conflicts and/or irregularities occur between project documents, specifications, drawings, and/or applicable codes, rules, regulations, ordinances, standards, guidelines and practices, the more stringent requirement shall apply as reasonably determined by Owner or government agency inspector.

E. This specification represents the design intent for the project communicated by way of narrative descriptions of intended functionality and single line or detail drawings indicating likely equipment connectivity to achieve that functionality. The designs in this specification do not represent fully engineered technical solutions. Contractors are required to review the designs presented in the project documents closely, submit any

questions and clarifications regarding the design intent through the RFI process and develop their own engineered solutions representing a fully functional turn-key solution in their bid responses.

F. The scope of this project includes the complete system engineering, procurement, fabrication, installation, programming, testing, training and warranty.

G. Proposed solutions shall be based on the designs communicated in the specifications, but shall include any additional equipment, materials, software, licenses and/or labor required for the contractor to deliver a fully functional turn-key system solution that meets intended operational performance requirements.

H. It is the responsibility of the Contractor awarded this project to ensure that all quantities, materials, labor, licenses, permits, sales taxes and any and all other costs to provide a turnkey project are included in their bid.

I. Floor plans, drawings, elevation drawings, and other drawings received by the Contractor as part of the construction process are hereby incorporated into this document by reference. It is the responsibility of the Contractor to ensure that amounts and lengths of cabling and pathways are correct, and that all materials and labor are included to install the system per the drawings and these specifications.

J. Permits, licenses, applicable sales taxes, insurance requirements, payment/performance bond costs, and other miscellaneous costs are the responsibility of the Contractor and shall be included in the contract price and this scope of work. Such items are to be listed separately on pricing sheets, if provided. Copies of all required permits, licenses, insurance requirements and bond(s) are to be delivered to Owner prior to commencement of any work.

K. Installation Schedule and Coordination: Contractor shall take the fast-track nature of this project and potential requirement for installation/work schedule adjustments and quick turnarounds into consideration in constructing this project as Owner will NOT entertain or agree to added-cost change orders associated with scheduling changes.

L. Work will need to be closely coordinated with architect, City Personnel, GC, MEP contractors, structural contractor and all low-voltage contractors and each of their respective schedules.

M. This will be a turnkey Project. Any item of the equipment or material not specifically addressed on the drawings, specifications or elsewhere in Division 27 specifications documents, but required to provide complete and functional systems as contemplated and/or specified herein, shall be provided at no additional charge to owner in a quantity and quality consistent with other specified items.

N. Coordination with Project Design Team: The build contractor will be responsible for coordinating all communications cabling infrastructure requirements, including review of existing site conditions, review and coordination of electrical power and grounding requirements, conduits and back boxes, structural support requirements, and coordination.

O. Assembly: The contractor shall procure and assemble all hardware and equipment and any additional materials as required to deliver the completely functioning communications cabling system.

P. Installation: The contractor shall install all equipment, inter-rack and intra-rack cable, wiring of equipment, connectors, panels, plates, and other material at the Project site.

Q. Testing and Adjustment: The contractor shall perform all tests and adjustments, furnish all test equipment necessary and perform all work required to properly configure the systems and to verify their performance in accordance with the information in this document and the design-build integrator's approved engineered designs.

R. Warranty: The contractor shall warrant the installed system in accordance with the terms of this document and accompanying contractual documents.

1.3 RELATED DOCUMENTS

A. All divisions of the specification and general provisions of the Construction Documents.

B. Architectural, mechanical, electrical, and all technology drawings including but not limited to Telecommunication Drawings.

C. Refer to structural seismic requirement design documents specifications, if available, for Non-Structural Components for all structural bracing and support of telecommunications equipment.

1.4 REFERENCES

A. Abbreviations and Acronyms:

1.	A/E:	Architect / Engineer (designer)
2.	BICSI:	Building Industry Consulting Service International
3.	EIA:	Electronics Industry Alliance
4.	ELFEXT	Equal Level far End Cross Talk
5.	FTP	Foiled Twisted Pair
6.	IDF:	Intermediate Distribution Facility
7.	ILEC/LEC:	Incumbent Local Exchange Carrier
8.	ISP:	Inside Plant
9.	IT:	Information Technology
10.	BDF:	Building Distribution Frame
11.	LOMMF:	Laser Optimized Multi-Mode Fiber
12.	MDF:	Main Distribution Facility
13.	MPOE:	Minimum Point of Entry
14.	NEXT	Near End Cross Talk
15.	OSP:	Outside Plant
16.	PSELFEXT:	Power Sum Equal Level Far End Cross Talk
17.	PSNEXT:	Power Sum Near End Cross Talk
18.	RCDD:	Registered Communications Distribution Designer

19. TBD: To Be Determined
20. TCIM: Telecommunication Cabling Installation Manual
21. TDMM: Telecommunications Distribution Methods Manual
22. TIA: Telecommunications Industry Association
23. UTP: Unshielded Twisted Pair
24. WAP: Wireless Access Point

1.5 APPLICABLE REGULATORY REFERENCES

A. Contractor is responsible for knowledge and application of current versions of all applicable Standards and Codes. In cases where listed Standards and Codes have been updated, Contractor shall adhere to the most recent revisions, including all relevant changes or addenda at the time of installation.

1. ANSI/TIA:

a. TIA-526-7 (OFSTP-7) (July 2015) Measurement of Optical Power Loss of Installed Single-Mode Fiber Cable Plant
b. TIA-526-14-B (April 2015) (OFSTP-14) Optical Power Loss Measurements of Installed Multimode Fiber Cable Plant
c. ANSI/TIA/EIA-598-C (July 2014) Optical Fiber Cable Color Coding
d. ANSI/TIA-568-C.0 (December 2015) Generic Telecommunications Cabling for Customer Premises
e. TIA-568-C.0-1 (September 2012) Generic Telecommunications Cabling for Customer Premises-Addendum 1, Updated Reference for Balanced Twisted-Pair Cabling
f. ANSI/TIA-568-C.1 (February 2012) Commercial Building Telecommunications Cabling Standards
g. TIA-568-C.1-2 (November 2014) Commercial Building Telecommunications Cabling Standard, Addendum 2 General Updates
h. ANSI/TIA-568-C.2 (June 2016) Balanced Twisted Pair Communications Cabling and Components Standards
i. ANSI/TIA-568-C.3 (June 2011) Optical Fiber Cabling Components Standard
j. ANSI/TIA-568-C.3-1 (December 2011) Optical Fiber Cabling Component Standard- Addendum 1, Addition of OM4 Cabled Optical Fiber and array connectors
k. ANSI/TIA-1183 (August 2012) Test Fixtures for Balun-Less Measurements of Balanced Components and Systems
l. ANSI/TIA-1183-1 (January 2016) Test Fixtures for Balun-Less Measurements of Balanced Components and Systems, Addendum 1 – Extending Frequency Capabilities to 2 GHz.
m. ANSI/TIA-568-C.4 (July 2011) Broadband Coaxial Cabling Components Standard
n. ANSI/TIA-942-A (August 2012) Telecommunications Infrastructure Standard for Data Centers
o. ANSI/TIA-942-A-1 (March 2013) Telecommunications Infrastructure Standard for Data Centers, Addendum 1 - Cabling Guidelines for Data Center Fabrics
p. TIA-569-D (April 2015) Telecommunications Pathways and Spaces

q. TIA-569-D-1 (October 2016) Telecommunications Pathways and Spaces Addendum 1- Revised Temperature and Humidity Requirements for Telecommunications Spaces
r. ANSI/TIA-606-B (December 2015) Administration Standard for Telecommunications Infrastructure
s. TIA-607-B (November 2015) Generic Telecommunications Grounding (Earthing) and Bonding for Customer Premises
t. TIA-607-B-1 (January 2017) Generic Telecommunications Grounding (Earthing) and Bonding for Customer Premises - External Grounding Addendum
u. TIA-758-B (April 2012) Customer-Owned Outside Plant Telecommunication Infrastructure Standard
v. TIA-1152 (November 2016) Requirements for Field Test Instruments and Measurements for Balanced Twisted-Pair Cabling
w. ANSI/TIA-862-B (February 2016) Structured Cabling Infrastructure Standard for Intelligent Building Systems.
x. TIA-570-C (August 2012) Residential Telecommunications Infrastructure Standard
y. TIA-1005-A (June 2012) Industrial Telecommunications Infrastructure Standard for Manufacturing, Process & Refining
z. ANSI/TIA-1005 (January 2015) Telecommunications Infrastructure Standard for Industrial Premises
aa. TIA-1005-1 (May 2012) Telecommunications Infrastructure Standard for Industrial Premises; Addendum 1 - Industrial Pathways and Spaces
bb. TIA-1179 (July 2010) Healthcare Facility Telecommunications Infrastructure Standard.

2. ISO/IEC

a. ISO 11801 (November 2010) - Generic Cabling for Customer Premises
b. ISO/IEC TR 14763-2-1:2012 - Information technology -- Implementation and operation of customer premises cabling -- Part 2-1: Planning and installation - Identifiers within administration system.

3. Electric Codes

a. California Electrical Code, CEC (2016)
b. ANSI/NFPA 70-2017, National Electrical Code© (NEC©)
c. ANSI/IEEE C2-207, National Electrical Safety Code®
d. National Electrical Code (NEC) (NFPA 70)

4. OSHA Standards and Regulations – all applicable
5. 2016 California Title 24

a. 2016 California Administrative Code, Title 24 Part 1
b. 2016 California Building Code, Title 24 Part 2
c. 2016 California Electrical Code, Title 24 Part 3
d. 2016 California Mechanical Code, Title 24 Part 4
e. 2016 California Plumbing Code, Title 24 Part 5
f. 2016 California Energy Code, Title 24 Part 6

g. 2016 California Fire Code, Title 24 Part 9
h. 2016 Green Building Standard Code, Title 24 part 11
i. 2016 California Standard Code, Title 24 Part 12

6. Local Codes and Standards – all applicable
7. BICSI

a. Telecommunications Distribution Methods Manual, 13th Edition
b. BICSI 004-2012, Information Technology Systems Design and Implementation Best Practices for Healthcare Institutions and Facilities
c. Information Technology Systems Installation Methods Manual (ITSIMM), 6th Edition
d. ANSI/BICSI 002-2014, Data Center Design and Implementation Best Practices
e. Network Systems and Commissioning (NSC) reference, 1st Edition
f. ANSI/NECA/BICSI 568-2006, Standard for Installing Commercial Building Telecommunications Cabling
g. NECA/BICSI 607-2011, Standard for Telecommunications Bonding and Grounding Planning and Installation Methods for Commercial Buildings
h. ANSI/BICSI 001-2009, Information Transport Systems Design Standard for K-12 Educational Institutions
i. Network Design Reference Manual, 7th Edition
j. Outside Plant Design Reference Manual, 5th Edition
k. Wireless Design Reference Manual, 3rd Edition
l. Electronic Safety and Security Design Reference Manual, 3rd Edition.

8. Anywhere cabling Standards conflict with electrical or safety Codes, Contractor shall defer to NEC and any applicable local codes or ordinances, or default to the most stringent requirements listed by either.
9. Knowledge and execution of applicable codes is the sole responsibility of the contractor.
10. Any code violations committed at the time of installation shall be remedied at the contractor's expense.

1.6 SCOPE OF WORK

A. General project information:

1. These Specifications and associated drawings are the governing document for the installation of the telecommunications infrastructure and includes project descriptions, specified and recommended products, installation and project management methods, the scope of work and elevation drawing specifications.
2. Through this division specification document, Compton Community College District will be referred to as the owner.
3. Owner wishes to contract with a General Contractor, who will sub-tier the supplier/contractor ("ICT-Information and Communication Technology") to provide, install, test and warranty a complete turn-key a Cable Infrastructure System for the Owner's New Residential Buildings, the "Project" per the scope of work and specifications stated herein. This inquiry implies no obligation on the part of

Owner. Contractor shall bear all costs and expenses incurred in preparing a response a Request for Proposal (“RFP”) and subsequent award of project, it being understood and agreed that Owner accepts no responsibility for any costs and/or expenses incurred by winning contractor in preparing and submitting such response.

4. The Owner is developing (3) Student Housing Buildings, located on the NVC campus. The buildings will be a newly developed site with (3) buildings, four levels of residential. The building will consist of the following:

    a. Three (4) level buildings with residential apartments and general residential living spaces. The new first floor MPOE/Server Rooms will support the network requirements.

B. Purpose:

1. This specification defines quality standards and practices common to all network cabling for New Residential Buildings project. In addition, said project will have Requests for Proposals (RFP), associated drawings and requirements pertaining to their specific environments. Such collateral will be referred to in this document as “Project Specific Documentation” or simply “Construction Documents”.
2. Voice and Data Networks encompass a broad spectrum of technologies and are distributed into project internal spaces. Installed cables will be used for Ethernet, high and low speed data applications, used in analog and digital voice, not to exclude other future Voice/Data technologies. This specification will include indoor/outdoor cable installations, and backbone cabling, telecommunications closet and equipment cabling, equipment hardware as well as routing and support infrastructure.
3. It is the responsibility of the installing contractor to evaluate these general recommendations and adapt them effectively to actual projects. Contractor is responsible for identifying and bringing to the attention of any design directions that may be in conflict or otherwise improved. All such conflict resolutions shall be in writing from A/E or owner.
4. Note that while many portions of this global specification are addressed to "The contractor", these requirements apply equally to anyone doing the network cabling and infrastructure work within, whether those persons are outside contractors or persons directly employed by the owner.
5. Contractor shall be solely responsible for all parts, labor, testing, documentation and all other associated processes and physical apparatus necessary to turn-over the completed system fully warranted and operational for acceptance by A/E.
6. This specification includes structured cabling design considerations, product specifications and installation guidelines for low-voltage network systems and associated infrastructure including, but not limited to:

    a. Cabling Sub-system 1 – Horizontal

        1) Category 6 cable
        2) Work area (equipment outlet) appliances and configuration
        3) Horizontal Pathways
        4) Copper Patching

b. Backbone Cabling

1) Interbuilding backbone – Copper and Fiber
2) Patching / Cross-connect – Copper and Fiber

c. Telecommunications Spaces

1) Telecommunications Room Requirements
2) Racks and Cabinets
3) Overhead Pathways

d. Communications Grounding Systems
e. Communications Labeling and Administration

C. Scheduling:

1. Contract Documents and the overall construction schedule must be carefully reviewed to determine all required interfacing and timing of the work. All such documents shall be available through the General Contractor or Construction Manager.
2. Project schedule shall include, but are not limited to, the following task sequence:

a. New Server Room, IDF Construction and buildout.
b. Conduit infrastructure; including vaults/pull box install and conduit duct banks.
c. Individual Building Pathway Installation.
d. Building Category 6 Cable installations; includes install, termination, labeling, testing, as-built and warranty documentation.
e. Wireless Access Points.
f. New backbone fiber optic cabling installations; includes install, termination, labeling, testing, as built and warranty documentation.
g. Service provider cabling and equipment installation.
h. Service provider completion and commissioning.

D. Coordination:

1. Install and coordinate the telecommunications cabling work in cooperation with other trades installing interrelated work. Before installation, make proper provisions to avoid interference in a manner accepted by the architect. Any repairs or changes made necessary in the contract work, caused by the sub-contractor's neglect, shall be made by the sub-contractor at their own expense.

1.7 CONTRACTOR QUALIFICATIONS

A. General:

1. Contractor shall have at least 5 years of experience installing and testing structured cabling systems.

2. Contractor shall employ at least one BICSI Registered Communication Distribution Designer (RCDD), and the RCDD shall sign-off on all designs offered, including stamping the design with their current BICSI/RCDD stamp.
3. Contractor shall have the responsibility to obtain any of the necessary permits, licenses, and inspections required for the performance of data, voice, and fiber optic cable installations.
4. Contactor shall be a current manufacturer Certified Installer certificate. A copy of corporate certificate shall be included with quote.
5. Contractor shall have service facilities within 50 miles of project location.
6. At least 75 percent of the technicians on the job shall have a current manufacturer Certified Copper Technicians certificate to install manufacturer Copper Distribution Systems.
7. At least 75 percent of the technicians installing any Fiber Distribution Systems shall have a current manufacturer Certified Fiber Technicians certificate to install Fiber Distribution Systems.
8. The Telecommunications contractor shall provide a project manager to serve as the single point of contact to manage the installation, speak for the contractor and provide the following functions:

    a. Initiate and coordinate tasks with the Construction Manager and others as specified by the project schedule.
    b. Provide day to day direction and on-site supervision of Contractor personnel.
    c. Ensure conformance with all contract and warranty provisions.
    d. Participate in weekly site project meetings.
    e. This individual shall remain project manager for the duration of the project. The contractor may change Project Manager only with the written approval of A/E.

B. References:

1. Communications Contractor shall provide with bid a list of three reference accounts where similar Data, Voice, Fiber Optic Cable, and related migration/cutover equipment installation work was performed within the last year or twelve-month period.

C. Insurance Requirements:

1. Contractor shall be insured and shall provide with bid a Certificate of Indemnification, Certificate of Insurance, and meet all required insurance and licensing policies as specified by A/E Risk Management Division and any Federal, State, and local organization pertaining to data, voice and fiber optic cable installation.
2. Contractor’s vehicles brought onto project properties, shall comply with all requirements of all Federal, State, and local agencies. Vehicles shall meet current DOT, state and local, safety inspections where required.

D. Termination of Services:

1. Owner or A/E reserves the right to terminate the Communication Contractor's services if at any time the A/E determines the Communication Contractor is not fulfilling their responsibilities as defined within this document.
2. Contractor's appearance and work ethics shall be of a professional manner, dress shall be commensurate with work being performed.
3. Dress displaying lewd or controversial innuendos shall strictly be prohibited.
4. Conduct on project property shall be professional in nature.
5. Any person in the Contractor's employ working on a project considered by to be incompetent or disorderly, or for any other reason unsatisfactory or undesirable, such person shall be removed from work on the project.
6. The Communications Contractor shall be restricted from the premises and compensated for the percentage of work completed satisfactorily.

E. Other Contractor Responsibilities

1. Contractor is responsible for the removal and disposal of all installation and construction debris created in the process of the job. All work areas shall be cleaned at the conclusion of the workday and no tools or materials shall be left in a manner as to pose a safety hazard.
2. Contractor shall remove all abandoned cable per Article 800 of the National Electrical Code and per TIA and BICSI standards, recycling these materials where possible. This is mandatory; Contractors shall consider this when placing bids.
3. Contractor shall abide by the regulations set by A/E or Owner Security Department pertaining to access to and conduct while on project property and shall obey speed limits and parking regulations.

1.8 SYSTEM PERFORMANCE WARRANTY

A. General

1. Contractor shall provide a manufacturer System Warranty on all copper and fiber permanent cabling links.
2. This is a system performance warranty guaranteeing for a minimum of 20 years from acceptance that the installed system shall support all data link protocols for which that copper Category or fiber OS designation is engineered to support according to IEEE and TIA standards.
3. The manufacturer System Warranty may be invoked only if the cabling channel links are comprised of manufacturer connectivity and approved by the manufacturer. Patch cords shall be same manufacturer of cable.
4. Upon acceptance of Warranty, manufacturer will mail a notification letter to the installer and a notification letter and warranty certificate to A/E.

B. Contractor Warranty Obligations

1. Installation firm shall be a current manufacturer Certified Installer in good standing and shall include a copy of the company certification with the bid.
2. Contractor shall name a supervisor to serve on site as a liaison responsible to inspect and assure all terminations are compliant to factory methods taught in

manufacturer Technician Certification Training and according to all Standards cited in the Regulatory References section of this document.

3. Contractor liaison shall have a current, up-to-date manufacturer Certified Technician certificate in both copper and fiber. Copies of the copper and fiber certificates of the manufacturer liaison shall be submitted with the bid.
4. Contractor agrees all components comprising active links shall be of the same copper Category or fiber OS/OM designation as the system being installed. Contractor shall under no circumstances mix different Categories or OS/OM classes of cable or termination devices (connectors) within the same link or system.
5. Contractor shall install all racking and support structures according to cited TIA Standards in such fashion as to maintain both Standards and Manufacturer recommendations for uniform support and protection, segregation of different cable types, maintenance of maximum pulling tensions, minimum bend radius, approved termination methods as well as adhering to industry accepted practices of good workmanship.
6. Contractor is responsible for understanding and submitting to manufacturer all documents required prior to project start to apply for this warranty. These include but are not limited to the project information form and SCS warranty agreement.
7. Contractor is responsible for understanding and submitting to manufacturer all documents required at project end. These include completed warranty forms, passing test reports and drawings of floor plans showing locations of links tested.
8. Test results shall be delivered in the tester native format (not Excel) and represent the full test report. Summaries shall not be accepted. Contact manufacturer for a current list of approved testers, test leads and latest operating systems.
9. The Communications Contractor shall correct any problems and malfunctions that are warranty-related issues without additional charge for the entire warranty period. The warranty period shall commence following the acceptance of the project by A/E and written confirmation of Warranty from manufacturer.

1.9 SAFETY

A. General

1. All cabling work being performed on project property or under contract to shall comply with Rules for safe operations, any state or local safety regulations and meet the requirements of OSHA Safety and Health Standards. The contractor Project Manager shall maintain a copy of Rules for Safe Operations for reference. It is the responsibility of the Communications Contractor to immediately correct any unsafe working practices on the part of contractor personnel. Unsafe working environments or conditions created by contractor personnel shall be reported immediately to the Construction Manager.
2. Any liability for correction of conditions created by the contractor’s personnel rests with the contractor.
3. The Communications Contractor shall be solely and completely responsible for conditions of the job site (as pertaining to the materials and equipment specified), including safety of persons and property during performance of work.
4. No act, service, drawing review or construction observance by any employee, representative or engineer may be construed as a review or approval of the

adequacy of the contractor(s) safety measures, in, on, or near the construction site.

1.10 WORKING CONDITIONS

A. Site Access

1. All cable installations shall be pre-approved by the Construction Manager to ensure that the necessary arrangements have been made for proper access to project sites.
2. A twenty-four-hour prior notice shall be submitted to the Construction Manager for any work schedule changes.
3. Communications Contractor shall display badges or passes as mandated by project property Security Department Rules and Regulations.

B. Scheduling

1. Coordination of site surveys and the issue of project owner owned materials and equipment shall be the responsibility of the Construction Manager. Once said equipment and materials are in the contractor's possession, it is the contractors to safeguard the material and equipment from damage or theft.
2. Information required by the Contractor to price and complete a defined scope of work shall be furnished to the Communications Contractor by the A/E Project Manager in a Scope of Work document and at the time of the site survey (if necessary) and shall be maintained by the Communications Contractor until the completion of the job.
3. It is the contractor's responsibility to begin work promptly according to the Start Dates and to complete work by the Proposed Completion Date listed on the Cable Run Request Form.
4. The Contractor shall notify the Construction Manager in writing of any delays; at that time, they shall come up with a mutually agreeable project schedule.
5. The Communications Contractor shall coordinate with the Construction Manager working hours and job site access issues.
6. The Communications Contractor shall coordinate with the Construction Manager to minimize outages to the existing systems.
7. Any service interruption required by the Communications Contractor shall be requested in writing and scheduled with the Construction Manager.
8. The Communications Contractor shall not proceed with the requested service interruption until written approval is granted by the Construction Manager.
9. All problems, and questions relating to a particular job, shall be referred to the Construction Manager and no changes shall be made without his/her written approval.

C. Harmony Clause

1. Contractor shall coordinate and work in harmony with other trades on the project as well as with A/E personnel.

1.11 COORDINATION

A. Coordinate layout and installation of voice and data communication cabling with other owner contractors and equipment suppliers.

1. Meet jointly with other contractors, equipment suppliers, and owner representatives to exchange information and agree on details of equipment arrangements and installation interfaces.
2. Record agreements reached in meetings and distribute to other participants.
3. Adjust arrangements and locations of distribution frames, cross-connect and patch panels in equipment rooms and telecommunications rooms to accommodate and optimize arrangement and space requirements of voice and LAN equipment.
4. When indicated on drawings, contractor shall reuse existing copper and fiber optic backbone cables.
5. Provide weekly progress reports and crew schedules to project representatives by 5:00 PM, Thursday (or agreed upon day) of each project work week.

1.12 ACTION SUBMITTALS

A. Product Data: For each product indicated.

1. Submit all product data in accordance with general requirements of the construction documents.
2. Submit product cut sheets and a detailed list of components a minimum of two (2) weeks prior to commencement of Division-27 work for A/E review and action.
3. Contractor shall provide product data and installation instructions for all fire stopping materials
4. Alternate and “Or Equal” designated products shall be submitted for review and judgment to the A/E prior to installation. The contractor proposed alternate products or components shall be verified by two (2) independent sources within the past 6 months. This request shall include the two (2) independent sources, the original Product’s specification sheet, the proposed substitute product cut sheet, and a written request to review the substitute product.
5. Any request of an alternate or substitution shall be submitted to the A/E for action no later than fourteen (14) calendar days after release of the original telecommunications bid documents.

1.13 Information & Communication Technology (ICT) components

A.The Contract Documents generally outline industry standard components to be installed as part of the project ICT installation requirements. Such identification is intended to be general in nature rather than exhaustive. All stated quantities are subject to validation by ICT contractor. ICT Contractor is reminded that differences between estimated quantities and those reasonably derived based from the Contract Documents (as well as through bid conferences, job walks, addendums, and other distribution of information) shall be the responsibility of the ICT contractor. There shall be no additional cost incurred by NVC – New Residential Buildings project for not complying with the specifications and requirements of the Contract Documents.

B. Any variance from those components identified on the drawings and/or below shall be submitted to NVC – New Residential Buildings project representatives for approval prior to ordering and installation; the risk for all costs incurred by the ICT Contractor for materials ordered prior to such written approval shall be borne entirely by the ICT contractor. Nonetheless, it is imperative that the ICT Contractor determine the availability of necessary materials and propose equivalent substitutes as necessary to meet all installation milestones. Delays in ICT installations due to lack of product availability are unacceptable. As catalog numbers change frequently, the ICT Contractor shall verify all part numbers prior to ordering materials. Clarifications shall be issued in response to written Requests for Information (RFI).

C. Fire Stop and firestopping requirements for the project include:

1. All conduits leaving the entrance room for other portions of the building shall be fire-stopped after the installation of cable.
2. The Contractor shall fire stop around the tray and, after installation of the cables, within the tray using removable pillow-style products following manufacturers' guidelines. Sound deadening material shall be provided and installed after installation of cable.
3. Strict adherence to the CEC/NEC NFPA 101 is required for any raceway penetrations of fire-rated walls. See section 07840 for UL system numbers and to construction drawings for details.
4. All riser conduits shall be sealed using a UL classified fire stop. The Contractor shall provide a copy of the fire seal manufacturer's installation instructions and rating information prior to inspection of the installed materials.
5. Integrally Fire Stopped Sleeves

    a. Integrally Fire Stopped Sleeves shall be used for Telecommunications cabling in locations where the cabling pathway penetrates a fire barrier. The IFSS shall replace the use of conduit used in conjunction with other fire stopping methods.
    b. All manufacture instructions and requirements shall be followed for the installation of the IFSS.
    c. Documentation shall include picture of completed assemble with time/date stamp.

D. All new fiber optic cabling shall be indoor/outdoor-Plenum rated. Unrated cable (such as filled ASP) shall not be installed within the structure except when placed within IMT, PVC or RGS conduit.

E. Throughout this specification, Corning, Superior Essex, Chatsworth Products, Inc. and other manufacturers are cited. These citations are for the purpose of establishing quality, performance and warranty certification criteria.

1.14 DELIVERY AND STORAGE

A. ICT Contractor shall provide a materials schedule prior to the start date of cable installation. Material schedule shall specify all material quantities and their delivery date for this project.

B. ICT Contractor shall provide protection from weather, moisture, dirt, dust and other contaminants for telecommunications cabling and pathway equipment placed in storage.

1.15 INFORMATIONAL SUBMITTALS

A. Coordination Drawings:

1. Submit all shop drawings in accordance with the general requirements of the construction documents.
2. Submit shop drawings a minimum of two (2) weeks prior to commencement of Division-27 work for A/E review and action.
3. Shop drawings shall include evidence of grounding and bonding components are coordinated with field conditions and the work of other trades.
4. This submittal may have a written component and a visual, drawn component for review and action by the A/E prior to installation.

B. Certificates:

1. Submit management and installation team reference documentation verifying:

   a. The project manager is a RCDD in good standing with BICSI and is qualified to manage the scope of work described in the contract documents and has five (5) years of experience managing similar projects in size and scope. The documentation shall include the RCDD registration number.
   b. The field supervisor is a BICSI trained technician that is qualified to perform and oversee the work described in the contract documents.

C. Qualification Statements:

1. The contractor shall submit documentation that within the past 12 months, a minimum of 75% of all installation personnel have been trained or certified by the manufacturer of the products they are installing.

1.16 CLOSEOUT SUBMITTALS

A. As-Built Drawings:

1. Submit all as-built drawings in accordance with the general requirements of the construction documents.

   a. The drawing notes shall define field conditions experienced not defined in sheet notes.
   b. The drawings shall identify all fire stop locations and digital picture shall accompany as-built package.

2. Submit as-built drawings a minimum of two (2) weeks after completion of all Division- 27 work for A/E and Owner reference.

3. Communication contractor to print, frame and mount approved as-built drawings in MPOE. Coordinate location with A/E.

1.17 QUALITY ASSURANCE

A. Qualifications – Manufacturer

1. Component manufactures shall be ISO 9001:2000 and offer products that are RoHS compliant.
2. Installers shall have manufacturer certificate of completion for the fire stop solution being proposed.

B. Qualifications – Installer:

1. At a minimum, seventy-five percent (75%) of the onsite contractor provided field technicians shall be factory certified within 12 months by the manufacturer of the selected telecommunications system components being installed. Proof of certification shall be available on site for review at all times for each field technician.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 EXAMINATION

A. Check actual site conditions prior to start of any work. Ensure all preceding trade work associated with the telecommunications system is accurate and complete before proceeding with installation or use of products specified in this section.

B. Methodology for fire stop requirements that contractor shall comply with, include:

1. In any area in which a fire rated wall, partition, floor, or ceiling is penetrated, the Contractor shall be responsible for creating the pathway and sealing around all cables and sleeves with a UL classified fire seal sufficient to return the structure to its original rating. Creation of such openings as are necessary for cable passage between locations as shown on the drawings shall be the responsibility of the Contractor. Any opening in a rated structure created by the Contractor that is larger than one inch in diameter shall be equipped with a metal sleeve secured and fire-stopped in place.
2. Comply with requirements in Section 078413 "Penetration Firestopping."(Check Architect specifications for fire stopping)
3. Comply with TIA-569-B, Annex A, "Firestopping."
4. Comply with BICSI TDMM, "Firestopping Systems" Article.

C. Sleeves for Conduits Penetrating Above-Grade Non-Fire-Rated Concrete and Masonry-Unit Floors and Walls:

1. Interior Penetrations of Non-Fire-Rated Walls and Floors:

    a. Seal annular space between sleeve and pathway or cable, using joint sealant appropriate for size, depth, and location of joint. Comply with requirements in Section 079200 "Joint Sealants."
    b. Seal space outside of sleeves with mortar or grout. Pack sealing material solidly between sleeve and wall, so no voids remain. Tool exposed surfaces smooth; protect material while curing.

2. Use pipe sleeves unless penetration arrangement requires rectangular sleeved opening.
3. Size pipe sleeves to provide 1/4-inch annular clear space between sleeve and pathway or cable unless sleeve seal is to be installed or unless seismic criteria require different clearance.
4. Install sleeves for wall penetrations unless core-drilled holes or formed openings are used. Install sleeves during erection of walls. Cut sleeves to length for mounting flush with both surfaces of walls. Deburr after cutting.
5. Install sleeves for floor penetrations. Extend sleeves installed in floors 4 inches above finished floor level. Install sleeves during erection of floors.

D. Sleeves for Conduits Penetrating Non-Fire-Rated Gypsum Board Assemblies:

1. Use circular metal sleeves unless penetration arrangement requires rectangular sleeved opening.
2. Seal space outside of sleeves with approved joint compound for gypsum board assemblies.

3.2 RE-INSTALLATION

A. No additional burden to the owner regarding costs, network down-time, and end user interruption shall result from the re-installation of specified components. Scheduling for re- installation work shall be coordinated, in writing, with the owner prior to beginning any re- installation work

3.3 CLOSEOUT ACTIVITIES

A. Contractor shall provide documentation of all telecommunications system components under this section utilized throughout the site for review and reference by the Owner and A/E team.

B. Contractor to submit all as-built drawings and any test documentation required prior to acceptance by the Owner

END OF SECTION

SECTION 270543 - UNDERGROUND DUCTS FOR COMMUNICATIONS SYSTEMS

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Publications and Standards

B. Work Sequencing and Coordination

C. Telecommunications Submittals

D. Quality Assurance

1.2 PUBLICATIONS AND STANDARDS

A. National Electrical Code (NEC) (ANSI/NFPA 70):

1. Chapter 8: “Communications Systems”
2. Article 250: “Grounding”

B. Telecommunications Industry Association TIA 607 - Commercial Building Grounding and Bonding Requirements for Telecommunications

C. Federal Communications Commission (FCC) Part 15 and Part 68

D. Rural Utilities Services (RUS), formally REA

E. Lightning Protection Code - ANSI/NFPA 780-2017

F. American Society for Testing Materials (ASTM) Publications

G. National Electrical Manufacturer’s Association (NEMA) Publications

H. State of California Administrative Code, Title 24, Part 3, CCR, 1994 California Electrical Code

I. State of California Public Utilities Commission (Cal. P.U.C.) Publication: G.O. 92, 95, & 128 Rules for Construction of Underground Electrical and Communications Systems

J. Underwriters Laboratories Inc. (U.L.) Publications

1. 6-1981 (R86) Rigid Metallic Conduit
2. 514B-1982 Fittings for Conduit and outlet Boxes
3. 651-1981 Schedule 40 and 80 Rigid PVC Conduit
4. UL 467 “Grounding and Bonding Equipment”
5. UL 497, 497A, and 497B “Communications Circuit Protectors”

1.3 RELATED SECTIONS

A. Contract Terms and Conditions

B. Division 1 specification sections

C. Division 26 Related Electrical Underground Section(s)

D. Division 26 Related Bonding and Earthing Section(s)

1.4 SUBMITTALS

A. Submittals shall be made as defined in Section 270500.

1.5 QUALITY ASSURANCE

A. For products or workmanship specified by association, trade, Federal, or State Standards, the Contractor shall comply with the requirements of the standard. When more rigid requirements are specified or required by applicable (City) codes, the Contractor shall comply with City codes and local AHJ requirements.

B. The Contractor shall conform to reference standard by date of issue current on final design documents.

PART 2 - PRODUCTS

2.1 COMMUNICATIONS UTILITY VAULTS

A. All telecommunications vaults to be placed shall be specifically designed for telecommunications applications, with no exceptions.

B. Materials

1. The Contractor shall provide pre-cast utility vaults meeting ASTM C 478 with 28-day 5500 psi minimum compressive strength concrete and designed for AASHTO H-20 loading per AASHTO HB 14. The dimensions for each utility vault are specified on the construction drawings. Any questions the Contractor has about the size should be discussed with the owner’s representative and the telecommunications engineer.
2. Utility vaults shall have tongue-and-grove double sealed joints on mating edges of pre-cast components. The joints shall firmly interlock adjoining components and provide waterproof junctions and adequate shear transfer. Joints shall be sealed with approved watertight joint sealant as prescribed in the manufacturer’s installation specifications and conforming to AASHTO M198, Type B. Sealing material shall be installed in strict accordance with manufacturer’s printed instructions.

3. Conduit Entrances

    a. Knockout panels or pre-cast individual conduit openings may be used.
    b. On sides where no conduit is installed, 12-inch high by 12-inch wide (minimum) knockout panels for future raceway installation shall be provided. Knockouts are required on all four sides.
    c. For existing utility vaults, new ducts shall enter the utility vault with factory-formed bell end of the conduit, and a seal around the conduit shall be applied after installation. Existing utility vaults shall be retrofitted with the required racking and grounding and bonding per the TIA Bonding and Grounding Standards.

4. Covers

    a. The Contractor shall provide solid covers (traffic rated), with a 76.2 cm (30 in.) diameter clear opening. For vaults longer than 12’ in length, (2) openings with covers are required.
    b. Heavy-duty type frames and covers made of cast iron 10” high, suitable for H-20 loading, and having machined bearing surfaces shall be used.
    c. The covers shall be of indented type with solid top design.
    d. The upper side of each cover shall have the letters “Communications” cast or burned by welder, in integral letters no less than 2 inches high. Either the covers or the ring of the casting shall be field stamped with utility vault or pull box numbers.

C. Manufacturers

1. Utility Vault Company (Old Castle)
2. Jensen Precast
3. Approved equivalent product

2.2 COMMUNICATIONS PULL BOXES

A. Pre-cast pull boxes shall meet the standards defined in Subsection 2.1.B.(1).

B. Joints and seals shall be provided and installed as defined in Subsection 2.1.B.(2).

C. Conduit entrances shall be provided as defined in Subsection 2.1.B.(3).

D. Pull boxes shall be equipped with cable racking on both long walls suitable to support large copper cables as called for on the design documents.

E. All pull boxes shall be equipped with spring-loaded, traffic-rated, skid proof lids with a locking mechanism, unless otherwise specified in the drawings. All lids shall have the identification marking of “Communications” permanently affixed to the cover. The pull box number identification shall be stamped or welded on the cover per the Owner’s specified numbering plan.

2.3 COMMUNICATIONS UTILITY VAULT/PULL BOX HARDWARE

A. Materials

1. Pulling irons shall be provided, as required for the size of utility vault/pull box (minimum of 4 per utility vault: 2 placed on each end wall, top and bottom). Pulling irons shall be placed opposite the terminators. All pulling irons shall be constructed of 2.2 cm (7/8 inch) hot-dip galvanized steel.
2. A sump of 30cm (12 in.) in diameter shall be provided in each utility vault, per the manufacturer's specifications.
3. Heavy-weight cable racks with adjustable arms shall be provided for all cables in each utility vault. The racks shall be attached with adjustable inserts set in the concrete walls (bolts or studs embedded in concrete will not be used). Racks and inserts shall be centered on the side walls that are utilized for the racking of splice cases in the utility vault, arranged so that all spare conduit ends are clear for future cable installation. The racks shall have a sufficient number of arms to accommodate cables for each conduit entering or leaving the utility vault.
4. Corner stand-off brackets 15cm to 20cm (6 in. to 8 in. from wall) shall be provided if the utility vault is equipped with center exit conduits. The bracket shall extend from 15cm (6 in.) off floor to 15cm (6 in.) below roof.
5. All utility vault and pull box hardware shall be steel that is hot dip galvanized after fabrication.
6. Each utility vault shall have a detachable galvanized steel ladder that can be removed to facilitate future work in the utility vault. The ladder shall be secured to a top support arm in the utility vault opening or chimney.

B. Manufacturers

1. Hardware: Alhambra Foundry (model No. A-3382 ladder with A-3383 support bar) or Inwesco Products, or an approved equivalent product.
2. Utility vault: Utility Vault, or Associated Concrete Products, or an approved equivalent product.

C. Materials

1. Conduit

    a. Schedule 40 PVC - 4 inch inside diameter.
    b. Type C telephone conduit - 4 inch inside diameter (if concrete encased).
    c. If directional boring: HDPE Conduit, 4" from Carlon or equal.
    d. Corrugated flexible orange inner duct, 1-inch ID diameter, will be placed for fiber optic cable protection. A minimum of 4 inner ducts shall be placed in a 4-inch conduit, unless otherwise directed in the drawings.

2. Conduit shall have a factory formed bell on one end for interconnecting segments.
3. Spacers: High impact spacers shall be used in all multi-duct systems, for both solely owned or joint telecommunications/power construction. They shall conform with NEMA TC-2, TC-6, TC-8, and ASTM F 512 dimensions.
4. All fittings shall be designed specifically for use with the type of conduit placed.

5. All conduits shall be equipped with seal plugs in all utility vaults/pull boxes and expansion rubber seal plugs within all buildings.
6. Manufacturer: CARLON or approved equivalent.

2.4 COMMUNICATIONS ENTRANCE CONDUIT

A. To prevent shear, all conduit entering a building shall transition from PVC to metal from a minimum distance of 24” beyond the exterior of the foundation. These conduits shall slope downward away from the building to reduce the potential of water entering the building.

2.5 DUCT-BANK LOCATING CABLE (DETECTABLE WARNING TAPE)

A. Warning tape shall be a minimum of 3” wide, orange in color, and shall have a nondegradable imprint as follows:

1. “Caution Joint Power and Telecom Cable Buried Below”

B. The tape shall be detectable.

C. Manufacturer:

1. Carlon
2. Approved equivalent product

2.6 PULL ROPE

A. Pull rope shall be new 1/4” polypropylene over polyester rope with a minimum 1700 lb. tensile strength or woven cotton cord with footage markings (mule tape).

B. Manufacturers: Carlon or approved equivalent.

2.7 BONDING/GROUNDING – VAULTS AND PULL BOXES

A. The reinforcing steel in the walls of the utility vault shall be bonded together and brazed to the bronze inserts of each section of the utility vault per the manufacturer’s utility vault specifications. Two ground rods at opposite corners shall be furnished and installed in each vault (one rod in vaults smaller than 3’ X 5’ X 4’). The ground inserts shall be attached to the steel rebar to provide a point of attachment for the ground wires or bonding ribbon. The inserts shall be bronze, flush mounted, and brazed (exothermic weld) to the rebar cage of all the sections of the utility vault (bottom, intermediate, and roof sections).

B. Materials

1. Bonding Ribbon: Shall be made of annealed solid copper 3/8-inch-wide x 1/16 inch thick, tin plated. Manufacturer: INWESCO Cat.12A55 or approved equivalent.
2. Bonding Ribbon Clamp: Shall be made of soft lead 1/2-inch-wide by 1/16-inch-thick and shall accept 1/4-inch diameter bolt. Manufacturer: INWESCO Cat. 12A56 or approved equivalent.
3. Fargo Clamp: Shall be cast from copper, silver plated, furnished with copper bolt. Manufacturer: INWESCO Cat.12A57 or approved equivalent.
4. Ground Rod: Shall be manufactured of high strength high carbon steel, with electrolytically bonded jacket of copper on surface, and shall meet UL spec. 467 and ANSI C-33.8-1072. Manufacturer: INWESCO Cat.12A60 or approved equivalent.
5. Ground Inserts: Shall be made of Cast Bronze W/1/4 Copper Rod. Manufacturer: INWESCO Cat.12H69 or approved equivalent.

2.8 RACEWAY TAGS

A. Permanent markers with raceway designations engraved onto the tag shall be provided. Tags relying on adhesives or taped-on markers shall not be used.

2.9 DUCT PLUGS

A. Provide duct plugs capping all empty conduit and at conduit with installed cabling. All ducts and duct plugs must be re-enterable.

PART 3 - EXECUTION

3.1 COMMUNICATIONS UTILITY VAULTS AND PULL BOXES

A. General

1. The Contractor shall obtain all required permits and notifications before commencing any work operations.
2. All state and local ordinances shall be complied with at all times.
3. All federal, state, and local safety rules, including OSHA, will be enforced at all times during the duration of the project. It is the responsibility of the Contractor to inspect the job site to ensure compliance.

B. Final location of all communications utility vaults and pull boxes shall be determined by the Contractor and owner’s representative.

C. All conduits entering a utility vault or pull box shall be placed at right angles to the short walls and shall be sealed to prevent seepage unless otherwise specified on the construction documents.

D. Excavation dimensions shall be verified with the utility vault supplier in advance so as to prevent delays in setting schedule. All utility vaults and pull boxes shall be placed on 12 inches of compacted bedding material.

E. Shoring shall be in accordance to prevailing underground construction codes, i.e., OSHA, G. O. 128, NESC, and all applicable local, state, and federal statutes.

F. All utility vaults shall be equipped with pulling irons and a ladder for access.

G. Finish grade shall be established prior to placing structures.

H. The Contractor and the owner's representative shall inspect all utility vaults prior to backfilling.

I. Backfill materials shall have been sifted to provide a sand equivalent of not less than 20, and a sieve size of No.4 Backfill material shall be mechanically compacted to a minimum relative compaction of 90 percent to a level six (6) inches above final grade. The excess material shall be excavated to the final grade upon acceptance of compaction.

J. Existing and/or new communications utility vaults/pull boxes may be placed near the existing power and signal vault system. The Contractor shall either place new or enlarge existing utility vaults/pull boxes and conduits in such a manner as to not disturb existing utilities while maintaining specified clearances from all obstructions. This may require clearing much of the area around the vaults by hand. The final placement and depth shall be determined by the Contractor and owner's representative.

K. The Contractor shall locate all existing utilities within 20 feet of the new and/or enlarged utility vault/pull box system. The Contractor and owner's representative shall review and approve any revised coordination schematics. Caution shall be used when working in this area.

L. The Contractor shall excavate around existing vaults using caution to identify and preserve all utilities in the area.

3.2 UTILITY VAULT COVERS AND HARDWARE

A. Pull boxes shall be equipped with a non-skid, spring-loaded traffic-capable lid with a locking mechanism.

3.3 DUCT BANKS AND CONDUITS

A. All communications conduit banks shall be encased in slurry (2 bag cement mix, minimum 1800 PSI) with at least 2 inches of concrete at the top and bottom and 2 inches on each side when deemed necessary based on one or more of the following: bending radius, weight bearing, mechanical stress, etc. A horizontal and vertical separation of 2 inches between the ducts shall be maintained by installing high impact spacers with horizontal and vertical locking intervals of ten feet. Concrete shall have ten pounds of red oxide added for color.

B. All communications conduit shall be placed in a uniform manner between vaults. Conduit in position #1 at one utility vault shall maintain its position within the duct run and terminate in the #1 position at the next utility vault. The position of all conduits between utility vaults shall be maintained. All conduits shall enter utility vaults using the lower most precast knockouts.

C. Long radius bends (over 40 feet) shall be used whenever possible to make changes in direction. If it is found to be necessary to place a 90-degree bend in the conduit run, a factory-made sweep of no less than 12’ 6” radius shall be used. No conduit run shall exceed a total of 180 degrees of bend between any two points (such as utility vaults or buildings) considering both vertical and horizontal sweeps. Cold formed trench bends shall have a radius of not less than 40 feet and shall pass mandrel integrity. Bend radius criteria for conduit size 2” or less is 6 times the diameter of the conduit and, for any conduit larger than 2”, 10 times the diameter of the conduit.

D. All bends of less than 20-foot radius shall be encased in concrete when using Type C or Schedule 40 PVC conduits. Encasement shall start from 2 feet before curve to 2 feet past curve. Concrete shall be Type B at 2500 PSI, aggregate of no more than ¼” minus. Conduits shall be spaced at 2 inches minimum using high impact spacers at 2 feet on center.

E. The length and destination of all conduits shall be identified in each utility vault, pull box, and building. Embossed metal tags identifying each conduit shall be placed on end walls.

F. After installation of communications conduit, the Contractor shall prove all conduits by pulling a mandrel with a diameter ¼ inch smaller than the conduit and 6 inches long through each conduit end-to-end. An inspector designated by the Contractor and the owner’s representative shall be notified 24 hours before this procedure. Each conduit shall be cleaned with a bristle brush to remove any debris.

G. All utility vault and pull box entrances shall be shear-blocked with standard concrete extending no less than 15 inches from the entry wall. All entering ducts shall be completely encased.

H. Utility marking tape (see 3.5.A) shall be buried 12 inches below the surface directly above the conduit.

I. All conduit structures shall be built with the telecommunications conduits placed above the power conduits unless otherwise called out on the construction drawings and approved by the campus. If this type of construction is required, it shall receive the prior approval of the Contractor, the owner’s representative, and the Local Exchange Carrier.

J. All entrance conduits shall be securely fastened to the building. The end of the conduit located inside the building shall be sealed with expandable solid plugs to prevent rodents, water, or gases from entering the building.

3.4 ENTRANCE CONDUIT

A. The Contractor and the owner's representative shall determine the placement of all entrance conduit. All Applicable standards shall be adhered to, i.e., NEC, BICSI, Western Electric OSP, NESC or G.O. 128.

3.5 LOCATING DUCT BANK CABLE

A. Underground detectable warning tape shall be placed in all trenches at one foot below the final grade after the conduit and encasement is complete. The tape shall indicate the type of cable that will utilize the substructure system, e.g., fiber optic or copper cables. The detectable warning tape shall be installed according to manufacturer's specifications to ensure access to the tape for locating purposes.

3.6 PULL ROPE

A. Pull rope shall be new material that is free of knots, kinks, and abrasions.

B. Pull rope shall be placed as a single continuous length in every new duct section. (See Section 16730, 2.7.)

C. Pull rope shall be secured at each end.

3.7 BONDING/GROUNDING

A. Two ground rods shall be installed in each new manhole and one rod in a new pull box. All noncurrent-carrying metal parts in the utility vault and any metallic raceway grounding bushing shall be connected to this ground rod with a No. 4/0 bare copper ground conductor and approved ground clamp, as required per NEC.

B. The grounding system shall not rely on plumbing systems.

C. Bonding conductors shall be routed with a minimum number of bends. The bends placed in the conductor should be sweeping.

D. All bonding connections shall utilize listed bolts, crimp pressure connectors, clamps, or lugs. Exothermic welding may be used.

E. Multiple bus bars shall be directly bonded together with a No. 4/0 copper conductor.

F. Backbone cabling shall be bonded at each sheath opening with, minimally, a 6-AWG copper conductor.

END OF SECTION

SECTION 311000 - SITE CLEARING

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Removal of vegetation, grass, grass roots, shrubs, tree stumps, trees, upturned stumps, weed growth, tree roots, brush, masonry, concrete, rubbish, debris and other materials.
2. Removal of concrete and bituminous surfaces.
3. Removal of existing fences and gates.

B. Related Requirements:

1. Division 01 - General Requirements.
2. Section 31 2200 - Grading.
3. Section 31 2313 - Excavation and Fill.
4. Section 31 2316 - Excavation and Fill for Pavement.
5. Section 31 2319 - Excavation and Fill for Structures.
6. Section 31 2323 - Excavation and Fill for Utilities.
7. Section 31 2326 - Base Course.
8. Section 32 3113 - Chain Link Fences and Gates.
9. Section 32 9000 - Planting.

1.02 SUBMITTALS

A. Shop Drawings: Submit site plan indicating extent of site clearing.

1.03 QUALITY ASSURANCE

A. Comply with Standard Specifications for Public Works Construction, current edition, as a minimum requirement.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION

3.01 TREE AND STUMP REMOVAL

A. Remove trees and stumps indicated or required to be removed. Remove trees, together with bulk of roots, to a minimum depth of 4 feet below required grade, and within a radius of approximately 7 feet beyond perimeter of trunk at grade.

B. Fill and compact excavation from tree and stump removal. Fill in 6 inch layers, each compacted to 90 percent of maximum density in accordance with ASTM D1557.

1. Back filling shall not commence until the excavation is inspected and tested.

3.02 CONCRETE AND BITUMINOUS SURFACING REMOVAL

A. Break up and completely remove existing concrete surfacing, curbs, gutters, walks and bituminous surfacing to indicated limits. Cutting shall be performed to a neat and even line with proper tools or a concrete cutting saw. Minimum depth of cut shall be 1 1/2-inch, unless otherwise indicated. Remove concrete broken beyond the indicated limits to the nearest joint or score line and replace with new concrete to match existing.

3.03 FENCING

A. Existing fences scheduled to remain may be removed to facilitate the Work, provided they are installed to their original condition in accordance with requirements of Section 32 3113 - Chain Link Fences and Gates.

B. Fencing indicated to be removed and not reinstalled shall be completely removed, including footings. Fill and compact excavations.

C. Install chain link fencing indicated to be relocated or reset in accordance with applicable requirements specified under Section 32 3113 - Chain Link Fences and Gates.

3.04 CLEANUP

A. Remove rubbish, debris and waste materials and legally dispose of off the Project site.

END OF SECTION

SECTION 311010 - SITE CLEARING – LANDSCAPE PREPARATION

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Protecting existing vegetation to remain.
   2. Removing existing vegetation.
   3. Clearing and grubbing.
   4. Stripping and stockpiling topsoil.
   5. Removing above- and below-grade site improvements.
   6. Disconnecting, capping or sealing site utilities.
   7. Temporary erosion- and sedimentation-control measures.

1.2 MATERIAL OWNERSHIP

A. Except for stripped topsoil and other materials indicated to be stockpiled or otherwise remain Owner's property, cleared materials shall become Contractor's property and shall be removed from Project site.

1.3 PROJECT CONDITIONS

A. Traffic: Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities during site-clearing operations.

   1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction.
   2. Provide alternate routes around closed or obstructed traffic ways if required by Owner or authorities having jurisdiction.

B. Salvable Improvements: Carefully remove items indicated to be salvaged and store on Owner's premises where indicated.

C. Utility Locator Service: Notify utility locator service for area where Project is located before site clearing.

D. Do not commence site clearing operations until temporary erosion- and sedimentation-control and plant-protection measures are in place.

E. 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.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Satisfactory Soil Material: Requirements for satisfactory soil material are specified in Section 312000 Earth Moving.

1. Obtain approved borrow soil material off-site when satisfactory soil material is not available on-site.

PART 3 - EXECUTION

3.1 PREPARATION

A. Protect and maintain benchmarks and survey control points from disturbance during construction.

B. Locate and clearly identify trees, shrubs, and other vegetation to remain or to be relocated.

C. Protect existing site improvements to remain from damage during construction.

1. Restore damaged improvements to their original condition, as acceptable to Owner.

3.2 TEMPORARY EROSION AND SEDIMENTATION CONTROL

A. Provide temporary erosion- and sedimentation-control measures to prevent soil erosion and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways, according to erosion- and sedimentation-control Drawings and requirements of authorities having jurisdiction.

B. Verify that flows of water redirected from construction areas or generated by construction activity do not enter or cross protection zones.

C. Inspect, maintain, and repair erosion- and sedimentation-control measures during construction until permanent vegetation has been established.

D. Remove erosion and sedimentation controls and restore and stabilize areas disturbed during removal.

3.3 TREE AND PLANT PROTECTION

A. General: Protect trees and plants remaining on-site according to requirements in Section 015639 Temporary Tree and Plant Protection.

B. Repair or replace trees, shrubs, and other vegetation indicated to remain or be relocated that are damaged by construction operations, in a manner approved by Architect.

3.4 EXISTING UTILITIES

A. Locate, identify, disconnect, and seal or cap utilities indicated to be removed or abandoned in place.

1. Arrange with utility companies to shut off indicated utilities.

B. Interrupting Existing Utilities: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:

1. Notify Architect not less than two days in advance of proposed utility interruptions.
2. Do not proceed with utility interruptions without Architect's written permission.

C. Removal of underground utilities is included in earthwork sections and with applicable fire suppression, plumbing, HVAC, electrical, communications, electronic safety and security and utilities sections and Section 024116 Structure Demolition and Section 024119 Selective Demolition.

3.5 CLEARING AND GRUBBING

A. Remove obstructions, trees, shrubs, and other vegetation to permit installation of new construction.

1. Grind down stumps and remove roots, 1-inch and larger, to a depth of 18 inches below exposed finish grade.
2. Use only hand methods for grubbing within protection zones.

B. Fill depressions caused by clearing and grubbing operations with satisfactory soil material unless further excavation or earthwork is indicated.

1. Place fill material in horizontal layers not exceeding a loose depth of 8 inches and compact each layer to a density equal to adjacent original ground.

3.6 TOPSOIL STRIPPING

A. Remove sod and grass before stripping topsoil.

B. Strip topsoil to depth of 6 inches in a manner to prevent intermingling with underlying subsoil or other waste materials.

C. Stockpile topsoil away from edge of excavations without intermixing with subsoil. Grade and shape stockpiles to drain surface water. Cover to prevent windblown dust and erosion by water.

3.7 SITE IMPROVEMENTS

A. Remove existing above- and below-grade improvements as indicated and necessary to facilitate new construction.

3.8 DISPOSAL OF SURPLUS AND WASTE MATERIALS

A. Remove surplus soil material, unsuitable topsoil, obstructions, demolished materials, and waste materials including trash and debris, and legally dispose of them off Owner's property.

B. Separate recyclable materials produced during site clearing from other nonrecyclable materials. Store or stockpile without intermixing with other materials and transport them to recycling facilities. Do not interfere with other Project work.

END OF SECTION

SECTION 312313 - EXCAVATION AND FILL

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Excavating, filling, backfilling, and compacting for Project site pavement, planting areas, buildings, and other structures.
2. Trenches for utility lines such as water, gas, irrigation, storm drain and sewer lines, concrete-encased conduits, manholes, vaults, valve boxes, catch basins, underground tanks, thrust blocks, yard boxes, pull boxes, and other utility appurtenances.

B. Related Requirements:

1. Division 01 - General Requirements.
2. Section 01 4524 - Environmental Import/Export Materials Testing.
3. Section 31 1000 - Site Clearing.
4. Section 31 2200 - Grading.
5. Section 31 2326 - Base Course.
6. Section 32 1313 - Site Concrete Work.
7. Section 32 3113 - Chain Link Fences and Gates.
8. Section 32 8413 - Potable Water Irrigation.
9. Section 32 8426 - Reclaimed Water Irrigation.
10. Section 32 9000 - Planting.
11. Section 33 1100 - Site Water Distribution Utilities.
12. Section 33 3000 - Site Sanitary Sewer Utilities.
13. Section 33 4000 - Storm Drainage Utilities.
14. Division 22 - Plumbing.
15. Division 26 - Electrical.

1.02 PROJECT REQUIREMENTS

A. Import and Export of Earth Materials:

1. Fees: Pay as required by authorities having jurisdiction over the area.
2. Bonds: Post as required by authorities having jurisdiction over the area.
3. Haul Routes and Restrictions: Comply with requirements of authorities having jurisdiction over the area.

1.03 SUBMITTALS

A. Shoring calculations as required in Article 3.03 of this Section.

1.04 QUALITY ASSURANCE

A. Comply with the Standard Specifications for Public Works Construction, current edition, except as modified herein.

B. Sampling, testing, and certification of imported and exported soils shall be performed in accordance with Section 01 4524, Environmental Import/Export Materials Testing.

1.05 TESTING

A. OWNER will retain a Geotechnical Engineer as an OWNER Consultant who will provide observations, tests, inspections and approvals identified in the Contract Documents as being responsibility of OWNER.

B. Imported Soils: The Geotechnical Engineer will obtain initial product Sample for testing in accordance Article 3.05 of this Section.

1.06 PROJECT CONDITIONS

A. Information on Drawings or in soil investigation report does not constitute a guarantee of accuracy or uniformity of soil conditions over the Project site.

PART 2 - PRODUCTS

2.01 FILL AND BACKFILL MATERIALS

A. Fill and backfill material shall be a granular material previously removed from excavation or imported fill material, free of clods and stones larger than 3 inches, (2½ inches for utility trenches) foreign materials, vegetable growths, sod, expansive soils, rubbish and debris. Material shall conform to these specified requirements and related sections.

B. Fill material exhibiting a wide variation in consistency and moisture content shall be blended and aerated to stabilize and upgrade the material.

C. Bedding material from trench bottom to one foot above the pipe:

1. Sand, gravel, crushed aggregate or native free-draining granular material providing a sand equivalent of at least 30 or a coefficient of permeability greater than 1.4 inches per hour.
2. Sand complying with the Specifications for cement concrete aggregates.

D. Brick rubble and broken concrete originating from the Project site shall be legally disposed of off the Project site No such material shall be imported from outside the Project site.

E. Permeable Backfill:

1. Provide permeable backfill material behind retaining structures consisting of gravel, crushed gravel, crushed rock, natural sands, manufactured sand, or combinations of these materials conforming to the following gradations:

Sieve Size:	Percentage Passing:
3/4 inch (19mm)	100
3/8 inch (10mm)	80 to 100
No. 100	0 to 8
No. 200	0 to 3

2. Those portions of fill material passing a No. 4 sieve shall provide a sand equivalent of at least 60.
3. Provided backing for weep-holes shall consist of two cubic feet of aggregate in burlap sacks, securely tied. Aggregate shall conform to requirements for No. 3 concrete aggregate as specified in subsection 200-1.4 of the Standard Specifications for Public Works Construction.
4. Permeable Backfill Alternate Materials: Instead of the materials specified for retaining structures backfill, a drainage matting system Miradrain by Mirafi, Inc., American Wick Drain, JDR Enterprises, or equal, may be provided if reviewed and approved by the ARCHITECT.

F. Cement-sand slurry shall be provided with one sack of cement per cubic yard of the mixture.

2.02 BASE MATERIALS

A. Concrete Slabs on Grade: Provide "Crushed Aggregate Base" as specified in Standard Specifications for Public Works Construction, Section 200 - Rock Materials, with 3/4 inch maximum size aggregates. Provide 3 inch thick base, unless noted otherwise.

B. Bituminous Surfacing: Provide as indicated on Drawings and specified in Section 31 2326 Base Course.

PART 3 - EXECUTION

3.01 GENERAL

A. Before initiating intrusive activities, contact Underground Service Alert of Southern California (USA or Dig Alert) to obtain a Dig Alert ticket for location information on buried public and USA member utilities and pipelines at least 48-hours prior to beginning work. A copy of the Dig Alert ticket shall be forwarded to the OWNER. For on-site utilities, retain a state-licensed third party underground utility locating service.

B. Where the Work includes a building extension or addition on an occupied Project site, perform Work in such a manner, and at such times, as not to disrupt

performance of existing utility services to existing Project site facilities. Where an interruption is necessary, obtain review from the OAR before proceeding.

C. Remove concrete or bituminous pavement to straight lines by saw cutting.

3.02 PROTECTION

A. Protect and guard excavations against danger to life, limb, and property as required by, but not limited to, OSHA regulations.

B. Protect existing improvements including landscaping against damage. Repair or replace damaged items.

C. Protect existing utility services and distribution systems from damage or displacement.

D. Remove conduits or pipes not in service, exposed during Work, unless a minimum cover of two feet is provided. Remove concrete, clay or other non-metallic pipe over 8 inches in diameter, unless otherwise indicated.

E. Shore, crib, or lag excavations and earthen banks as necessary to prevent cave in, erosion or gullying of sides.

F. Provide excavations free from standing water by pumping, draining, or providing protection against water intrusion. If soil becomes soft, soggy, or saturated, excavate to firm undisturbed earth and fill as required. Slope adjacent grades away from excavations to minimize entry of water.

3.03 SHORING

A. Provide shoring as necessary to properly and safely support earth sides of excavations, and existing curbs, sidewalks, gutter, drives and stairs, against movement and collapse.

B. Design and Calculations: Provide in accordance with requirement of governing Cal-OSHA requirements.

C. Remove shoring upon completion of the Work of this Section or when no longer needed unless required otherwise by authorities having jurisdiction.

3.04 EXCAVATION

A. Unclassified Excavations: Comply with the Standard Specifications for Public Works Construction, Section 300: "Earthwork", except as modified herein.

B. Form sides of footings, pads, grade beams, and slab foundations, unless otherwise indicated. Provide excavations of sufficient size to permit installation and removal of forms and other required Work.

C. Machine-drill excavation for round footings to size and depth indicated. Provide a collar or casing, or other adequate protection, to exclude dirt and debris. Protect excavations with plank covers until concrete is placed.

D. Provide excavation bottoms level and free from loose material. Excavate to indicated or required elevations of undisturbed earth.

E. Barricade trenches, ditches, pits, sumps, and similar Work outside the barricaded working area with chain link fence as specified in Section 01 5000 - Construction Facilities and Temporary Controls, and in accord with Cal-OSHA standards and requirements.

F. Trenches over five feet in depth shall comply with the Construction Safety Orders of the California Division of Industrial Safety.

G. Where indicated or required to excavate in lawn areas, protect adjoining lawn areas outside of the Work area. Replace or install removed sod upon completion of backfill by installing sod level with adjacent lawns. If installation of removed sod fails, furnish sod and install to match existing lawns.

H. For Structures:

1. Calculate excavation quantities based on elevations or depths indicated on Drawings.
2. Provide 2,000 psi concrete for backfill of over-excavated areas to indicated or required elevations.
3. Special preparation of bottom of excavated planes areas: Excavate areas shown on Drawings as bottom of excavated planes (B.E.P.), by excavating and filling to indicated grades and elevations.

I. For Utilities:

1. Excavate trenches to required depth for utility lines, such as pipes, conduits, and tanks, with minimum allowance of 6 inches at the bottom and 6 inches at the sides for bedding or concrete encasement as indicated on Drawings. Grade bottom of trenches to a uniform smooth surface. Remove loose soil from the excavation before placing sand bedding or concrete encasement.
2. Do not install piping lengthwise under concrete walks without review by the ARCHITECT.
3. Do not excavate trenches parallel to footings closer than 18 inches from the face of the footing or below a plane having a downward slope of two horizontal to one vertical, from a line 9 inches above bottom of footings.
   a. Unless otherwise indicated on Drawings, depth of excavations outside buildings shall provide for a minimum coverage above top of piping, tank or conduit measured from the lowest adjoining finished grade, as follows:

Steel Pipe	24 inches below finish grade
Copper Water Tube	18 inches below finish grade
Cast-Iron, Pressure Pipe	36 inches below finished grade
Plastic Pipe (other than waste)	30 inches below finished grade

Tanks or other structure	36 inches below finished grade
Soil, sewer and storm drain	minimum 18 inches below finished grade, and as required for proper pitch and traffic load. Install polypropylene sewer pipe with at least 24 inches of coverage.
Irrigation Pipe:	Non-pressure pipe - 12 inches, pressure pipe - 24 inches.

b. Trench width shall provide space for fitting and joining. Excavate for piping bells and fittings, bell and spigot pipe and other fittings.

4. Where portions of existing structures, walks, paving, or other improvements are removed or cut for piping or conduit installation, replace the material with equal quality, finished to match adjoining existing improvements. Repair pavement as specified in Section 32 0117 - Pavement Repair.

5. Provide a minimum clear dimension of 2 inches from sides of wall excavation to outer surfaces of buried pipes or conduits placed in the same trench or outside surfaces of containers and tanks.

3.05 IMPORT/EXPORT OF MATERIALS

A. Unclassified Fill and Compaction: Comply with the Standard Specifications for Public Works Construction, Section 300 - Earthwork, except as modified herein. Install and compact fill in layers not to exceed 6 inches in thickness.

B. Provide fill materials as specified in Part 2- Products. If excavated materials from the Project site are not of required quality or sufficient quantity, import additional materials as necessary.

C. In addition to the requirements of this Section, import and/or exported materials shall comply with the requirements of Section 01 4524, Environmental Import/Export Materials Testing.

D. Imported fill materials shall be sampled by the Geotechnical Engineer, for compliance with the requirements of Part 2 of this Section.

E. The Geotechnical Engineer, will submit the samples to an independent DSA approved testing laboratory for testing.

F. Initial sampling and testing shall be performed before importing material to the Project site. Identify the location of the source site in addition to the address, name of the person and entity responsible for the source site. The Geotechnical Engineer, will obtain both the initial and additional samples from the identified site and submit samples for required testing.

G. The Geotechnical Engineer will perform additional sampling during import operations. If the total quantity of import is determined to be greater than 1000 cubic yards of material, one sample shall be obtained and submitted for testing for each 250 cubic yards of imported material. If the total quantity of import is

determined to be less than 1000 yards, one sample shall be obtained and submitted for testing for each 100 cubic yards of imported material.

H. The independent approved testing laboratory will perform the required tests and report results of tests noting if the tested material passed or failed such tests and will furnish copies to the Project Inspector, ARCHITECT, OAR, DSA, CONTRACTOR, and others as required. Report shall state tests were conducted under the responsible charge of a licensed State of California professional engineer and the material was tested in accordance with applicable provisions of the Contract Documents, California Building Code, and the DSA. Upon completion of the Work of this Section, the independent testing laboratory and Geotechnical Engineer will submit a verified report to the DSA as required by the CBC.

I. Bills of lading or equivalent documentation will be submitted to the Project Inspector on a daily basis.

J. Upon completion of import operations, provide the OAR a certification statement attesting that imported material has been obtained from the identified source site.

3.06 INSTALLATION OF MATERIALS

A. Pavement: Fill or backfill materials shall be installed in horizontal layers of 6 inches, unless otherwise required. Each layer shall be evenly placed and moistened or aerated as necessary. Unless otherwise reviewed by the Geotechnical Engineer, each layer of fill material shall cover the length and width of the area to be filled before the next layer of material is installed. Top surface of each layer shall be installed to an approximate level with a crown or crossfall of at least 1 in 50, but not more than 1 in 20. Provide adequate drainage at all times during installation of the Work of this Section.

B. Structures:

1. After concrete has been placed, forms removed, and concrete Work inspected, backfill excavations with earth to indicated or required grades. Backfill simultaneously on each side of walls or grade beams. Remove rubbish, debris and other waste materials from excavations before placing backfill.
2. Before placing backfill, adequately cure concrete and provide bracing, if required to stabilize structure. Protect waterproofing or damp-proofing against damage during backfilling operations, with required protection board. Remove bracing as backfill operation progresses.
3. Do not furnish or install expansive soils for retaining wall backfill.
4. Rigidly control the amount of water to be installed to provide optimum moisture content for type of fill material furnished. Do not over-saturate or compact by flooding or jetting.
5. Install wall backfill before installing railings and fences on walls.
6. Install weep hole drainage at the backside of walls so the backing completely covers the weep holes, is horizontally centered and extends at least 12 inches above the bottom of the weep opening. Provide an 8-inch

square section of 1/4 inch galvanized or aluminum screen, with a minimum wire diameter of 0.03 inch, and install at the backside of each weep hole before installing the backfill material.

7. Where a reviewed drainage matting system is provided instead of permeable backfill for retaining structures, install in accordance with the manufacturer recommendations.

C. Utilities:

1. Do not install backfill until the Work of this Section has been inspected and tested. Do not furnish or install materials excavated from the Project site containing materials not permitted for backfill.
2. Backfill electrical or other excavated utility trenches located outside of barricaded installation areas within 24 hours after inspection by the IOR.
3. Install backfill in layers not exceeding 4 inches in thickness, except cement-sand slurry.
4. If materials excavated from the Project site are not permitted for trench backfill in paved areas, backfill trenches with a cement-sand slurry mix. Install backfill to an elevation of the existing undisturbed grades plus one inch.

3.07 COMPACTING

A. Each layer of fill material shall be compacted by tamping, sheepsfoot rollers, or pneumatic-tired rollers to provide specified relative compaction. At inaccessible locations, provide specified compaction by manually held, operated and directed compaction equipment.

B. Install and compact sand bedding to provide a uniform bearing under the full length of piping and conduits.

C. Unless otherwise indicated, compact each layer of fill material to a relative compaction of at least ninety percent.

D. When fill materials, or a combination of fill materials, are encountered or provided which develop densely packed surfaces as a result of installation or compacting operations, scarify each layer of compacted fill before installing the next succeeding layer.

3.08 INSPECTION AND TESTING

A. The Geotechnical Engineer will inspect and test excavations, sample material quality for testing as set required in Part 2, and observe installation and compaction of fill materials.

B. The Geotechnical Engineer will sample imported fill materials from their designated source and submit samples to the independent approved testing laboratory before delivery to the Project site.

C. Installation of backfill shall be observed by the Geotechnical Engineer.

D. The Geotechnical Engineer will inspect and test excavation Work before the installation of fill and other materials.

E. Compaction: Test compaction in accordance with ASTM D1557, Method C.

F. The Project Inspector will inspect foundation excavations when completed and ready for forms, after forms are in place, and before first placement of concrete.

3.09 PROTECTION

A. Protect the Work of this Section until Substantial Completion.

3.10 CLEANING

A. Remove rubbish, debris, and waste materials and legally dispose of off the Project site.

END OF SECTION

SECTION 312316 - EXCAVATION AND FILL FOR PAVING

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Excavating, backfill, and compacting for paved areas.
2. Installation of fill materials.

B. Related Requirements:

1. Division 01 - General Requirements.
2. Section 01 4524 - Environmental Import/Export Materials Testing.
3. Section 31 1000 - Site Clearing.
4. Section 31 2200 - Grading.
5. Section 31 2323 - Excavation and Fill for Utilities.
6. Section 32 2326 - Base Course.
7. Section 32 0117 - Pavement Repair.
8. Section 32 1216 - Asphalt Paving.
9. Section 32 1313 - Site Concrete Work.

1.02 PROJECT REQUIREMENTS

A. Import and Export of Earth Materials:

1. Fees: Pay as required by authorities having jurisdiction over the area.
2. Bonds: Post as required by authorities having jurisdiction over the area.
3. Haul Routes and Restrictions: Comply with requirements of authorities having jurisdiction over the area.

1.03 QUALITY ASSURANCE

A. Comply with Standard Specifications for Public Works Construction, current edition, except as modified herein.

B. Sampling, testing, and certification of imported and/or exported soils shall be performed in accordance with Section 01 4524 - Environmental Import/Export Materials Testing.

1.04 TESTING

A. OWNER will retain a Geotechnical Engineer as an OWNER Consultant who will provide observations, tests, inspections and approvals identified in the Contract Documents as being responsibility of OWNER.

B. Imported Soils: The Geotechnical Engineer will obtain initial product Sample for testing in accordance Article 3.05 of this Section.

1.05 PROJECT CONDITIONS

A. Information on Drawings or in soils report does not constitute a guarantee of accuracy or uniformity of soil conditions over the Project site.

PART 2 - PRODUCTS

2.01 BASE MATERIALS

A. Concrete Slabs On Grade: Provide “Crushed Aggregate Base “as specified in the Standard Specifications for Public Works Construction, Section 200: “Rock Materials,” with ¾ inch maximum size aggregates. Provide 3-inch thick base, unless noted otherwise.

B. Bituminous Surfacing: As indicated on Drawings and specified in Section 31 2326 - Base Course.

2.02 FILL AND BACKFILL MATERIALS

A. Fill and backfill materials shall be previously excavated materials or imported fill material, free of clods and stones larger than 3-inch, foreign materials, vegetable growths, sod, expansive soils, rubbish and debris. Material shall conform to these specified requirements and related sections.

B. Fill material exhibiting a wide variation in consistency and moisture content shall be blended or aerated to stabilize and upgrade the material.

C. Imported Fill Material:

1. Provide suitable materials obtained from Project site excavations for earthwork and fill materials. If excavated materials are not of suitable quality or sufficient quantity, import additional materials as necessary.
2. Imported fill shall be a granular material with sufficient binder to form a firm and stable unyielding subgrade and shall not have more than 60 percent of fines passing 200 mesh sieve. Material shall have a coefficient of expansion of not more than 2 percent from air dry to optimum moisture content and not more than 6 percent from air dry to saturation. Imported material shall be clean and free of rubbish, debris, and toxic or hazardous contaminants. Adobe or clay soils are not permitted.

D. Brick rubble and broken concrete originating from the Project site shall be legally disposed of off the Project site. No such materials shall be imported from outside the Project site.

E. Permeable Backfill:

1. Provide permeable backfill material behind retaining structures consisting of gravel, crushed gravel, crushed rock, natural sands, manufactured sand, or combinations of these materials conforming to the following gradations:

Sieve Size:	Percentage Passing:
3/4 inch (19mm)	100
3/8 inch (10mm)	80 to 100
No. 100	0 to 8
No. 200	0 to 3

2. Those portions of fill material passing a No. 4 sieve shall provide a sand equivalent of at least 60.
3. Provided backing for weep holes shall consist of two cubic feet of aggregate in burlap sacks, securely tied. Aggregate shall conform to requirements for No. 3 concrete aggregate as specified in subsection 200-1.4 of the Standard Specifications for Public Works Construction.
4. Permeable Backfill Alternate Materials: Instead of the materials specified for retaining structures backfill, a drainage matting system, Miradrain by Mirafi, Inc., or equal, may be provided if reviewed and approved by the ARCHITECT.

PART 3 - EXECUTION

3.01 GENERAL

A. Before initiating intrusive activities, contact Underground Service Alert of Southern California (USA or Dig Alert) to obtain a Dig Alert ticket for location information on buried public and USA member utilities and pipelines at least 48-hours prior to beginning work. A copy of the Dig Alert ticket shall be forwarded to the OWNER. For on-site utilities, retain a state-licensed third party underground utility locating service.

B. Clear the Project site as indicated in Section 31 1000 - Site Clearing.

3.02 PROTECTION

A. Protect and guard excavations against danger to life, limb, and property as required by, but not limited to, Cal-OSHA regulations.

B. Protect adjacent existing improvements including landscaping against damage.

3.03 EXISTING UTILITY LINES

A. Protect existing utility lines from damage or displacement.

B. Remove conduits or pipes not in service, exposed during Work, unless a minimum cover of 2 feet is provided. Remove concrete, clay or other non-metallic pipe over 8 inches in diameter, unless otherwise indicated.

3.04 EXCAVATION

A. Unclassified Excavations: Comply with the Standard Specifications for Public Works Construction, Section 300: "Earthwork," except as modified herein.

3.05 FILL

A. Unclassified Fill and Compaction: Comply with the Standard Specifications for Public Works Construction, Section 300: "Earthwork," except as modified herein.

B. Provide fill materials as specified in Part 2 - Products. If excavated materials from the Project site are not of required quality or sufficient quantity, import additional materials as necessary.

C. In addition to the requirements of this Section, import and/or exported materials shall comply with the requirements of Section 01 4524 - Environmental Import/Export Materials Testing.

D. Imported fill materials will be sampled by the Geotechnical Engineer for compliance with the requirements of Part 2 of this Section.

E. The Geotechnical Engineer will submit samples to a DSA approved independent approved testing laboratory for testing.

F. Initial sampling will be performed by the Geotechnical Engineer before importing material to the Project site. Identify the location of the source site in addition to the address, name of the person and/or entity responsible for the source site. The Geotechnical Engineer will obtain both the initial and additional samples from the identified site and will submit samples to the approved independent testing laboratory for testing.

G. The Geotechnical Engineer will perform additional sampling during import operations. If the total quantity of import is determined to be greater than 1,000 cubic yards of material, one sample shall be obtained and submitted for testing for each 250 cubic yards of imported material. If the total quantity of import is determined to be less than 1,000 yards, one sample shall be obtained and submitted for testing for each 100 cubic yards of imported material.

H. The independent approved testing laboratory will perform the required tests and report results of tests noting if the tested material passed or failed such tests and

will furnish copies to the Project Inspector, ARCHITECT, OAR, DSA, CONTRACTOR, and others as required. Report shall state tests were conducted under the responsible charge of a licensed State of California professional engineer and the material was tested in accordance with applicable provisions of the Contract Documents, CBC, and the DSA. Upon completion of the Work of this Section, the independent testing laboratory and Geotechnical Engineer shall submit a verified report to the DSA as required by CBC.

I. Bills of lading or equivalent documentation will be submitted to the Project Inspector on a daily basis.

J. Upon completion of import operations, provide the OAR a certification statement attesting that imported material has been obtained from the identified source site.

3.06 INSTALLATION OF MATERIALS

A. Fill or backfill materials shall be installed in horizontal layers of 6 inches, unless otherwise required. Each layer shall be evenly placed and moistened or aerated as necessary. Unless otherwise reviewed by the Geotechnical Engineer, each layer of fill material shall cover the length and width of the area to be filled before the next layer of material is installed. Top surface of each layer shall be installed to an approximate level with a crown or crossfall of at least 1 in 50, but no more than 1 in 20. Provide adequate drainage at all times during construction of the Work of this Section.

3.07 COMPACTING

A. Each layer of fill material shall be compacted by tamping, sheepsfoot rollers, or pneumatic-tired rollers to provide specified relative compaction. At inaccessible locations, provide specified compaction by manually held, operated and directed compaction equipment.

B. Unless otherwise indicated, compact each layer of earth fill to a relative compaction of at least 90 percent.

C. When fill materials, or a combination of fill materials, are encountered or provided which develop densely packed surfaces as a result of installation or compacting operations, scarify each compacted layer before installing the next succeeding layer.

3.08 INSPECTION AND TESTING

A. The Geotechnical Engineer will inspect and test excavations, sample material quality as required in Part 2, and observe installation and compaction of fill materials.

B. The Geotechnical Engineer will sample imported fill materials from their designated source before delivery to the Project site.

C. Installation of backfill will be observed by the Geotechnical Engineer.

D. The Geotechnical Engineer will inspect and test excavation Work before the installation of fill and/or other materials.

E. Compaction: Test compaction in accordance with ASTM D1557, Method C.

3.09 PROTECTION

A. Protect the Work of this Section until Substantial Completion.

3.10 CLEANING

A. Remove rubbish, debris, and waste materials and legally dispose of off the Project site.

END OF SECTION

SECTION 312319 - EXCAVATION AND FILL FOR STRUCTURES

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Excavating, backfilling, and compacting for buildings and structures.
2. Fill materials.

B. Related Requirements:

1. Division 01 - General Requirements.
2. Section 01 4524 - Environmental Import/Export Materials Testing.
3. Section 31 1000 - Site Clearing.
4. Section 31 2200 - Grading.
5. Section 31 2616 - Excavation and Fill for Paving.
6. Section 31 2323 - Excavation and Fill for Utilities.

1.02 PROJECT REQUIREMENTS

A. Import and Export of Earth Materials:

1. Fees: Pay as required by authorities having jurisdiction over the area.
2. Bonds: Post as required by authorities having jurisdiction over the area.
3. Haul Routes and Restrictions: Comply with requirements of authorities having jurisdiction over the area.

1.03 SUBMITTALS

A. Imported Soils: A Geotechnical Engineer, retained by the Owner as an Owner Consultant, will obtain initial product Sample for testing in accordance with the terms of Article 3.05 of this Section.

B. Shoring calculations as required in Article 3.03 of this Section.

1.04 QUALITY ASSURANCE

A. Comply with the following as a minimum requirement: Standard Specifications for Public Works Construction, current edition, except as modified herein.

B. Sampling, testing, and certification of imported and/or exported soils shall be performed in accordance with Section 01 4524 - Environmental Import/Export Materials Testing.

1.05 TESTING

A. OWNER will retain a Geotechnical Engineer as an OWNER Consultant who will provide observations, tests, inspections and approvals identified in the Contract Documents as being responsibility of OWNER.

B. Imported Soils: The Geotechnical Engineer will obtain initial product Sample for testing in accordance Article 3.05 of this Section.

1.06 PROJECT CONDITIONS

A. Information on Drawings or in soils report does not constitute a guarantee of accuracy or uniformity of soil conditions over the Project site.

PART 2 - PRODUCTS

2.01 FILL AND BACKFILL MATERIALS

A. Fill and backfill materials shall be a granular material previously removed from excavation, or imported fill material, free of large clods and stones larger than 3 inches, foreign materials, vegetable growths, sod, expansive soils, rubbish and debris. Material shall conform to these specified requirements and related sections.

B. Fill material exhibiting a wide variation in consistency and or moisture content shall be blended and/or aerated to stabilize and upgrade the material.

C. Imported Fill Material:

1. Provide suitable materials obtained from Project site excavations for earthwork and fill materials. If excavated materials are not of suitable quality or sufficient quantity, import additional materials as necessary.
2. Imported fill shall be a granular material with sufficient binder to form a firm and stable unyielding subgrade and shall not have more than 60 percent of fines passing 200 mesh sieve. Material shall have a coefficient of expansion of not more than two percent from air dry to optimum moisture content and not more than six percent from air dry to saturation. Imported material shall be clean and free of rubbish, debris and toxic or hazardous contaminants. Adobe or clay soils are not permitted.

D. Brick rubble and broken concrete originating from the Project site shall be legally disposed of off the Project site No such materials shall be imported from outside the Project site.

E. Permeable Backfill:

1. Provide permeable backfill material behind retaining structures consisting of gravel, crushed gravel, crushed rock, natural sands, manufactured

sand, or combinations of these materials conforming to the following gradations:

Sieve Size	Percentage Passing
3/4 inch	100
3/8 inch	80 to 100
No. 100	0 to 8
No. 200	0 to 3

2. Those portions of fill material passing a No. 4 sieve shall provide a sand equivalent of at least 60.
3. Provided backing for weep-holes shall consist of two cubic feet of aggregate in burlap sacks, securely tied. Aggregate shall conform to requirements for No. 3 concrete aggregate as specified in subsection 200-1.4 of the Standard Specifications for Public Works Construction.
4. Permeable Backfill Alternate Materials: Instead of the materials specified for retaining structures backfill, a drainage matting system, Miradrain by Mirafi, Inc., or equal, may be provided if reviewed and approved by the ARCHITECT.

PART 3 - EXECUTION

3.01 GENERAL

A. Before initiating intrusive activities, contact Underground Service Alert of Southern California (USA or Dig Alert) to obtain a Dig Alert ticket for location information on buried public and USA member utilities and pipelines at least 48-hours prior to beginning work. A copy of the Dig Alert ticket shall be forwarded to the OWNER. For on-site utilities, retain a state-licensed third party underground utility locating service.

B. Clear the Project site as indicated in Section 31 1000 - Site Clearing.

3.02 PROTECTION

A. Protect and guard excavations against danger to life, limb, and property as required by, but not limited to, Cal-OSHA regulations.

B. Protect adjacent existing improvements including landscaping against damage.

C. Shore, crib, or lag excavations and earthen banks as necessary to prevent caving-in, erosion or gullying of sides.

D. Divert or de-water excavations until concrete is placed, forms are removed, and backfilling is complete.

3.03 SHORING

A. Provide shoring as necessary to properly and safely support earth sides of excavations, curbs, sidewalks, gutter, drives and stairs, against movement and collapse.

B. Design and Calculations: Provide in accordance with requirement of Cal-OHSA. Remove shoring upon completion of Work, or when no longer needed.

3.04 EXCAVATION

A. Form sides of footings, pads, grade beams, and slab foundations, unless otherwise indicated. Provide excavations of sufficient size to permit installation and removal of forms and other Work as required.

B. Machine-drill excavation for round footings to size and depth indicated. Provide a collar or casing, or other adequate protection, to exclude dirt and debris. Protect excavations with plank covers until concrete is placed.

C. Provide excavation bottoms level and free from loose material. Excavate to indicated or required elevations of undisturbed earth.

D. Provide excavations free from standing water by pumping, draining, or providing protection against water intrusion. If soil becomes soft, soggy, or saturated, excavate to firm undisturbed soil and fill as required. Slope adjacent grades away from excavations to minimize entry of water.

E. Calculate excavation quantities based on elevations or depths indicated on Drawings.

F. Provide 2,000 psi concrete for backfill of over-excavated areas to indicated or required elevations.

G. Special preparation of bottom of excavated planes areas: Excavate areas designated on Drawings as bottom of excavated planes (B.E.P.), by excavating and filling to indicated grades and elevations.

3.05 IMPORT/EXPORT OF MATERIALS

A. Provide fill materials as specified in Part 2- Products. If excavated materials from the Project site are not of required quality or sufficient quantity, import additional materials as necessary.

B. In addition to the requirements of this Section, import and/or exported materials shall comply with the requirements of Section 01 4524 - Environmental Import/Export Materials Testing.

C. Imported fill materials will be sampled by the Geotechnical Engineer for compliance with the requirements of Part 2 of this Section.

D. The geotechnical engineer will submit all samples to a DSA approved independent testing laboratory for testing.

E. Initial sampling will be performed by the Geotechnical Engineer before importing material to the Project site. Identify the location of the source site in addition to the address, name of the person and/or entity responsible for the source site. The Geotechnical Engineer will obtain both the initial sample and additional samples from the identified site and will submit samples to the approved independent testing laboratory for testing.

F. The Geotechnical Engineer will perform additional sampling during import operations. If the total quantity of import is determined to be greater than 1,000 cubic yards of material, one sample shall be obtained and submitted for testing for each 250 cubic yards of imported material. If the total quantity of import is determined to be less than 1,000 yards, one sample shall be obtained and submitted for testing for each 100 cubic yards of imported material.

G. The independent approved testing laboratory will perform the required tests and report results of tests noting if the tested material passed or failed such tests and will furnish copies to the Project Inspector, ARCHITECT, OAR, DSA, CONTRACTOR, and others as required. Report shall state tests were conducted under the responsible charge of a licensed State of California professional engineer and the material was tested in accordance with applicable provisions of the Contract Documents, CBC and the DSA. Upon completion of the Work of this Section, the independent testing laboratory and Geotechnical Engineer will submit a verified report to the DSA as required by CBC.

H. Bills of lading or equivalent documentation will be submitted to the Project Inspector on a daily basis.

I. Upon completion of import operations, provide the OAR a certification statement attesting that all imported material has been obtained from the identified source site.

3.06 BACKFILLING

A. After concrete has been placed, forms removed and concrete Work inspected, backfill excavations to indicated or required grades. Backfill simultaneously on each side of walls or grade beams. Remove rubbish, debris, and other waste materials from excavations before placing backfill.

B. Before installing backfill, adequately cure concrete and provide bracing to stabilize structures. Protect waterproofing or dampproofing against damage during backfilling operations with required protection board. Remove bracing as backfill operation progresses.

C. Do not furnish or install expansive soils for below grade building walls.

D. Install each layer of material in a not to exceed thickness of 6 inches, unless otherwise required.

E. Rigidly control the amount of water to be installed to provide optimum moisture content for type of fill material furnished. Do not over-saturate or compact by flooding or jetting.

F. Install wall backfill before installing railings and fences on walls.

G. Impervious backfill materials shall be installed in layers along with and by the same methods specified for structure backfill. Impervious backfill materials shall be at the approximate grade and elevation and where exposed to erosion, shall be covered with at least a 12-inch layer of fill material as reviewed by the Geotechnical Engineer.

H. Install weep hole drainage at the backside of walls so the backing completely covers the weep holes, is horizontally centered and extends at least 12 inches above the bottom of the weep opening. Provide an 8-inch square section of 1/4 inch galvanized or aluminum screen, with a minimum wire diameter of 0.03 inch, and install at the backside of each weep hole before installing the backfill material.

I. Where a reviewed drainage matting system is provided instead of permeable backfill for retaining structures, install in accordance with the manufacturer recommendations.

3.07 COMPACTING

A. Compact each layer of fill material by tamping, sheepsfoot rollers or pneumatic-tired rollers, to such extent as to provide specified relative compaction. At inaccessible locations, compact to specified requirements with hand-held, operated and directed compaction equipment.

A. Unless otherwise indicated, compact each layer of fill material to a relative compaction of at least 90 percent.

B. Do not compact by flooding or jetting.

C. When fill materials, or a combination of fill materials, are encountered or provided which develop densely packed surfaces as a result of installation or compacting operations, scarify each layer of compacted fill before installing the next succeeding layer.

3.08 INSPECTION AND TESTING

A. The Geotechnical Engineer will inspect and test excavations, sample material quality as required in Part 2, and observe installation and compaction of fill materials.

B. The Geotechnical Engineer will sample imported fill materials from their designated source before delivery to the Project site.

C. Installation of backfill shall be observed by the Geotechnical Engineer.

D. The Geotechnical Engineer will inspect and test excavation Work before the installation of fill and/or other materials.

E. Compaction: Test compaction in accordance with ASTM D1557, Method C.

F. The Project Inspector will inspect foundation excavations when completed and ready for forms, after forms are in place and before first placement of concrete.

3.09 PROTECTION

A. Protect the Work of this Section until Substantial Completion.

3.10 CLEANUP

A. Remove rubbish, debris, and waste materials and legally dispose of off the Project site.

END OF SECTION

SECTION 312323 - EXCAVATION AND FILL FOR UTILITIES

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Excavating, backfilling, and compacting utility trenches such as water, gas, irrigation, storm drain, sewer lines, concrete-encased conduits, and manholes, vaults, valve boxes, catch basins, underground tanks, thrust blocks, yard boxes, pull boxes and other utility appurtenances.

B. Related Requirements:

1. Division 01 - General Requirements.
2. Section 01 4524 - Environmental Import/Export Materials Testing.
3. Section 31 1000 - Site Clearing.
4. Section 31 2200 - Grading.
5. Section 31 2316 - Excavation and Fill for Paving.
6. Section 31 2319 - Excavation and Fill for Structures.
7. Section 32 1313 - Site Concrete Work.
8. Section 32 8413 - Potable Water Irrigation.
9. Section 32 8426 - Reclaimed Water Irrigation.
10. Section 33 1100 - Site Water Distribution Utilities.
11. Section 33 3000 - Site Sanitary Sewer Utilities.
12. Section 33 4000 - Storm Drainage Utilities.
13. Division 22 - Plumbing.
14. Division 26 - Electrical.

1.02 PROJECT REQUIREMENTS

A. Import and Export of Earth Materials:

1. Fees: Pay as required by authorities having jurisdiction over the area.
2. Bonds: Post as required by authorities having jurisdiction over the area.
3. Haul Routes and Restrictions: Comply with requirements of authorities having jurisdiction over the area.

1.03 QUALITY ASSURANCE

A. Comply with the following as a minimum requirement: Standard Specifications for Public Works construction, current edition except as modified herein.

B. Sampling, testing, and certification of imported and/or exported soils shall be performed in accordance with Section 01 4524 - Environmental Import/Export Materials Testing.

1.04 TESTING

A. OWNER will retain a Geotechnical Engineer as an OWNER Consultant who will provide observations, tests, inspections and approvals identified in the Contract Documents as being responsibility of OWNER.

B. Imported Soils: The Geotechnical Engineer will obtain initial product Sample for testing in accordance Article 3.02 of this Section.

1.05 PROJECT CONDITIONS

A. Information on Drawings or in soils report does not constitute a guarantee of accuracy or uniformity of soil conditions over the Project site.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Bedding material from trench bottom to one foot above the pipe:

1. Sand, gravel, crushed aggregate or native free-draining granular material providing a sand equivalent of at least 30 or a coefficient of permeability greater than 1.4 inches per hour.
2. Sand complying with the Specifications for cement concrete aggregates.

B. Backfill Materials:

1. Excavated trench material to be installed for backfilling shall be clean, free of large clods, and stones larger than 2 ½-inch in any dimension.
2. Cement-sand slurry shall be provided with one sack of cement per cubic yard of the mixture.
3. Imported Fill Material: Imported fill material shall be a granular material with sufficient binder to form a firm and stable unyielding subgrade and shall not have more than 60 percent of fines passing a 200 mesh sieve. Material shall provide a coefficient of expansion of not more than two percent from air dry to optimum moisture content and not more than six percent from air dry to saturation. Imported materials shall be clean and free of rubbish, debris, and toxic or hazardous contaminants. Adobe or clay soils are not permitted.

PART 3 - EXECUTION

3.01 GENERAL

A. Before initiating intrusive activities, contact Underground Service Alert of Southern California (USA or Dig Alert) to obtain a Dig Alert ticket for location information on buried public and USA member utilities and pipelines at least 48-

hours prior to beginning work. A copy of the Dig Alert ticket shall be forwarded to the OWNER. For on-site utilities, retain a state-licensed third party underground utility locating service.

B. Barricade trenches, ditches, pits, sumps, and similar Work outside the barricaded working area with chain link fence as specified in Section 01 5000, Construction Facilities and Temporary Controls, and in accordance with Cal-OSHA standards and requirements.

C. Saw-cut concrete or bituminous paving for trench installation.

D. Trenches over 5 feet in depth shall conform to the Cal-OSHA.

E. Where indicated and required to excavate in lawn areas, protect adjoining lawn areas outside of the Work area. Replace or install removed sod upon completion of backfill by installing sod level with adjacent lawns. If installation of removed sod fails, furnish sod and install to match existing lawns.

F. Backfill over excavations to the required elevations with earth, gravel, sand, or concrete and compact as required. Provide excavations free from standing water by pumping, draining, or providing protection against water intrusion. Slope adjacent grades away from excavations to minimize entry of water.

G. Do not install piping lengthwise under concrete walks without review by the ARCHITECT.

H. Do not excavate trenches parallel to footings closer than 18 inches from the face of the footing or below a plane having a downward slope of two horizontal to one vertical, from a line 9 inches above bottom of footings.

1. Unless otherwise indicated on Drawings, depth of excavations outside the buildings shall allow for a minimum coverage above top of pipe, tank, or conduit measured from the lowest adjoining finished grade, as follows:

Steel Pipe	24 inches below finished grade
Copper Water Tube	18 inches below finished grade
Cast-Iron Pressure Pipe	36 inches below finished grade
Plastic Pipe (other than waste)	30 inches below finished grade
Tanks or other structures	36 inches below finished grade
Soil, Sewer & Storm Drain	minimum 18 inches below finished grade, and as required for proper pitch and traffic load. (Install polypropylene sewer pipe with at least 24 inches coverage)
Irrigation Pipe:	nonpressure pipe 12 inches, pressure pipe 24 inches

2. Trench width shall provide ample space for fitting and joining. Excavate for piping bells and fittings, bell and spigot pipe and other fittings.

I. Unless indicated otherwise, excavate trenches to the required depths for utilities, such as pipes, conduit and tanks, with minimum allowances of 6 inches at the bottom and 6 inches at the sides for bedding of unprotected piping or as required for concrete encasement of conduits as indicated on Drawings. Grade bottom of

trenches to a uniform smooth surface. Remove loose soil from the excavation before installing sand bedding or concrete encasement.

J. Provide excavations free from standing water by pumping, draining, or providing protection against water intrusion. If soil becomes soft, soggy, or saturated, excavate to firm undisturbed soil and fill as required. Slope adjacent grades away from excavations to minimize entry of water.

K. Provide a minimum clear dimension of 2 inches from sides of wall excavation to outer surfaces of buried pipes or conduits installed in the same trench or outside surfaces of containers and tanks.

L. Do not install backfill until required inspections and testing is completed.

M. Backfill electrical or other excavated utility trenches located outside of barricaded installation areas within 24 hours after inspection by the Project Inspector.

N. Install backfill materials in layers not exceeding 4 inches in thickness and compact to 90 percent of the maximum density.

O. If materials excavated from the Project site are not permitted for trench backfill in paved areas, backfill trenches with a cement-sand slurry mix. Install backfill to an elevation of the existing undisturbed grade plus one inch.

P. Install and compact sand bedding to provide a uniform full length bearing under piping and conduits.

Q. Where portions of existing structures, walks, paving, or other improvements are removed or cut for piping or conduit installation, replace the material with equal quality, finished to match adjoining existing improvements. Repair pavement as specified in Section 32 0117, Pavement Repair.

3.02 IMPORT/EXPORT OF MATERIALS

A. Provide fill materials as specified in Part 2, Products. If excavated materials from the Project site are not of required quality or sufficient quantity, import additional materials as necessary.

B. In addition to the requirements of this Section, import and exported materials shall comply with the requirements of Section 01 4524, Environmental Import/Export Material Testing.

C. Imported fill materials will be sampled by the Geotechnical Engineer for compliance with the requirements of Part 2 of this Section.

D. The Geotechnical Engineer will perform the tests by utilizing an independent approved testing laboratory.

E. Initial sampling will be performed by the Geotechnical Engineer before importing material to the Project site. Identify the location of the source site in addition to the address, name of the person and/or entity responsible for the source site.

The Geotechnical Engineer will obtain both the initial sample and additional samples from the identified site and shall submit all samples to the approved independent testing laboratory.

F. The Geotechnical Engineer will perform additional sampling during import operations. If the total quantity of import is determined to be greater than 1,000 cubic yards of material, one sample shall be obtained and submitted for testing for each 250 cubic yards of imported material. If the total quantity of import is determined to be less than 1,000 yards, one sample shall be obtained and submitted for testing for each 100 cubic yards of imported material.

G. The independent approved testing laboratory will perform the required tests and report results of all tests noting if the tested material passed or failed such tests and will furnish copies to the Project Inspector, ARCHITECT, OAR, DSA, CONTRACTOR, and others as required. Report shall state tests were conducted under the responsible charge of a licensed State of California professional engineer and the material was tested in accordance with applicable provisions of the Contract Documents, CBC and the DSA. Upon completion of the Work of this Section, the independent testing laboratory and Geotechnical Engineer will submit a verified report to the DSA as required by CBC.

H. Bills of lading or equivalent documentation will be submitted to the Project Inspector on a daily basis.

I. Upon completion of import operations, provide the OAR a certification statement attesting that imported material has been obtained from the identified source site.

3.03 INSPECTION AND TESTING

A. The Geotechnical Engineer will inspect and test excavations, sample material quality as required in Part 2, observe installation and compaction of fill materials.

B. Compaction test shall be performed in accordance with ASTM D1557, method "C."

3.04 PROTECTION

A. Protect the Work of this Section until Substantial Completion.

3.05 CLEANUP

A. Remove rubbish, debris, and waste materials and legally dispose of off the Project site.

END OF SECTION

SECTION 313116 - TERMITE CONTROL

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. Soil treatment.
2. Wood treatment.
3. Bait-station system.

B. Related Requirements:

1. Section 061000 "Rough Carpentry" for wood preservative treatment by pressure process.

1.3 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include construction details, material descriptions, dimensions of individual components, and profiles for termite control products.
2. Include the EPA-Registered Label for termiticide products.

1.5 INFORMATIONAL SUBMITTALS

A. Qualification Data: For qualified Installer.

B. Product Certificates: For each type of termite control product.

C. Soil Treatment Application Report: After application of termiticide is completed, submit report for Owner's records and include the following:

1. Date and time of application.

2. Moisture content of soil before application.

3. Termiticide brand name and manufacturer.

4. Quantity of undiluted termiticide used.

5. Dilutions, methods, volumes used, and rates of application.

6. Areas of application.

7. Water source for application.

D. Wood Treatment Application Report: After application of termiticide is completed, submit report for Owner's records and include the following:

1. Date and time of application.

2. Termiticide brand name and manufacturer.

3. Quantity of undiluted termiticide used.

4. Dilutions, methods, volumes used, and rates of application.

5. Areas of application.

E. Bait-Station System Installation Report: After installation of bait-station system is completed, submit report for Owner's records and include the following:

1. Location of areas and sites conducive to termite feeding and activity.

2. Plan drawing showing number and locations of bait stations.

3. Dated report for each monitoring and inspection occurrence, indicating level of termite activity, procedure, and treatment applied before time of Substantial Completion.

4. Termiticide brand name and manufacturer.

5. Quantities of [termiticide] [and] [nontoxic termite bait] used.

6. Schedule of inspections for one year from date of Substantial Completion.

F. Sample Warranties: For special warranties.

1.6 QUALITY ASSURANCE

A. Installer Qualifications: A specialist who is licensed according to regulations of authorities having jurisdiction to apply termite control treatment and products in jurisdiction where Project is located and who is accredited by manufacturer.

1.7 FIELD CONDITIONS

A. Soil Treatment:

1. Environmental Limitations: To ensure penetration, do not treat soil that is water saturated or frozen. Do not treat soil while precipitation is occurring. Comply with requirements of the EPA-Registered Label and requirements of authorities having jurisdiction.

2. Related Work: Coordinate soil treatment application with excavating, filling, grading, and concreting operations. Treat soil under footings, grade beams, and ground-supported slabs before construction.

1.8 WARRANTY

A. Soil Treatment Special Warranty: Manufacturer's standard form, signed by Applicator and Contractor, certifying that termite control work consisting of applied soil termiticide treatment will prevent infestation of subterranean termites. If subterranean termite activity or damage is discovered during warranty period, re-treat soil and repair or replace damage caused by termite infestation.

1. Warranty Period: Three years from date of Substantial Completion.

B. Wood Treatment Special Warranty: Manufacturer's standard form, signed by Applicator and Contractor, certifying that termite control work consisting of applied wood termiticide treatment will prevent infestation of subterranean termites. If subterranean termite damage is discovered during warranty period, repair or replace damage caused by termite infestation and treat replacement wood.

1. Warranty Period: 12 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Source Limitations: Obtain termite control products from single source[**from single manufacturer**].

2.2 SOIL TREATMENT

A. Termiticide: EPA-Registered termiticide acceptable to authorities having jurisdiction, in an aqueous solution formulated to prevent termite infestation.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

a. Bayer Environmental Science.
b. Ensystex, Inc.
c. Master Builders Solutions; brand of MBCC Group.
d. Syngenta Crop Protection, LLC.

2. Service Life of Treatment: Soil treatment termiticide that is effective for not less than three years against infestation of subterranean termites.

2.3 WOOD TREATMENT

A. Borate: EPA-Registered borate termiticide acceptable to authorities having jurisdiction, in an aqueous solution for spray application and a gel solution for pressure injection, formulated to prevent termite infestation in wood.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

a. Ensystex, Inc.
b. Nisus Corporation.
c. NovaGuard Technologies, Inc.

2.4 BAIT-STATION SYSTEM

A. Description: EPA-Registered system acceptable to authorities having jurisdiction. Provide bait stations based on the dimensions of building perimeter indicated on Drawings, according to product's EPA-Registered Label and manufacturer's written instructions.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

a. Ensystex, Inc.
b. Master Builders Solutions; brand of MBCC Group.
c. The Dow Chemical Company.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Applicator present, for compliance with requirements for moisture content of soil per termiticide label, interfaces with earthwork, slab and foundation work, landscaping, utility installation, and other conditions affecting performance of termite control.

B. Proceed with application only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. General: Prepare work areas according to the requirements of authorities having jurisdiction and according to manufacturer's written instructions before beginning application and installation of termite control treatment(s). Remove extraneous sources of wood cellulose and other edible materials, such as wood debris, tree stumps and roots, stakes, formwork, and construction waste wood from soil within and around foundations.

B. Soil Treatment Preparation: Remove foreign matter and impermeable soil materials that could decrease treatment effectiveness on areas to be treated. Loosen, rake, and level soil to be treated, except previously compacted areas under slabs and footings. Termiticides may be applied before placing compacted fill under slabs if recommended in writing by termiticide manufacturer.

1. Fit filling hose connected to water source at the site with a backflow preventer, according to requirements of authorities having jurisdiction.

3.3 APPLYING SOIL TREATMENT

A. Application: Mix soil treatment termiticide solution to a uniform consistency. Distribute treatment uniformly. Apply treatment at the product's EPA-Registered Label volume and rate for maximum specified concentration of termiticide to the following so that a continuous horizontal and vertical termiticidal barrier or treated zone is established around and under building construction.

1. Slabs-on-Grade and Basement Slabs: Under ground-supported slab construction, including footings, building slabs, and attached slabs as an overall treatment. Treat soil materials before concrete footings and slabs are placed.

2. Foundations: Soil adjacent to and along the entire inside perimeter of foundation walls; along both sides of interior partition walls; around plumbing pipes and electric conduit penetrating the slab; around interior column footers, piers, and

chimney bases; and along the entire outside perimeter, from grade to bottom of footing.

3. Crawlspaces: Soil under and adjacent to foundations. Treat adjacent areas, including around entrance platform, porches, and equipment bases. Apply overall treatment only where attached concrete platform and porches are on fill or ground.

4. Masonry: Treat voids.

5. Penetrations: At expansion joints, control joints, and areas where slabs and below-grade walls will be penetrated.

B. Post warning signs in areas of application.

C. Reapply soil treatment solution to areas disturbed by subsequent excavation, grading, landscaping, or other construction activities following application.

3.4 APPLYING WOOD TREATMENT

A. Wood Treatment: Apply wood treatment after framing, sheathing, and exterior weather protection is completed but before electrical and mechanical systems are installed.

B. Application: Mix borate wood treatment solution to a uniform consistency. Apply treatment at the product's EPA-Registered Label volume and rate for the maximum borate concentration allowed for each specific use so that wood framing, sheathing, siding, and structural members subject to infestation receive treatment.[**Apply treatment to the height of 8 feet above grade**] <**Insert requirement**>.

1. Framing and Sheathing: Apply termiticide solution by spray to bare wood and with complete coverage.

2. Heavy Wood Members: For wood greater than 4 inches thick, inject termiticide gel solution under pressure into holes of size and spacing required by manufacturer for treatment.

3. Exterior Uncoated Wood Trim and Siding: Apply termiticide solution to bare wood only when forecasted weather conditions indicate no precipitation or fog before application of seal coat. After 48 hours, verify that surface is sufficiently dry for seal coat and apply seal coat of paint as specified in Section 099113 "Exterior Painting.".

3.5 INSTALLING BAIT-STATION SYSTEM

A. Bait-Station System: Install during construction to determine areas of termite activity and after construction, including landscaping, is completed.

B. Place bait stations according to product's EPA-Registered Label and manufacturer's written instructions, in the following locations:

1. Conducive sites and locations indicated on Drawings.

2. In and around infested trees and stumps.

3. In mulch beds.

4. Where wood directly contacts soil.

5. Areas of high soil moisture.

6. Near irrigation sprinkler heads.

7. Each area where roof drainage system, including downspouts and scuppers, drains to soil.

8. Along driplines of roof overhangs without gutters.

9. Where condensate lines from mechanical equipment drip or drain to soil.

10. At plumbing penetrations through ground-supported slabs.

11. Other sites and locations as determined by licensed Installer.

C. Spacing: Place bait stations according to manufacturer's written instructions and at a frequency no less than the following:

1. One bait station per [**8 linear feet**] [**20 linear feet**] <Insert value>.

2. One cluster of bait stations per 20 linear feet, with no fewer than three bait stations per cluster.

3.6 PROTECTION

A. Avoid disturbance of treated soil after application. Keep off treated areas until completely dry.

B. Protect termiticide solution dispersed in treated soils and fills from being diluted by exposure to water spillage or weather until ground-supported slabs are installed. Use waterproof barrier according to EPA-Registered Label instructions.

3.7 MAINTENANCE SERVICE

A. Maintenance Service: Beginning at Substantial Completion, maintenance service shall include [**three**] [**six**] [**nine**] [**12**] months' full maintenance by[**skilled employees of termite-control-treatment Installer**] [**manufacturer's authorized service**

representative]. Include [**monthly**] [**quarterly**] [**semiannual**] [**annual**] maintenance as required for proper performance according to the product's EPA-Registered Label and manufacturer's written instructions. Parts and supplies shall be manufacturer's authorized replacement parts and supplies.

B. Continuing Maintenance Proposal: Provide from termite-control-treatment Installer to Owner, in the form of a standard yearly (or other period) maintenance agreement, starting on date initial maintenance service is concluded. State services, obligations, conditions, and terms for agreement period and for future renewal options.

1. Include annual inspection for termite activity and effectiveness of termite treatment according to manufacturer's written instructions.

END OF SECTION 313116

SECTION 313213 – SOIL MIXING STABILIZATION

PART 1 - GENERAL

1.01 SCOPE

A. In accordance with the specifications contained in this Section and as shown on the Contract Drawings, the DSM Contractor shall furnish all plant, equipment, labor, and materials required to plan, develop mix design, and construct the Deep Soil Mixing (DSM) test section and production DSM at the locations and elevations indicated on the Contract Drawings and these specifications, and associated testing, monitoring, sampling, and recording to meet the performance requirements outlined in these Contract Documents.

B. The purpose of the DSM is to mitigate the liquefaction potential and limit settlement under the building area.

C. The scope of work shall include, but not limited to, the following:

1. design for DSM

2. construction of the DSM

1.02 RELATED DOCUMENTS

A. The DSM Contractor shall acknowledge that the following references have been received, read, and understood at the time of the bid.

1.03 DEFINITIONS

A. DSM: A soil-cement constructed by treating soils in situ by deep soil–cement mixing technology. The DSM shall consist of overlapping DSM columns in a single row or overlapping multiple columns.

B. Element: This is an inclusive term that refers to a DSM element produced by a single stroke of the mixing tools at a single equipment location. An element produced by a single-axis machine or a set of overlapping elements produced by a single stroke of a multiple shaft mixing tool is each considered an element. An element consisting of overlapping elements produced by a single stroke of a multiple-shaft mixing tool is sometimes referred to as a "panel".

C. Cement factor in place, cement dosage: Ratio of weight of dry cement to the volume of soil to be treated and the grout volume.

D. GEOR: Geotechnical Engineer of Record.

E. Grout: A stable mixture of water, Portland cement, and admixtures. The purpose of the grout is to assist in loosening the soils for penetration and optimum mixing, and upon setting, to strengthen the in situ soil.

F. Grout–soil ratio: A volumetric ratio of grout to in situ soil to be mixed.

G. Volume ratio: Ratio of the volume of slurry injected to the volume of soil mixing column.

H. Spoil return: All materials including, but not limited to liquids, semi-solids, and solids that are discharged above the ground surface during, or as a result of the DSM process.

I. Obstruction: Man-made or man-placed objects or materials occurring at or below the ground surface which unavoidably stops the progress of work for more than one (1) hour despite the DSM Contractor's diligent efforts.

1.04 SUBMITTALS

A. Complete fabrication, assembly, and installation drawings, together with details and data governing materials used, and other accessories furnished, shall be submitted for acceptance in accordance with the procedures outlined in Section 1, "General." Data submitted shall include, but not be limited to the following:

1. qualifications package

2. grout mix and proposed mix designs including all materials and quantities

3. cement mill certificates

4. manufacture information for each admixture

5. field test program

6. deep mixing work plan

7. workplan for the quality control program

8. sample daily quality control report

    a. submit all daily quality control reports at the end of the next working day

9. Calibration

    a. submit all metering equipment calibration test results including mixing systems, delivery systems, alignment systems, and mixing tool rotational and vertical speed.

10. DSM QC test results

11. Record drawings

    a. submit record drawings indicating the location of the DSM in terms of project coordinates

1.05 QUALIFICATIONS OF THE DSM CONTRACTOR TO BE SUBMITTED WITH BID

A. General: The DSM Contractor is responsible for submitting a qualifications package that showcases their experience in DSM at the time of bid submission. One (1) Contractor, the DSM Contractor, shall perform all parts of the DSM installation. The DSM Contractor

shall be experienced in all aspects of DSM design and construction, and shall furnish all necessary plant, materials, skilled labor, and supervision to complete the Contract. The DSM Contractor may be the Contractor bidding the job or a subcontractor.

B. Staff experience: The DSM Contractor shall submit qualifications of the Project Superintendent, Ground Improvement Design Engineer, DSM Rig Operator(s), and DSM Mixing Plant Operator(s) to be utilized on the project. The Project Superintendent shall be authorized to act on behalf of the DSM Contractor. The Project Superintendent shall have at least five (5) years on-site experience managing DSM field operations of similar size and scope and shall have supervised at least two (2) projects within the past five (5) years employing the DSM technique proposed for this project. The Project Superintendent shall have experience and knowledge of all aspects of DSM as required for the project and shall be present at the worksite at all times during DSM operations. The Ground Improvement Design Engineer shall have at least five (5) years of experience in the design/QC of DSM systems. The Ground Improvement Design Engineer shall be a Geotechnical Engineer (GE) currently registered by the State of California. The Ground Improvement Design Engineer shall supervise review QC records and as-built drawings to confirm that the DSM work meets the design intent. The DSM Rig and Mixing Plant Operator(s) shall have at least three years of experience using the equipment selected for this project. DSM Contractor shall submit evidence of previous staff experience in the Qualifications Package Submittal. Personnel named in this package shall not be substituted without the express written consent of the GEOR.

C. Project experience: The DSM Contractor shall submit evidence of experience and competence to design and construct the DSM. The DSM Contractor shall submit information on prior projects in the Qualifications Package Submittal to document their qualifications. The projects must have the following characteristics to qualify as acceptable projects. Failure of the Qualification Package to meet these requirements may result in the rejection of the DSM Contractor.

1. Satisfactorily completed at least five (5) school projects with DSA/CGS involvement for liquefaction mitigation using DSM, during the last three years. Multiple buildings of the same project/school will not be counted as multiple projects.

2. At least five (5) projects showing the independent and successful design and installation of structural DSM of similar or greater depth and length.

3. At least five (5) projects where the DSM Contractor implemented QA/QC programs during DSM treatment and used computerized data acquisition systems

4. An ongoing project may be used to satisfy the experience requirements provided the qualifying work has been completed and accepted by the owner.

5. Qualifications package submittal: The Qualifications Package shall include project and staff experience. For project experience, the DSM Contractor shall submit detailed information on previous projects in the format listed below. The architect may contact any of the listed references to verify the accuracy of the information. Failure to provide accurate and complete information may result in the invalidation of the listed project.

a. Name of person in charge of the project for the Contractor

b. Name of the project

c. Location of the project

d. Name of client/owner

e. Name and telephone number of the person in charge of the project for the client. The contractor shall verify that all listed references and telephone numbers are current and complete

f. A description of the project, including a detailed discussion of the work elements included in the construction

D. For staff experience, the DSM Contractor shall submit the names and resumes of the Project Superintendent, Ground Improvement Design Engineer, DSM Rig Operator(s), and DSM Mixing Plant Operator(s) to be utilized on the project.

1.06 PERFORMANCE CRITERIA

A. Perform appropriate ground improvement beneath areas of structures listed above as stated under the scope of work to provide the following criteria upon successful completion of each.

1. Post-construction settlement shall be less than:

a. ≤ 2.0 inches total settlement (1 inch static + 1 inch seismic settlement)

b. ≤ 1.0 inches differential seismic settlement over a span of 13.9 feet

2. The DSM system should be constructed to a minimum depth of 20 feet below the existing ground surface elevation of El. 57.00’. Individual DSM columns shall have a minimum diameter of 3 feet and have a minimum overlap of 6 inches between columns.

3. The minimum area replacement ratio for the project shall be 35%.

a. For this project, the area replacement ratio shall be defined as area of mixed soil over the area of the building.

1.07 SOILCRETE MIX DESIGN

A. The DSM Contractor develop a soilcrete mix design intended to meet or exceed the DSM strength and uniformity requirements specified herein. The soilcrete mix design will specify the proportions of soil and grout, and in the in-place binder (cement) content that will be used on production, along with the required blade rotation number (BRN, the cumulative number of mixing blade rotations within a 1 meter interval of the mixed column).

B. The soilcrete design may be based on the DSM Contractor's experience. At the option of the DSM Contractor, the soilcrete desing may be informed by a bench-scale laboratory test program that uses bulk samples obtained from the project by the DSM Contractor.

1.08 DEEP MIXING WORK PLAN

A. The DSM Contractor shall submit a deep mixing work plan for review and acceptance by the GEOR. This plan shall include the following items:

1. Detailed descriptions of a sequence of construction, all construction procedures, equipments (catalog cut sheets), batching and storage equipment layout, ancillary equipment to be used to penetrate the ground, proportion, mix binders and inject and mix the site soils.

2. Proposed mix design(s), including cement, water, and admixtures, and their relative proportions, the required mixing time, water-to-cement ratio of the grout, cement factor in place, and volume ratio for a deep mixed element. The mix design shall be stamped and signed by a Geotechnical Engineer who is currently registered by the State of California.

3. Proposed injection and mixing parameters, including mixing slurry rates, slurry pumping rates, air injection pressure, and volume flow rates, mixing tool rotational speeds, and penetration and withdrawal rates.

4. Methods for controlling and recording the verticality and the top and bottom elevation of each element.

5. Methods for monitoring the quality control parameters outlined in the quality control program and collecting samples for laboratory confirmation testing.

6. Methods for locating the DSM in the field and confirming that the DSM is plumb.

7. The anticipated cement dosages to achieve the acceptance criteria.

8. A proposed element numbering scheme.

9. Working drawings for the DSM elements showing the site location of the DSM project as well as the dimensions, layout, and locations of all DSM elements. Drawings shall indicate the identification number of every element if a multi-shaft mixing tool is used and every element if a single-auger mixing tool is used.

10. Sample daily quality control reports.

11. The GEOR or his representative shall perform the QC testing.

1.09 EXISTING UTILITIES

A. The General Contractor shall field locate and verify the locations of all utilities prior to starting work. The General Contractor shall notify the DSM Contractor, Engineer, and Owner's Project Manager of any utility locations that may be impacted and may require relocation.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Grout: The material added to the blended in situ soils shall be a Portland cement grout. The purposes of the grout are to assist in loosening the soils for penetration and optimum mixing, and upon setting, to strengthen the in-situ soils. The grout shall be premixed in a mixing plant that combines dry materials and water in predetermined proportions. Ratios of the grout components shall be proposed by the DSM Contractor, confirmed during the field test program, and reviewed and accepted by the Architect. Once accepted, the grout composition shall not change unless requested in writing from the DSM Contractor and accepted in writing by the Engineer.

B. Cement: The cement used in preparing the grout shall conform to ASTM C 150 Type II/V PCC. The cement shall be adequately protected from moisture and contamination while in transit to and in storage at the job site. Reclaimed cement or cement containing lumps or deleterious matter shall not be used.

C. Water: Water used in mixing cement grout shall conform to ASTM C 1602.

D. Admixtures: Admixtures of softening agents, dispersions, retarders, or plugging or bridging agents may be added to the water or the grout to permit efficient use of materials and proper workability of the grout provided the DSM Contractor submits documentation demonstrating the effects of the admixture. Admixtures shall be accepted by the Engineer before use.

2.02 EQUIPMENT

A. Deep mixing equipment shall be of sufficient size, capacity, and torque to perform the required deep mixing to the desired depths. Characteristics of deep mixing equipment are as follows:

B. Drilling equipment: The equipment shall be capable of advancing through previously installed elements to achieve designed overlapping or remixing as needed and be sufficient to maintain the necessary revolutions per minute and penetration rate at the maximum depth to achieve thorough mixing.

1. The mixing and injection equipment shall be sufficient to adequately blend and distribute the binder with the in-situ soils to provide the required strength. The mixing shafts shall have mixing augers and blades (paddles) configured in such a manner so that they are capable of thoroughly blending the in-situ soils and grout.

2. The power source for driving the mixing shafts shall be sufficient to maintain the required revolutions per minute (RPM) and penetration rate from a stopped position at the maximum depth required.

C. Equipment instrumentation: All equipment shall have monitoring equipment to permit accurate and continuous monitoring, recording, and controlling of mixing tool depth, location, binder volume flow rates, and density, binder injection pressures and quantities, tool rotational speeds, tool advancement, and withdrawal rates.

1. The output from these sensors, the cement factor in place, and the number of mixing cuts per unit depth shall be visible in real-time to the operator and QC Inspector during penetration and withdrawal.

2. The proposed display and monitoring systems shall be submitted and accepted by QC Inspector prior to use.

3. Calibration of this equipment shall be performed at the beginning of the project and the calibration data shall be submitted to QC Inspector. The calibration shall be repeated at intervals not to exceed two (2) months.

D. In the event that equipment instrumentation becomes partially or fully inoperable, the DSM Contractor shall repair the instrumentation system and bring it to a fully operational state. DSM construction is not allowed without instrumentation unless there is a safety hazard by not continuing the work. The DSM rig shall be equipped with electronic sensors built into the leads to determine vertical alignment in two (2) directions.

1. The sensors shall be calibrated at the beginning of the project and the calibration data shall be submitted to QC Inspector. The calibration shall be repeated at intervals not to exceed two (2) months.

2. The output from the sensors shall be routed to a console that is visible to the operator and QC Inspector during penetration. The console shall be capable of indicating the alignment angle in each plane.

E. Grout mixing: Grout shall be premixed in a mixing plant, using a batch process, which combines dry materials and water in predetermined proportions. The mixing plant shall consist of a grout mixer, grout agitator, grout pump, and a computer control/measurement unit.

1. Dry materials shall be stored in silos. The dry materials shall be transported to the project site and blown into the on-site storage tanks using a pneumatic system.

2. The air evacuated from the storage tanks during the loading process shall be filtered before being discharged to the atmosphere.

3. Automatic batch scales or calibrated auger shall be used to accurately determine mix proportions for water and cement during grout preparation.

4. The dry admixtures, if used for mixing with water and cement, may be delivered to the mixing plant by a calibrated auger. However, the DSM Contractor shall demonstrate that the calibrated auger can deliver the quantity of dry admixture with accuracy equivalent to that measured and delivered by weight.

5. The grout density shall be measured by a mud balance or a mass flow meter before it is sent to the mixing rig.

6. Calibration of mixing components shall be done at the beginning of the project and repeated at intervals not to exceed two (2) months thereafter.

7. The cement shall be adequately protected from moisture and contamination while

in transit to and in storage at the job site. Reclaimed cement or cement containing lumps or deleterious matter shall not be used.

8. Positive displacement pumps shall be used to transfer the grout from the mixing plant to the DSM equipment. The grout shall be delivered to each slurry–injection point by an individual positive displacement pump.

PART 3 –TESTING & EXECUTION

3.01 FIELD TEST PROGRAM

A. Prior to production work, the DSM Contractor shall construct a test section to verify that the DSM Contractor's proposed equipment, procedures, and mix design can uniformly mix the onsite soils to the target depth(s) and achieve the product requirements outlined in the acceptance criteria. The field test program shall be used to optimize the various components of the DSM process, such as type of mixing equipment (e.g. single, double, or triple-axis), grout mix composition, rotational speed, penetration, and retraction rates, and confirm that results create soil-cement properties that meet required design criteria. The DSM Contractor shall construct more than one (1) test section if multiple mix designs/cement dosages are proposed.

B. The DSM Contractor can begin production work before test program results are available at its sole risk.

C. The DSM Contractor shall submit a plan drawing showing the location of the test section elements.

D. One (1) test section shall be constructed for each initial DSM mix design/cement dosage the DSM Contractor proposes to evaluate in the field demonstration test program and possibly use for the production DSM. A test section is defined as a continuous secant-type DSM section at least 15 linear feet long and of the depth and arrangement shown on the contract drawings. The cement dosage used for the accepted test section shall be required for use in the production DSM construction.

E. Equipment, procedures, accepted mix design, and element layout used on the test section shall be identical to those proposed for the production DSM construction.

F. The DSM Contractor shall perform one full-depth core and the related laboratory UCS testing for each test section in accordance with the Quality Control Program.

G. The DSM Contractor shall submit to the Engineer results of the test program and recommend grout mix, procedure, and equipment parameters based on those results. The DSM Contractor, at their expense, may be required to repeat construction of a test section if recommended parameters fall outside test requirements. The test program shall confirm that the resultant test section geometry and soil-cement properties meet the required design criteria before production work commences.

3.02 PRODUCTION DSM

A. The DSM Contractor shall proceed with construction of the production DSM after results of the field test program have been accepted by the Engineer. The DSM Contractor shall

take all the risks, if he proceeds with the production prior to the approval of the field test program by the Engineer.

B. The DSM Contractor is responsible for the survey and site layout of each column to within 3 inches of the design coordinates. The layout can be done by the DSM Contractor's QA/QC representative with oversight by a licensed professional engineer. The General Contractor is responsible for grading a suitable working platform at the site capable of supporting the weight of the drill and other equipment and allowing movement from location to location without difficulty.

C. The DSM shall have essentially vertical elements and shall extend through the on-site soils to the elevations required by the contract drawings.

D. The completed DSM elements shall be a homogeneous mixture of grout and in-situ soils. Mixing is to be controlled by shaft rotational speed, drilling speed, and grout injection rate.

E. The DSM Contractor shall determine the average target DSM strength, thickness, and depth(s).

F. The overlap of elements and constant center-to-center spacing between adjacent elements shall conform to the contract drawings. A vertical alignment of 1.5 percent shall be maintained during the DSM installation.

G. Monitoring of construction parameters and confirmation testing will be used to verify that the acceptance criteria have been satisfied.

1. The DSM Contractor shall establish consistent procedures to be employed during DSM construction to ensure a relatively uniformly mixed product is created.

2. These procedures are to be defined in the deep mixing work plan and subsequently modified, if necessary, based on the results of the test section(s).

3. Prior to beginning production DSM installation, the DSM Contractor shall construct test section(s) in the area shown on the Contract Drawings, and results of the test section program shall be accepted by the Engineer.

4. The purpose of the test sections is to verify that the DSM Contractor's proposed equipment, procedures, and mix design can uniformly mix the on-site soils to the target depth(s) and achieve the required DSM strength(s).

5. Based on the evaluation of completed in–place test sections, the Engineer will determine if the test sections yield acceptable results and whether the DSM Contractor may proceed with the production DSM construction.

6. The cement factor in place, equipment, installation procedures, and sampling and testing methods established during the test sections shall be used for the production DSM construction.

7. The DSM Contractor may request that the established cement factor in place, equipment, installation procedure, or test methods be modified. The Engineer may

require additional testing or a new test section, at no additional cost to the owner, to verify that acceptable results can be achieved using the modification(s).

8. The DSM Contractor shall not change cement content in place, equipment, installation procedures, or sampling or testing methods unless accepted by the Engineer in writing.

H. The DSM Contractor shall conduct sampling and testing of the production DSM using the same methods employed during the test sections and in accordance with the requirements listed in the Quality Control Program.

1. For the production DSM construction, the following minimum frequency shall be instituted: Collect full–depth continuous core of the DSM for a minimum of 2% of the DSM locations.

2. Perform UCS tests on wet (grab) specimens in accordance with the requirements of the Quality Control Program.

3.03 MATERIAL ACCEPTANCE CRITERIA

A. The in-place grout mix together with the soils shall achieve:

1. A minimum average unconfined compressive strength (UCS) at 28 days of 150 psi and shall be determined by ASTM D 1633 "Standard Test Method for Compressive Strength of Molded Soil-Cement Cylinders”

2. No more than ten (10) percent of the wet samples or ten (10) percent of the core samples tested for each building shall exhibit a UCS of less than 75 psi at 28 days.

3. A pattern of low-strength samples, such as at a constant depth will not be accepted.

4. Uniformity of soil-cement shall meet the requirement as outlined in Section 3.05.

3.04 GEOMETRIC ACCEPTANCE CRITERIA

A. The DSM Contractor shall accurately stake the location of the proposed DSM shown on the Contract Drawings before beginning installation.

B. The DSM shall be installed within the following geometric tolerances:

1. The horizontal alignment of the DSM shall be within three (3) inches of the planned location at the top of DSM.

2. The vertical inclination of the DSM shall be inclined no more than 1.0 percent from vertical.

3. The element overlaps and constant center-to-center spacing between adjacent elements shall conform to the contract plan.

C. The DSM Contractor shall provide an adequate method to allow QC Inspector to verify the as-built location of the DSM during construction.

D. The equipment operator shall control the vertical alignment of the DSM element. Two (2) measures of the drill rig mast verticality shall be monitored, longitudinal and transverse to the DSM alignment.

E. DSM depths shall be determined by the DSM Contractor.

1. The equipment shall be adequately marked to allow QC Inspector to confirm the penetration depth during construction. The total depth of penetration shall be measured either by observing the length of the mixing shaft inserted below a reference point on the mast, or by subtraction of the exposed length of the shaft above the reference point from the total shaft length, or by electronic depth encoder.

2. The final depth of the stroke shall be noted and recorded on the Daily Quality Control Report by the DSM Contractor.

3. If rigs with varying mixing shaft lengths are used, the shortest shafts shall extend to the minimum District-accepted DSM depth(s) provided by the DSM Contractor.

3.05 UNIFORMITY OF MIXING ACCEPTANCE CRITERIA

A. Uniformity of mixing shall be evaluated by QC Inspector based on the full–depth core samples recovered by the DSM Contractor from the DSM.

1. To evaluate uniformity using core samples, all lengths of the unrecovered core shall be assumed to be unimproved soil.

2. Uniformity shall be determined by QC Inspector through inspection of core samples. A full-depth core is defined as a full–length continuous coring operation at a single location that extends from the top to the bottom of the DSM element.

3. Recovery shall be at least 85 percent for each full-depth core. In addition, continuous core recovery shall be at least 85 percent over any 5-foot core run. If 85% cannot be confirmed by coring, the DSM Contractor at no extra cost may propose optical viewer logs to confirm uniformity.

4. Within a full-depth core, the sum length of unmixed or poorly mixed soil regions or lumps that extend entirely across the diameter of the core sample (2.5 inches) shall not exceed 10 percent of the entire recovered core length of a DSM element. In addition, lumps of unimproved soil shall not be more than 15 percent of the total volume of any 5-foot section interval of the full-depth core. Any individual or aggregation of lumps of unimproved soil shall not be larger than six (6) inches in the greatest dimension. If there are excessive mechanical damages to the recovered cores, the DSM Contractor is allowed to perform additional core(s) in the same or adjacent soil mixing column(s) at the DSM Contractor’s expense.

B. If any section of the DSM is found not to satisfy the above criteria, the DSM Contractor shall develop a mitigation plan for review and approval by the GEOR. Mitigation may consist of remixing or replacing the columns, or performing an engineering evaluation to show that the as-built condition meets the design requirements.

1. Unless otherwise determined by the GEOR, the extent of the failed section shall be considered to include all DSM sections constructed during all rig shifts that occurred between the times of construction when passing tests were achieved, i.e., within the wet sampling interval. The DSM Contractor may conduct additional sampling and testing to better define the limits of the failed area at no additional cost to the owner.

2. The DSM Contractor shall submit a proposed remixing/repair plan of failed section(s) for review and acceptance by the GEOR.

3.06 OBSTRUCTIONS

A. The DSM Contractor shall be responsible to penetrate and mix some dense sand layers and stiff clay layers, which may need pre-drilling at no cost to the owner. If an obstruction is encountered that prevents pre-drilling advancement, the DSM Contractor shall immediately notify the Ground Improvement Design Engineer, GEOR and Owner's Project Manager and investigate the location and extent of the obstruction. The DSM Contractor shall propose remedial measures to clear the obstruction for acceptance by the Ground Improvement Design Engineer, GEOR and Owner's Project Manager. The DSM Contractor will be compensated for removal or clearing of obstructions. If the element cannot be installed at the design location due to obstructions, the element shall be relocated as directed by the Ground Improvement Design Engineer.

B. While the investigation for obstruction is underway, the DSM Contractor shall continue to install elements in areas away from the obstruction location. No stand–by delay will be allowed for equipment and operations during the investigation of obstruction.

C. The DSM Contractor shall be compensated for removal or clearing of unknown obstructions.

3.07 GROUT PREPARATION

A. Dry binders shall be stored in silos and fed to mixers for agitation and shearing. In order to accurately control the mixing ratio of grout, the addition of water and cement shall be determined by weight using the automatic batch scales in the mixing plant, or the real-time grout-specific gravity measurement.

1. The admixtures, if used, for mixing with water and cement, can be delivered to the mixing plant by a calibrated auger. However, the DSM Contractor shall prove that the calibrated auger can deliver the quantity of dry admixture with accuracy equivalent to that measured and delivered by weight.

B. A minimum mixing time of three minutes and a maximum holding time of three (3) hours shall be enforced for the grout.

1. The specific gravity of the (grout) shall be determined during the design mix program. The specific gravity of the grout shall be checked by the DSM Contractor at least two times per shift per rig using the methods outlined in ASTM D 4380. If the grout is batched by the jet valve method, the specific gravity shall be measured in real-time during production. The specific gravity of the grout measured in the

field shall not deviate by more than 3 percent of the calculated specific gravity for the design cement ratio.

2. If the grout density deviates by more than 3 percent, the DSM Contractor should recalibrate monitoring equipment and perform additional testing as required at no additional cost to the owner. The DSM Contractor may also adjust cement or water quantities appropriately and retest at no additional cost to the owner.

3. The grout hold time shall be calculated from the beginning of the initial mixing.

4. The specific gravity measurements shall be indicated on the daily quality control report.

3.08 SOIL–GROUT MIXING

A. Installation of each element shall be continuous without interruption. If an interruption of more than one (1) hour occurs, the element shall be remixed (while injecting grout at the design grout ratio) for the entire height of the element at no additional cost to the owner.

B. The completed DSM shall be a uniform mixture of cement grout and the in situ soils.

1. Soil and grout shall be mixed together in place by specially designed blades on the mixing shafts.

2. The grout shall be pumped through the mixing shafts and injected from the bottom of the mixing tool. The mixing tool shall break up the soil and blend it with cement grout.

3. The mixing action of the tool shall blend, circulate, and knead the soil over the length of the element while mixing it in place with the grout.

4. Over any five (5)–foot section of an element, the lumps of unimproved soil shall not amount to more than ten (10) percent of the total volume of the DSM segment and any individual lump or aggregation of lumps of unimproved soil shall be no larger than six (6) inches in greatest dimension.

3.09 SHAFT ROTATIONAL SPEED AND PENETRATION/WITHDRAWAL RATE

A. The mixing shaft rotational speed (measured in RPMs) and penetration/withdrawal rates may be adjusted to achieve adequate mixing. The required rotational speeds and penetration/withdrawal rates for the various soil layers encountered shall be determined during the test sections.

B. The shaft rotational speed shall be adequate during penetration and withdrawal to achieve the design blade rotation number. The blade rotation number is defined as the number of the blade cut through one (1) meter of soil. The rotational speeds and penetration/withdrawal rates shall be recorded on the Daily Quality Control Report.

C. The cementing factor in place and the blade rotation number determined during the test section shall be used during the balance of the work. If these parameters are varied less than 85 percent from those determined during the test sections, the DSM section shall

be remixed (while injecting grout at the design grout ratio) to a depth at least three (3) feet below the deficient zone at no additional cost to the owner.

D. The DSM Contractor may request that the established mixing parameters be modified during the production DSM installation. To verify acceptable results for the modified parameters, the Ground Improvement Design Engineer may require additional testing or a new test section at no additional cost to the owner.

3.10 GROUT INJECTION RATE

A. The grout injection rate per vertical foot of the element shall be in accordance with the requirements of the design mix.

1. The required mix design and cement content in place shall be determined during the test sections.

2. The grout injection rate shall be constantly monitored and controlled.

3. The DSM Contractor shall record the volume of grout injected for each one (1) vertical feet of each element on the Daily Quality Control Report.

B. If the volume of grout injected per vertical foot of element is less than eighty-five (85) percent of the amount required to meet the grout–soil ratio established during the test sections, the DSM shall be remixed and additional grout injected (at the design grout–soil ratio) to a depth at least three (3) feet below the deficient zone, at no additional cost to the owner.

C. With the approval of the Ground Improvement Design Engineer the cement factor in place be modified during the production DSM installation.

3.11 CONTROL OF SPOILS

A. The DSM Contractor shall control and process all spoils created during the DSM construction.

1. The areas designated by the owner shall be used for containment and processing of the spoils.

2. Positive means shall be provided for containing all spoil returns, flush water, and other waste materials within the work area.

3. All sedimentation and turbidity control measures required by applicable Federal, State, and local regulations shall be implemented. Precautions and measures shall be implemented to prevent any spoil returns or other waste material from entering storm drain structures, drainage courses, or leaving the site via surface drainage. If spoil returns or other waste materials enter such areas, the DSM Contractor shall be responsible for immediately and completely cleaning and removing these materials to the acceptance of the owner and at no cost to the owner.

3.12 QUALITY CONTROL PROGRAM

A. General

1. The DSM Quality Control (QC) Program shall be the responsibility of the DSM Contractor and shall include, as a minimum, the following components:

   a. Construction of at least one (1) test section by the DSM Contractor;

   b. Field monitoring by the DSM Contractor of construction parameters during DSM construction;

   c. Sample collection including full depth continuous coring, and wet grab sampling;

   d. Reporting of the field monitoring, sampling, and any strength testing performed by the DSM Contractor.

2. The DSM Contractor shall provide all the personnel and equipment necessary to implement the Quality Control Program.

   a. Prior to site mobilization, the DSM Contractor shall submit a detailed work plan for the Quality Control Program for review and acceptance by the GEOR.

   b. The work plan shall include, as a minimum, a description of all procedures to be implemented, parameters to be monitored, tolerances for the parameters monitored, and the names of any subcontractors used for testing.

3. Following the test sections, the DSM Contractor may revise the Quality Control Program.

   a. The established quality control procedures shall be maintained throughout the production DSM installation to ensure consistency in the DSM installation and to verify that the work complies with all requirements indicated in the Contract Plans and Specifications.

B. Sample collection and strength testing

1. The acceptance of the work shall be based on demonstrating that the in-place grout mix together with the soils has achieved the strength and uniformity requirements.

2. Confirmation that the strength and uniformity requirements have been satisfied will be determined by a series of tests performed on samples collected by the DSM Contractor. Confirmation sample collection and testing shall include:

   a. Full-depth continuous coring and testing: Full–depth continuous coring performed by the DSM Contractor and QA laboratory UCS testing conducted on the core samples by the GEOR laboratory. The DSM Contractor will core 2% of the production DSM columns. The purpose of the coring is to evaluate

mixing quality and obtain samples for UCS testing.

b. Wet (grab) soil mix samples: Wet samples that are retrieved and cast into molds by the DSM Contractor and QC laboratory UCS testing by the GEOR laboratory.

c. Additional confirmation testing: The DSM Contractor, at its own expense, may perform borehole imaging.

3. Full–depth coring, sampling, and testing: Continuous coring shall be performed for the full depth of the DSM by the DSM Contractor.

a. Full–depth samples obtained by the DSM Contractor shall have a diameter of at least 2.5 inches. The full–depth samples shall be obtained along an essentially vertical alignment located one–fourth of an element diameter from the element center.

b. Full–depth samples shall be retrieved using standard continuous coring techniques after the soil–grout mixture has hardened sufficiently.

c. For the continuous coring method, each core run shall be at least five (5) feet in length and contain at least five (5) test specimens with a length to diameter ratio of 2, or greater.

d. Upon retrieval, the full–depth samples shall be logged and test specimen selection.

1) Field logging will be performed to determine if the uniformity and recovery criteria have been satisfied.

2) Following logging, select four (4) to ten (10) specimens from each full–depth sample recovered for QA UCS strength testing.

3) Following logging and test specimen selection the entire full–depth sample, including the designated test specimens, shall be immediately sealed in plastic wrap to prevent drying. The designated test core specimens for QA testing will be transported to the GEOR laboratory.

4) All core holes shall be filled with cement grout that will obtain a twenty-eight (28)–day strength equal to or greater than the strength of the DSM.

e. QA strength testing shall be conducted on core samples.

1) The core samples shall be stored in a moist room in accordance with ASTM D 1632 until the test date.

2) UCS tests shall be conducted on core samples at the design target cure age in accordance with ASTM D 1633.

3) The remaining portions of the full–depth samples that are not tested

shall be retained by the DSM Contractor, until completion and acceptance of all DSM sections, for possible inspection and confirmation testing.

4. Wet sample collection and testing: Wet (grab) samples shall be retrieved and cast into molds by the DSM Contractor from a minimum of one column per work shift per rig, at one random depth.

    a. Samples shall be retrieved using an in-situ wet sampler immediately after element construction and shall consist of no fewer than six (6) specimens per sampling event. The specimens shall be in (3)-inch by six (6)-inch cylindrical molded.

    b. UCS shall be conducted on wet specimens in pairs at selected ages in accordance with ASTM D 1633, including the design target cure age. Results of wet specimens tested before the design target cure age may be used to provide an early indication of DSM strength and the trend of strength increase with curing time, and to evaluate whether the work of the DSM Contractor can achieve the average target UCS criteria.

5. Daily quality control report

    a. The DSM Contractor shall submit Daily Quality Control Reports to the Engineer at the end of the next working day in an electronic file or by hard copy. The Daily Quality Control Report shall document the progress of the DSM construction, present the results of the QC parameter monitoring, and clearly indicate if the elements have met the acceptance criteria.

    b. The Daily Quality Control Report shall include as a minimum the results of the following QC parameter monitoring for each element:

        1) rig number

        2) type of mixing tool

        3) date and time (start and finish) of element construction

        4) element number and reference drawing number

        5) element diameter

        6) element top and bottom elevations

        7) grout mix design designation

        8) slurry-specific gravity measurements

        9) description of obstructions, interruptions, or other difficulties during installation and how they were resolved

    c. The daily quality control reports shall also include the following parameters

recorded automatically or manually for each element at intervals no greater than four (4) feet and submitted in the form of either table or figures:

1) elevation in feet vs. real-time

2) shaft rotation speed in RPMs vs. real-time.

3) penetration and withdrawal rates in feet per minute vs. real-time.

4) grout injection rate in GPM vs. real-time.

5) grout specific gravity vs. time.

6) cement factor in place vs. depth.

7) blade rotation number vs. depth.

3.13 AS-BUILT DRAWINGS

A. Following DSM construction, the DSM Contractor shall submit as-built drawings of the DSM in terms of project coordinates.

SECTION 331100 - SITE WATER DISTRIBUTION UTILITIES

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Site water distribution systems located outside the building perimeter, extending to an existing water line or meter.

B. Related Requirements:

1. Division 01 - General Requirements.

2. Division 22 – Plumbing.

3. Section 31 2313 - Excavation and Fill.

4. Section 31 2323 - Excavation and Fill for Utilities.

5. Section 32 1313 - Site Concrete Work.

6. Section 33 3000 - Site Sanitary Sewer Utilities.

1.02 SUBMITTALS

A. Shop Drawings: Submit site plan indicating locations of lines, valves, and related appurtenances.

B. Product Data: Manufacturer’s catalog data for materials. Include technical data for accessories, gaskets, joints and couplings.

C. Certificates: Certificates attesting that tests set forth in referenced publications have been performed, and the performance requirements have been satisfied.

1.03 QUALITY ASSURANCE

A. Comply with the following as a minimum requirement:

1. American National Standards Institute (ANSI):

a. ANSI H23.1 - Seamless Copper Water Tube.

2. NSF International (NSF):

a. ANSI/NSF 61 Drinking Water System Components – Health Effects.

b. ANSI/NSF 372 Drinking Water System Components – Lead Content.

3. American Society of Mechanical Engineers (ASME):

a. ASME B16.18 - Cast Copper Alloy Solder Joint Pressure Fittings.

b. ASME B16.22 - Wrought Copper and Copper Alloy Solder-Joint Pressure Fittings.

c. ASME B16.26 - Cast Copper Alloy Fitting for Flared Copper Tubes.

d. ASME B16.51 - Copper and Copper Alloy Press-Connect Pressure Fittings.

4. American Society for Testing and Material (ASTM) International:

a. ASTM A36 – Standard Specification for Carbon Structural Steel.

b. ASTM A240 – Standard Specification for chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications.

c. ASTM A312 – Standard Specification for Seamless, Welded, and Heavily Cold Worked Austenitic Stainless Steel Pipes.

d. ASTM A536 - Standard Specification for Ductile Iron Castings.

e. ASTM B61 - Standard Specification for Steam or Valve Bronze Castings.

f. ASTM B62 - Standard Specification for Composition Bronze or Ounce Metal Castings.

g. ASTM B75 - Standard Specification for Seamless Copper Tube.

h. ASTM B88 - Standard Specification for Seamless Copper Water Tube.

i. ASTM B152 – Standard Specification for Copper Sheet, Strip, Plate, and Rolled Bar.

j. ASTM 17 – Standard Specifications for Copper Alloy Sand Castings for General Applications.

k. ASTM D1784 – Standard Specification for Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Poly (Vinyl Chloride) (CPVC) Compounds.

l. ASTM D2683 - Standard Specification for Socket-Type Polyethylene Fittings for Outside Diameter-Controlled Polyethylene Pipe and Tubing.

m. ASTM D3035 - Standard Specification for Polyethylene (PE) Plastic Pipe (DR-PR) Based on Controlled Outside Diameter.

n. ASTM D3139 - Standard Specification for Joints for Plastic Pressure Pipes Using Flexible Elastomeric Seals.

o. ASTM D3261 - Standard Specification for Butt Heat Fusion Polyethylene (PE) Plastic Fittings for Polyethylene (PE) Plastic Pipe and Tubing.

p. ASTM D3350 - Standard Specification for Polyethylene Plastics and Fittings Materials.

q. ASTM F2620 - Standard Practice for Heat Fusion Joining of Polyethylene Pipe and Fittings.

r. ASTM F2206 - Standard Specification for Fabricated Fittings of Butt-Fused Polyethylene (PE).

s. ASTM F477 - Standard Specification for Elastomeric Seals for Joining Plastic Pipe.

t. ASTM F714 - Standard Specification for Polyethylene (PE) Plastic Pipe (DR-PR) Based on Outside Diameter.

5. American Water Works Association (AWWA):

a. AWWA C104/A21.4 - Cement-Mortar Lining For Ductile-Iron Pipe and Fittings.

b. AWWA C110/A21.10 - Ductile-Iron and Gray-Iron Fittings

c. AWWA C111/A21.11 - Rubber-Gasket Joints for Ductile-Iron Pressure Pipe and Fittings.

d. AWWA C115/A21.15 - Standard for Flanged Ductile-Iron Pipe with Threaded Flanges.

e. AWWA C153/A21.53 – American National Standard for Ductile-Iron Compact Fittings for Water Service

f. AWWA C207 – Steel Pipe Flanges for Waterworks Service Sizes 4 In. Through 144 In.

g. AWWA C500 - Metal Seated Gate Valves for Water Supply Service.

h. AWWA C503 - Wet- Barrel Fire Hydrants.

i. AWWA C508 - Swing-Check Valves for Waterworks Service, 2 inches through 24 inches (50-mm through 600-mm) NPS.

j. AWWA C510-89 - Standard for Double Check Valve Backflow-Prevention Assembly.

k. AWWA C511 - Reduced-Pressure Principal Backflow-Prevention Assembly.

l. AWWA C600 - Installation of Ductile-Iron Water Mains and Their Appurtenances.

m. AWWA C800 - Underground Service Line valves and Fittings.

n. AWWA C900 – Polyvinyl Chloride (PVC) Pressure Pipe and Fabricated Fittings 4 In. Through 12 In., for Water Transmission and Distribution.

o. AWWA C901 – Polyethylene (PE) Pressure Pipe and Tubing, 3/4 In. Through 3 In., for Water Service.

p. AWWA M23 - PVC Pipe - Design and Installation.

q. AWWA M55 - PE Pipe - Design and Installation.

6. Manufacturers Standardization Society (MSS) of the Valve and Fittings Industry:

a. MSS SP-80 - Bronze Gate, Globe, Angle and Check Valves.

7. Uni-Bell PVC Pipe Association (UBPPA):

a. UBPPA UNI-PUB-09 - Installation Guide for Gasketed-Joint PVC Pressure Pipe (C900).

8. Underwriters Laboratories Inc. (UL):

a. UL 246 – Standard for Hydrants for Fire-Protection Service.

b. UL 262 – Standard for Gate Valves for Fire-Protection Service.

c. UL 312 – Standard for Check Valves for Fire-Protection Service.

9. National Pollutant Discharge Eliminations System (NPDES):

a. Comply with storm water requirements of general permit for storm water discharges when flushing pipe systems including storm drains and maintaining logs.

10. Plastic Pipe Institute (PPI):

a. TN-38 – Bolt Torque for Polyethylene Flanged Joints.

b. TR-4 – Technical Report requirements of Hydrostatic Design Basis (HDB), Hydrostatic Design Stress (HDS), Strength Design Basis (SDB), Pressure Design Basis (PDB) and Minimum Required Strength (MRS) Ratings for Thermoplastic Piping Materials or Pipes.

c. TR-33 – Technical Report for Generic Butt Fusion Joining Procedure for Field Joining of Polyethylene Pipe.

B. Provide valves from the same manufacturer.

C. Manufacturer of plumbing products must be third-party certified to ANSI/NSF Standard 61, Section 9 certification, and ANSI/NSF 372 to demonstrate compliance with the federal requirements for lead contribution to drinking water, the Safe Drinking Water Act SDWA, and the California Health and Safety Code Section 116875. No pipe, pipe fitting, or any other fitting or fixture intended to convey or dispose water for human consumption for drinking or cooking is allowed in the domestic plumbing system, if they do not meet the low lead definition of Health and Safety Code 116875. Weighted average lead content of the wetted surface area of pipes, fittings and fixtures may not exceed 0.25 percent.

D. Qualifications of Manufacturer: Products used in the Work of this Section shall be produced by manufacturers regularly engaged in manufacture of similar items and with a history of successful production as reviewed by the ARCHITECT.

1.04 PRODUCT HANDLING

A. Store items above ground on platforms, skids, or other required supports.

B. Protect materials from direct sunlight.

C. Protect coating and linings on piping, fittings, and accessories from damage. Repair and/or replace damaged coatings or linings.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Pipes, Fittings, and Joints:

P-1: Underground water service pipe sizes up to 3-inch shall be Copper water tubing, Type K hard, ANSI H23.1, ASTM B88, IAPMO IS. Manufacturer: Mueller, Cerro Brass, Cambridge-Lee, Halstead, or equal.

An approved protective wrap shall be used to completely isolate and protect underground copper tubing and extend past the surface a minimum 12-inch. The excess wrapping shall be trimmed down and taped

to copper tubing with 10 mill PVC pipe tape at grade level of concrete or asphalt.

PF-1a: Copper Press-Connect pressure fittings, comply with ASME B16.51 with Ethylene Propylene Diene Monomer, EPDM O-Ring Seal in each end. Fittings with the sizes of 2-1/2" and larger shall have cross-section Grab Rings and separation rings.

Manufacturer: Viega, Mueller Industries, Apollo, or equal.

PF-1b: Wrought Copper - solder type ASME B 16.22.

Manufacturer: Mueller Brass, Nibco, Lee Brass, or equal.

PF-1c: Grooved end type– ASTM B75 or ASTM B152 and ASME B16.22 Wrought Copper, bronze sand casting per ASTM B584 copper alloy CDA 836 per ASME B16.18. Couplings shall be CTS style 606 supplied with angle pattern bolt pads for rigidity, coated with copper coated alkyd enamel. Gaskets shall be pre-lubricated Flush seal type.

Manufacturer: Victaulic, or equal.

P-2: Underground water service pipe sizes up to 3-inch shall be high density polyethylene pipe (HDPE) with tracer wire. Pipe and fitting system shall be pressure class 333 (DR7). All material shall be manufactured from a PE 4710 resin listed with the Plastic Pipe Institute (PPI) as TR-4. The resin material shall meet the specifications of ASTM D3350 with a minimum cell classification of 445474C. HDPE pipe and fittings shall contain no recycled compounds except that generated in the manufacturer's own plant from resin of the same specification from the same raw material. HDPE products shall be homogeneous throughout and free of visible cracks, holes, foreign inclusions, voids, or other injurious defects.
Pipe sizes smaller than 3" shall be manufactured to the dimensional requirements listed in ASTM D3035, and 3" Pipes shall have a manufacturing standard of ASTM F714. Pipes and fittings shall meet AWWA C901 and shall be listed as meeting NSF-61.
Installer shall be certified by manufacturer for HDPE pipe and joint installation.
Manufacturer: ISCO, JM Eagle or equal.

PF-2a: Butt Fusion HDPE Fittings shall meet the following requirement:

a. Molded fittings shall comply with the requirements of ASTM D 3261.

b. All fabricated elbows, tees, reducing tees and end caps shall be produced and meet the requirements of ASTM F2206.

c. Socket fittings shall meet ASTM D 2683.

d. Installer shall be certified by manufacturer for this type of joint installation.

Manufacturer: ISCO, JM Eagle or equal.

PF-2b: Bolted Connections- Flanges and MJ Adapters shall be fused onto the pipe and have a minimum pressure rating equal to or greater than the pipe and shall meet the following requirement:

a. Metallic back-up rings (Van-Stone style lap joint flanges), shall have a radius on the inside diameter of the bore so as to be compatible with HDPE Flanges. Back up rings shall have bolt pattern that will mate with AWWA C207 Class D (generically known as 150 pound patterns).

b. Flange assemblies shall be assembled and torqued according to PPI TN-38.

c. Installer shall be certified by manufacturer for this type of joint installation.

P-3: Underground water service pipe sizes 4-inch and larger shall be C900 water service pipe material complying with AWWA C900, and ASTM D1784 Cell Class 12454B with tracer wire, NSF and UL listed. Piping shall be plain end or gasket bell end, pressure class 305 (DR14) with cast iron pipe equivalent outside diameter.

PF-3: Fire Water Service, Domestic Water and Irrigation Service Line Fittings, Joints and Jointing Materials shall be Ductile-iron with mechanical joints conforming to AWWA C110/A21.10 or AWWA C153/A21.53, C900 compatible, and shall have cement mortar lining conforming to AWWA C104/A21.4, standard thickness unless otherwise indicated on Drawings.

a. Pipe joints shall be push on as specified in ASTM D3139.

b. Joints between pipe and metal fittings, valves, and other accessories shall be mechanical joints as specified in AWWA C111/A21.11.

c. Provide each joint connection with an elastomeric gasket suitable for the bell or coupling installation.

d. Gaskets for push on joints for pipe shall conform to ASTM F477.

e. Gaskets for push on joints and compression type joints or mechanical joints for connections between pipes and metal fittings, valves, and other accessories shall be as specified in AWWA C111/A21.11.

f. Sleeve-type mechanically coupled joints may be provided instead of push-on joints on plain-end PVC plastic joints. Comply with requirements of ASTM D3139.

g. Comply with installation guide UBPPA UNI-PUB-09.

Manufacturer: JM Eagle, Diamond Plastics, North American Pipe, or equal.

P-4: Aboveground water service pipe shall be Type 316L Stainless Steel, Schedule 40 water pipe, marked with manufacturer's identification and fittings. Manufacturer's representative shall instruct installers and certify them for joint installation. Piping system shall be provided with a five-year manufacturer’s material warranty.

Manufacturer: Viega, or equal.

PF-4: Type 316L Stainless Steel, Schedule 40 Press Fittings. For water service piping systems, provide with EPDM seals. Manufacturer's representative shall instruct installers and certify them for joint installation.

Manufacturer: Viega, or equal.

D. Gates Valves for PVC:

1. Non-rising stem type with resilient wedge gates or iron body bronze wedge gates and mechanical joint ends conform to AWWA C500.

2. Non-rising stem type with mechanical joints ends shall conform to AWWA C509.

3. Valves designed for a working pressure of 175 PSI shall be inside-screw type with operating nut, and resilient wedge type gate. Valve shall be provided with mechanical joints as required for the pipe to which it is intended to connect.

4. Valves with UL listing of 262 shall conform to AWWA C500. Valves shall open by counter-clockwise rotation of valve stem.

5. Stuffing boxes shall be provided with O-ring stem seals and shall be bolted and constructed to permit easy removal of parts for repair.

6. Sleeve type mechanical couplings may be provided instead of mechanical and push on joint ends.

7. Valve ends and gaskets for connection to sleeve type mechanical couplings shall conform to specified requirements for the joint or coupling.

E. Gate Valves in Valve Pits:

1. Outside screw and yoke rising stem type valves with resilient wedge gates and flanged ends shall conform to AWWA C500.

2. Outside screw and yoke rising stem type valves with flanged ends shall conform to AWWA C509.

3. Outside screw and yoke type Valves with double disc gates or split-wedge type gate and flanged ended ends shall be designed for 175 psi and conform to UL 262.

4. Provide valves with hand wheels that open by counterclockwise rotation of the valve stem.

5. Stuffing boxes shall be provided with O-ring stem seals and shall be bolted and constructed to permit easy removal of parts for repair.

F. Check Valves for PVC:

1. Valves shall be swing-check type conforming to AWWA C508 or UL 312.

2. Valves shall be provided with cast iron or steel body and cover, flanged ends and clear port opening.

3. Valves shall be designed for a working pressure of 175 PSI.

G. Fire Hydrants:

1. Before procurement, verify approval issued by the County of Los Angeles or Fire Department having jurisdiction.

2. Hydrants shall be wet barrel types conforming to AWWA C503 or UL 246.

3. Only 1¾-inch pentagonal nuts are to be provided on stems and protective caps.

4. Specified hydrants:

a. Clow/Rich # 850 or 860

b. James Jones #J3700 Fluted Spool

c. Equal.

H. Valve Boxes: 14 ¾-inch by 20-inch by 12-inch cast concrete with cast iron, traffic grade cover marked “WATER” (for use over water valves).

1. Brooks 36-H MB with No. 36-T cast iron cover EISEL 363.5, or equal.

I. Mechanical Thrust Restraint:

1. Restraint shall be incorporated into the follower gland.

2. Restraint shall consist of individually actuated wedges that increase resistance to pull out as internal pressure or external forces increase.

3. Gland shall be ductile iron conforming to ASTM A536.

4. Provide twist off nuts and tee-head bolts of the same size to ensure proper actuating of restraint devices.

5. Restraining device shall be provided with pressure rating equal to that of the pipe on which it is installed.

6. Restraining gland shall be UL listed.

7. Mechanical thrust restraint devices shall be EBAA Iron “Megalug” or equal.

J. Restraint Device Adapters:

1. Restrained flange adapters shall be provided instead of threaded or welded flange spool pieces on plain end of ductile iron or PVC pipe.

2. Flange adapters shall be manufactured of ductile iron conforming to ASTM A536 and be provided with flange bolt circles compatible with AWWA C115/A21.15.

3. Restraint of flange adapter shall consist of a multiple number of individually actuated gripping wedges to maximize restraint capability.

4. Torque limiting actuating screws shall be provided to insure proper initial set of gripping wedges.

5. Flange adapter shall be capable of deflection during assembly or permit lengths of pipe to be field cut to allow at least 0.6 inch of gap between end of pipe and mating flange without affecting integrity of seal.

6. Flange adapter shall be provided with a safety factor of at least 2:1 for rated pressure.

7. Restraint device adapters shall be EBAA Iron “Megaflange”, or equal.

K. Tracer Wire for Nonmetallic Pipes: Tracer wires shall be continuous solid copper wire type THWN, 12 AWG gauge, with heat and moisture resistance insulation. Blue plastic covered for domestic water and red for fire sprinkler. (Aluminum wire is prohibited). Provide in sufficient length to be continuous over each installed section of nonmetallic pipe.

L. Pipe markers shall be a concrete plaque inscribed with the word “WATER.”

M. Water Service Line Materials:

1. Water Service Line Piping Material: Refer to article 2.01.A within this section.

2. Water Service Line Appurtenances:

a. Corporation stops shall be ground key type; manufactured of bronze conforming to ASTM B61 or ASTM B62; and suitable for the working pressure of the system. Ends shall be suitable for solder-joint or flared tube compression type joint connection. Threaded ends for inlet and outlet of corporation stops shall conform to AWWA C800; coupling nut for connection to flared copper tubing and shall conform to ASME B16.26.

b. Goosenecks shall be type K copper tubing. Joint ends for goosenecks shall be as required for connecting to corporation stop and service line. Where multiple gooseneck connections are required for individual service, connect goosenecks to service line through brass or bronze branch connection; the total clear area of branches shall be at least equal to clear area of service line. Length of goosenecks shall be as indicated or required.

c. Curb or service stops shall be ground key, round way, inverted key type; bronze, conforming to ASTM B61 or ASTM B62; and rated at 150 psi. Ends shall be as required for connection to service piping. Arrow shall be cast into body of curb or service stop indicating direction of flow.

d. Gate valves 2.5-inch and larger shall be MSS SP-80, Class 150, solid wedge, or resilient wedge gate, and non-rising stem. Valves shall be provided with flanged end connections. Provide hand wheel operators if easily accessible. Provide operating nut if inside a vault, pit or valve box.

e. Gate valves in valve pits 2-inch, and smaller shall be MSS SP-80, Class 150, bronze, solid wedge, inside screw, rising stem. Valves shall be provided with flanged end connections or threaded end connections with union on one side of valve and hand wheel operator.

f. Valve boxes shall be provided at each gate valve installed underground. Valve boxes shall be a size suitable for valve on which it is installed.

N. Water meter will be installed by water purveyor for the area, unless noted otherwise.

O. Strainers:

STR-1 Description: Wye type with Monel or Stainless Steel strainer cylinder (manufacturer’s standard mesh), and gasketed machine strainer cap. Where indicated on Drawings, provide with valved (globe valve) blow out piping, same size as blow out plug:

2-inch and smaller: C.M. Bailey #100-A, bronze, 250 pound, or ductile iron with fusion bonded epoxy coating.

2 ½-inch and larger: Watts 77F-DI-FDA-125 pound, or other ductile iron fusion bonded epoxy coated flanged strainer, conforming to ASTM A312 for the strainer body, and ASTM A240 for the stainless steel strainer element. (No iron body strainer shall be used on potable water that is not fusion bonded epoxy coated inside and out.)

C.M.Bailey, Armstrong, Wilkins, Watts, or equal.

STR-2 "Y" pattern, cast iron bodies, 125 psi, Monel screen 16 square. mesh. Open area at least twice the cross-sectional area of IPS pipe in which strainer is installed and may be woven wire or perforated type. Screwed ends for sizes up to 2-inch, flanged ends for 2 ½-inch and larger perforations, in accordance with the following:

Bailey #100, Armstrong, Rp & C , Keckley, or equal.

STR-3 Bucket type, flange, semi-steel body, 125 psi, stainless steel screen with 1/8 inch diameter perforations (mounted above grade for water service). All sizes, for lines serving fire sprinkler risers:

Bailey #1, Zurn 150 Series, Rp 7 C, Watts 97fb-Fsfe, or equal.

STR-42" and larger: Watts 077-F-SS Stainless steel flange type strainer, or equal conforming to ASTM A312 for strainer body, ASTM A240 for the SS strainer element and ASTM A36 for base flange material.

P. Backflow Preventer Assemblies:

1. Assembly shall be provided with flanged connections, ductile iron with fusion bonded epoxy coated construction, bronze, or stainless steel.

2. Backflow preventer shall be suitable for cold water working pressure of 175 psi.

3. Internal parts shall be designed for replacement without removing valves from line.

4. Double check backflow preventer assembly shall consist of two independently acting spring cam or poppet style check valves, 2 shut-off valves and 4 test cocks. Check valve shall be designed to provide drip tight closure against reverse flow, low pressure drop at maximum flow capacity. Spring-loaded checks shall cause valve to seal against a higher inlet pressure than outlet pressure when there is no flow.

5. Double check backflow preventer assembly shall meet AWWA Standard C510-89. Assembly shall be Ames 2000ss, Febco 850, Watts 709, Wilkins 350, or equal.

6. Reduced pressure backflow preventer assembly shall consist of two check valves located between two shut-off valves with an area of reduced

pressure between two check valves and a relief device arranged to discharge to atmosphere.

a. Comply with AWWA Standard C511.

b. Fluctuation in piping pressure shall not cause cycling. Backflow preventer shall automatically maintain low pressure zone to positively prevent backflow of water into system. Assembly shall automatically indicated failure of any part vital to backflow prevention by the continuous discharge relief device.

c. Reduced pressure backflow preventer assembly shall be Cla-Val Model RP-4, or equal.

7. Backflow prevention assemblies (devices), shall be tested and certified by a certified backflow tester, and a test report shall be provided to the water agency having jurisdiction. Testing shall be performed in the presence of the Project Inspector.

PART 3 - EXECUTION

3.01 EXCAVATION, BACKFILLING AND COMPACTING

A. Conform to requirements in Section 31 2323 - Excavation and Fill for Utilities or Section 31 2313 - Excavation and Fill.

3.02 PIPE INSTALLATION

A. Project site water lines shall terminate approximately 5 feet from buildings, unless otherwise indicated on Drawings. Temporarily cap or plug terminals for future connection to building.

3.03 CLEARANCES OF WATER LINE

A. Building or Structures: Two feet.

B. Parallel to Sewer Line:

1. Water line 4-inch or less in diameter shall not be installed in a common trench with the building sanitary drain unless the bottom of the water line is at least 12 inches above the top of the building sanitary drain or where the water line is installed on a solid shelf excavated on one side of the common trench with a minimum clear horizontal distance of 12 inches from the building sanitary drain.

2. Water lines 6-inch and larger in diameter shall be separated from the Project site sanitary sewer, receiving more than one building sanitary drain or acid pipeline, in accordance with the requirement of the State of California, Human and Welfare Agency, Department of Health Services.

C. Crossing Sewer Line:

1. A water line shall be separated from sanitary sewer in accordance with the requirements of the State of California Administrative Code, Title 22, Section 64630(e)(2).

2. Install water line a minimum of 12 inches clear, above or below a sanitary sewer.

3. A water line 6-inch or greater in diameter, crossing under a Project site sanitary sewer line, shall be installed with joints located at least 10 feet away from each side of the sanitary sewer line.

4. A water line 6-inch or greater in diameter, crossing over a Project site sanitary sewer line, shall be installed with joints located at least 4 feet away from each side of a purple pipe or sanitary sewer line.

D. Install water lines no closer than 10 feet horizontally clear from the edge of sewage leach fields, seepage pits, and septic tanks.

3.04 PIPE INSTALLATION AND JOINING

A. Install all piping and fitting systems according to the manufacturer requirement.

B. Remove fins and burrs from pipe and fittings.

C. Clean piping, fitting, valves, and accessories before installing. Maintain items in a clean condition.

D. Provide proper facilities for lowering sections of pipe into trenches. Do not drop into piping, fittings, or other materials into trenches. Accurately cut pipe and install without springing or forcing. Replace any piping or fitting that does not provide sufficient space for proper installation of joining material.

E. Blocking or wedging between bells and spigots is not permitted. Install bell and spigot pipe with bell end pointing in the direction of flow.

F. Install piping to the lines and grades indicated or required. Low points and dips are not permitted. Support piping at proper elevation and grade with secure and uniform supports. Wood support blocking is not permitted. Where sand cement slurry will not be furnished for backfill, install piping so that full length of each section of pipe and each fitting will solidly rest on pipe bedding. Excavate recesses to accommodate bells, joints, and couplings. Provide anchors and supports where indicated or required for installation. Provide proper allowances and devices for expansion and contraction of piping and systems.

G. Maintain trenches free of standing water until pipe joints have been installed.

H. At the end of each day close open ends of pipe with temporary caps of the same material as the pipe.

I. Do not install piping when trench or weather conditions prevent proper installation.

3.05 INSTALLATION OF TRACER WIRE AND PIPE MARKERS

A. Tracer Wire: Install continuous length of tracer wire for full length of each run of nonmetallic pipe. Fasten wire to top of pipe in such a manner that it will not be displaced during construction operations. Wire shall be fastened to pipe at not greater than 20-foot intervals. Wire shall terminate above finished grade with a 12-inch lead taped around each riser. Provide a tracer wire to grade under a permanent marker where straight-line transitions of metallic to non-metallic pipe are installed.

B. Underground Pipe Markers: Provide markers at grade where non-metallic pipe is installed and for each horizontal change in direction.

3.06 CONNECTIONS TO EXISTING WATER LINES

A. After Project Inspector has inspected installation, perform connections to servicing water lines. Schedule service shutdown for connecting new system at a time causing minimum disruption.

3.07 INSTALLATION OF HDPE WATER SERVICE LINE

A. All HDPE pipe and fittings shall be cut, joined, and installed in accordance with the manufacturer's recommendations. Joining, and laying of polyethylene pipe shall be accomplished by personnel experienced and certified in working with polyethylene pipe systems.

B. Jointing:

1. All HDPE pipe shall be joined to itself by the heat fusion process which produces homogeneous, seal, leak tight joints. Tie-ins between sections of HDPE pipe shall be made by butt fusion whenever possible.

2. The pipe shall be joined by the butt fusion procedure outlined in ASTM F 2620 or PPI TR-33. A record or certificate of training for the fusion operator must be provided that documents training to the fundamentals of ASTM F 2620.

3. The employer of the fusion machine operator is responsible for the fusion joint quality of the fusion weld made by that individual. The employer is responsible for documenting all training and qualification records for that individual, including compliance to any code requirements for fusion/bonder operators.

4. All HDPE fusion equipment operators shall be qualified to the procedure used to perform pipe joining. Fusion equipment operators shall have current, formal training on all fusion equipment employed on the project approved by manufacturer. Training received more than two years prior to

operation with no evidence of activity within the past 6 months shall not be considered current.

C. Installation:

1. Buried HDPE pipe and fittings shall be installed in accordance with AWWA Manual of Water Supply Practices M55 Chapter 8. The Design Window identified in AWWA M55 Chapter 5 shall be considered acceptable design and installation conditions.

2. Unless required by design documents, no thrust blocks shall be placed in the HDPE pipe system since the fused system is fully restrained.

3. All appurtenances (tees, elbows, services, valves, etc.), must be independently supported and shall not rely on the pipeline and its connections for this support. Excessive stresses may be encountered when appurtenances are inadequately supported.

3.08 INSTALLATION OF C900 PLASTIC WATER SERVICE LINE

A. Unless otherwise indicated, install pipe and fittings as specified and in accordance with UBPPA UNI-B-09 and AWWA M23, Chapter 7, “Installation”.

B. Jointing:

1. Provide push on joints with elastomeric gaskets specified for this type of joint, furnishing either elastomeric-gasket bell-end pipe or elastomeric-gasket couplings. For pipe-to-pipe push on joint connections, provide pipe with push on joint ends furnished with factory installed bevel; for push on joint connections to metal fittings, valves and other accessories, square cut spigot end off pipe end.

2. Provide push on joint lubricant recommended by manufacturer.

3. Install push on joints for pipe-to-pipe connections in accordance with UBPPA UNI-PUB-09 and AWWA M23, Chapter 7, "Installation."

4. Install push on joints for connection to fittings, valves, and other accessories in accordance with requirements of UBPPA UNI-PUB-09 and with applicable requirements of AWWA C600.

5. Compression-type joints/mechanical-joints with gaskets, glands, bolts, nuts and internal stiffeners shall be installed in accordance with the requirements of UBPPA UNI-PUB-09 and AWWA C600 and Appendix A to AWWA C 111/A21.11.

a. Square cut spigot off end of pipe for compression-type joint/mechanical-joint connections and do not re-bevel.

6. Sleeve-type mechanical couplings shall be provided in strict accordance with coupling manufacturer's recommendations using internal stiffeners as specified for compression-type joints.

C. Provide mechanical thrust restraint devices for anchorage and piping unless thrust blocks are indicated on the Drawings. Thrust blocks shall be installed in accordance with the requirements of UBPPA UNI-PUB-09 except that size and location of blocks shall be as indicated. Thrust blocks shall be provided as specified in Section 32 1313 - Site Concrete Work.

3.09 INSTALLATION OF VALVES

B. Provide gate valves conforming to AWWA C500 and UL 262 in accordance with AWWA C600 for valve and fitting installation and with recommendations of AWWA C500 Appendix "Installation, Operation, and Maintenance of Gate Valves".

C. Provide gate valves conforming to AWWA C600 in accordance with AWWA C509 for valve and fitting installation and with recommendations of AWWA C500 Appendix "Installation, Operation, and Maintenance of Gate Valves".

D. Provide gate valves on PVC water service lines in accordance with AWWA M23 Chapter 7, "Installation."

E. Provide check valves and fittings in accordance with applicable requirements of AWWA C600 unless noted otherwise on the Drawings.

F. Provide gate and check valve joints as specified for the type of joints between pipe and fittings.

3.10 INSTALLATION OF HYDRANTS

A. Install hydrants according to requirements of AWWA C600 for hydrant installation and as indicated. Provide joints as specified for the type of joints between pipe and fittings.

B. Install hydrant with a 6-inch key gate valve between 4 and 10 feet from the hydrant.

3.11 INSTALLATION OF BACKFLOW PREVENTERS

A. Install reduced pressure backflow preventers to comply with RULE 16D of LADWP in the jurisdictional boundaries of Los Angeles Department of Water and Power.

3.12 INSTALLATION OF STRAINERS:

A. Strainers shall be installed on each water line downstream of the meter, above grade at the pressure regulating station. When a pressure regulating station (assembly) is not provided, "wye" type flange strainer shall be provided, with a shut off valve on the inlet and the outlet side.

B. If the water line is serving fire sprinkler risers or hydrants, then an approved fire service strainer shall be used: Watts 97DB-FSFE, or equal.

3.13 DISINFECTION OF DOMESTIC WATER PIPING SYSTEM

A. For complete requirement and procedure refer to section 22 1000, article 3.12.

3.14 ELECTROLYSIS PREVENTION

A. A minimum 6-inch long brass nipple shall be installed at locations specified or as required. Flanges shall be provided with a complete insulating component consisting of; gasket bolt sleeves and bolt washers. Dielectric insulators shall be installed at locations indicated or as required. Dielectric fittings are prohibited.

B. Where steel or cast iron below grade connects to copper or brass piping above grade, the transition from steel or cast iron pipe to copper or brass pipe shall be installed in an above grade accessible location.

C. Underground connections between dissimilar metals shall be in accessible yard boxes.

D. Above ground dielectric connections shall be exposed.

3.15 ABANDONING WATER LINES AND STRUCTURES

A. Water lines and appurtenances to be abandoned in place shall be cut and removed from areas where new Work is being installed.

B. Cap or plug abandoned existing drain lines below grade in a yard box and according to CBC.

3.16 TESTS AND INSPECTIONS

A. Provide labor, equipment, materials, test equipment and incidentals required for performing required field tests.

B. Tests shall not be performed for five days after concrete thrust blocks have been installed.

C. Testing Procedure: Water service lines shall be tested in accordance with applicable specified standard.

1. Test water service lines in accordance with applicable requirements of AWWA C600. No leakage is permitted.

2. Pressure testing: Before pressure test, fill portion of piping being tested with water for a minimum of 24 hours. Provide hydrostatic pressure of at least 50 psi greater than the maximum working pressure of tested system, but no less than 200 psi hydrostatic test pressure for system piping of 2-inch in diameter and larger. Provide and maintain hydrostatic

test pressure for at least two hours to ensure no leakage of any portion of piping or appurtenances under pressure test.

3.17 CLEANING

A. Remove rubbish, debris, and waste materials and legally dispose of off the Project site.

3.18 PROTECTION

A. Protect the Work of this section until Substantial Completion.

END OF SECTION

SECTION 333000 - SITE SANITARY SEWER UTILITIES

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Building Sanitary Sewer Lateral.
2. Closed-circuit television inspection of sewer laterals.

B. Related Requirements:

1. Division 01 - General Requirements.
2. Division 22 – Plumbing.
3. Division 23 - Mechanical.
4. Section 31 2313 - Excavation and Fill.
5. Section 31 2323 - Excavation and Fill for Utilities.
6. Section 32 1313 - Site Concrete Work.

1.02 SUBMITTALS

A. Shop Drawings: Submit site plan denoting locations of lines, valves, and appurtenances.

B. Product Data: Manufacturer’s catalog data for materials. Include technical data for accessories, gaskets, joints and couplings.

C. Certificates: Certificates attesting that tests set forth in referenced publication have been performed and the results required by design have been met.

D. Closeout Submittal: Submit three DVD’s of Closed-circuit television inspections performed. Include the following information:

1. Electronic Media Recordings: Visual and audio record of the entire length of pipe. For existing laterals identify problem areas, such as roots, cracks, fractures, broken pipe, and other unusual conditions found.
2. Digital Photographs of the pipe condition, connections, points of interest and defects found. Indicate distance of defects to a point of reference such as face of building or mainline.

3. Inspection Log: Provide written report including:

   a. Date and time of inspection.

   b. Name of School, Project, CONTRACTOR, and operator name.

   c. Location, material and size of pipe.

   d. Description of defects found.

1.03 QUALITY ASSURANCE

A. Comply with the following as a minimum requirement:

1. Standard Specifications for Public Works construction, current edition.

2. California Plumbing Code, CPC, current edition.

PART 2 – PRODUCTS

2.01 MATERIALS

A. Pipeline: Building or Project Site Sanitary Sewer and Vent: Minimum 5 feet away from building boundaries. For piping within 5 feet from building boundaries, and interior piping refer to Division 22 plumbing sections.

1. Cast iron soil pipe: Hubless, service weight, ASTM A888, CISPI 301, conforming to CISPI 310 and installed in accordance to IAPMO IS 6. Manufacturer: American Foundry, Tyler, or AB&I, or equal.

   a. Cast iron soil coupling: Hubless, heavy-duty with neoprene gaskets, stainless steel corrugated shields, and 4 bands of stainless-steel clamps. IAPMO, ASTM C564 and CISPI 310. Manufacturer: American Foundry, Mission Rubber Company, Tyler, or equal.

2. PVC (Poly Vinyl Chloride) Schedule 40 DWV Pipe, Conforming to ASTM D2665, ASTM F794, and ASTM F1866. Installer of PVC Schedule 40 DWV piping system shall carry ASTM D2855 and ASME B31.3 qualification. Installer shall provide proof of these qualifications to IOR prior to commencing work. Manufacturer: Charlotte pipe and foundry, Spears Manufacturing Company, Harvel Plastics Inc., or equal.

   a. PVC primer and solvent for chemical weld of pipe and fittings shall be as recommended by pipe manufacturer. Containers for solvent and primer shall be clearly marked with manufacturer's data. Solvent and primer shall not be more than one year old. The safety placards must be visible. Blue or red hot glue shall not be used.

1) Primer: Weld-On P-70 by IPS, Conforming to ASTM F656.

2) Cement: Weld-On 711 (gray) by IPS, Conforming to ASTM D2564.

3. Vitrified clay extra strength piping with plain ends. Comply with ASTM C700. Install with mechanical compression couplings. Joints shall comply with ASTM C425. Installation shall be in accordance with ASTM C12.

   Manufacturer: Mission Clay Products, or equal.

4. Acid waste and vent pipeline from building to Sampling Box: Refer to Division 22 for corrosive waste and vent piping.

B. Cleanout Assemblies: Cleanout plug shall be line size.

1. In covered concrete-paved floors: Iron body with UPC recognized plug, top, and adjustable sleeve, cut-off ferrule, polished brass/nickel/bronze, and secured Scoriated cover:

   a. Square:

J.R.SMITH	ZURN	JOSAM	OR EQUAL
4053	Z1400-SZ	57008-Z-1-SQ	

   b. Round:

J.R.SMITH	ZURN	WADE	JOSAM	OR EQUAL
4033	Z1400-BZ	W-6000	57008-Z-1	

2. Outside covered concrete-paved floors: Secured cover, extra heavy-duty, adjustable sleeve, cut-off ferrule, UPC recognized brass type plug, scoriated tractor type cover:

J.R.SMITH	ZURN	OR EQUAL
4233	Z1402-HD	

3. In yard boxes: Raised threaded head brass plug and Cast Iron Body Cleanout.

J.R.SMITH	ZURN	WADE	JOSAM	OR EQUAL
		8590A		

C. Yard Boxes: 14 1/2-inch by 19 3/4-inch by 12-inch, cast concrete, with cast-iron hinged locking traffic cover with the word “SEWER,” embossed on the cover in one inch high upper case lettering.

BROOKS No. 36-HFL Assembly with cast iron hinged locking cover	OR EQUAL

D. Concrete, Mortar and Related Materials: Conform to Section 32 1313 - Site Concrete Work, unless noted otherwise.

E. Metal Covers, Frames and Accessories:

1. Conform to Section 206 – Miscellaneous Metal Items of the Standard Specifications for Public Works Construction.

2. Metal Covers and Frames: Vandal-resistant design and construction.

3. Hot-dip galvanize steel parts after fabrication and prior to assembly in accordance with Section 210 – Paint and Protective Coating of the Standard Specifications for Public Works Construction.

F. Bedding Materials: Conform to the requirements of Section 31 2313 - Excavation and Fill or Section 31 2323 - Excavation and Fill for Utilities, as required.

PART 3 – EXECUTION

3.01 SANITARY SEWER INSTALLATION

A. Install sanitary sewers in a uniform alignment and slope to the point of connection as indicated. Before trench excavation, verify size, material, depth, and location of the point of connection. Minimum depth of below grade sewer lines shall be 24 inches to centerline of pipe

B. Pipe slope shall not be less than ¼ inch per foot or 2 percent unless pipe inverts are indicated. Where invert elevations are indicated, install pipe at a uniform slope between inverts.

C. Join pipes and fittings as recommended by the manufacturer.

D. PVC schedule 40 DWV pipe and fittings shall be solvent welded. PVC pipe ends shall be cut ninety (90) degrees and Beveled from 10°-15° with a proper beveling tool, cleaned and cleared of cutting burrs prior to cementing. Use approved reaming tool. Pipe ends shall be wiped clean and free of dirt, moisture, oil, and other foreign material with a rag. Primer shall be applied until the surface of the pipe and fitting is softened. Cement shall be applied with a light coat on the inside of the fitting and two heavier coats on the outside of the pipe. Pipe shall be inserted into the fitting and given a quarter turn while inserting if possible to help seat the cement while both the inside socket surface and outside surface of pipe are wet with solvent cement. Hold joint in place and undisturbed for 1 minute after assembly. Excess cement shall be wiped from the outside of the pipe.

3.02 CLEARANCE OF SANITARY SEWERS

A. Buildings or Structures: Two feet.

B. Parallel to Water Line:

1. Building sanitary drain, is not permitted to be installed in a common trench with a potable water line unless the bottom of the water line is at least 12 inches above the top of the sanitary sewer.

2. In addition, the potable water line shall be installed on a solid shelf excavated on one side of the common trench with a minimum clear horizontal distance of 12 inches from the sanitary sewer or building sanitary drain.

3. Project site sanitary sewer, receiving more than one building sanitary drain or acid pipeline, shall be separated from a potable water line in accordance with the requirements of the California Health, and Human Services Agency: Department of Public Health.

C. Crossing Water Line:

1. Building sanitary drain shall be installed a minimum of 12 inches below the potable water line.

2. Project site sanitary sewer shall be separated from the potable water main in accordance with the requirements of the State of California Administrative Code, Title 22, Section 64630(e)(2).

3.03 MANHOLES

A. Provide manholes in accordance with the Standard Plans for Public Works Construction, unless otherwise indicated.

B. Adjust manholes in accordance with the sub-section 302-5.8 Manholes (and other structures) of the Standard Specifications for Public Works Construction.

3.04 CLEANOUTS

A. Provide cleanout at the upper terminal for each sanitary pipeline, at intervals not exceeding 100 feet in straight run and any fraction thereof and for each aggregate horizontal change in direction exceeding 135 degrees.

B. Install required cleanouts before back filling of horizontal pipelines.

C. In unpaved and asphalt-paved areas, install cleanouts in yard boxes 2 inches below the yard box cover.

D. In concrete-paved areas, extend cleanouts flush with finish grade.

E. In traffic areas, install countersunk cleanout plugs where raised heads protrude.

3.05 ABANDONED SEWERS AND STRUCTURES

A. Plug or cap every abandoned sanitary sewer within 5 feet of the property line in a code required manner.

B. Demolish abandoned sanitary structures such as cesspool, septic tank, sewage pit, and manholes to a minimum depth of 5 feet below the finish grade, including removal of sewage. Disconnect any piping. After inspection, completely fill with earth, sand, gravel, cement-sand slurry, or other required material.

3.06 TESTING

A. After installation, test each sanitary drain and/or sewer and each section between successive manholes for either infiltration or exfiltration. Test shall be conducted in accordance with Section 306 - Underground Conduit Construction of the Standard Specifications for Public Works Construction.

B. Where excessive ground water is encountered test the pipeline for infiltration.

C. When infiltration or exfiltration exceeds allowable amounts as set forth in the Section 306 formula, perform repairs or replacements as necessary to comply with the required limits.

3.07 CLOSED-CIRCUIT TELEVISION INSPECTION

A. Coordinate with OAR time and date of inspection. Project Inspector shall be present during the CCTV inspection.

B. Clean laterals by hydraulic jet.

C. Perform internal closed-circuit television inspection of lateral from the building to the public mainline. Record sewer in its entirety with no breaks or interruptions. Move camera at a speed no grater than 30 feet per minute, stopping for a minimum of ten seconds to record pipe connections, defects, and points of interest.

D. Maintain technical quality, sharp focus and distortion free picture. Pan, tilt, and rotate as necessary to best view and evaluate connections, defects and points of interest.

E. Closed-circuit Television Equipment: As a minimum equipment shall include:

1. Television camera specially designed for pipe inspections, and operative in 100 percent humidity conditions.

2. Camera and television monitor capable of producing minimum 470H-line resolution color video picture.

3. Camera capable to inspect laterals as small as three inches up to 70 feet from sewer mainline.

4. Camera lighting shall be suitable to allow clear picture of inner wall at least ten feet in front.

F. Defective Work:

1. New Laterals: Defective Work found shall be repaired at CONTRACTOR's expense. Perform a new closed-circuit television inspection at no cost to OWNER.

2. Existing Laterals:

   a. If roots, sludge, or sediment material or other defect not related to the Work of this project impedes inspection, withdraw camera, restart inspection from opposite end and notify OAR of defects found.

   b. If obstruction or stoppage was caused by Work related to this project, remove obstruction at no cost to OWNER. Perform a new closed-circuit television inspection at CONTRACTOR's expense.

3.08 PROTECTION

A. Protect the Work of this section until Substantial Completion.

3.09 CLEANUP

A. Remove rubbish, debris, and waste materials and legally dispose of off the Project site.

END OF SECTION

SECTION 334000 - STORM DRAINAGE UTILITIES

PART 1 - GENERAL

1.01 SUMMARY

A. This Section includes storm drainage piping; sub-surface drains; metal covers, grates and frames; catch basins; box culverts; manholes, and BMPs.

1. Best Management Practices (BMPs):
   a. Catch Basin Inserts.
   b. Downspout Filters.
   c. Proprietary BMPs
2. Closed-circuit television inspection of storm drain lines.

1.02 RELATED REQUIREMENTS

A. Division 01 - General Requirements.

B. Section 01 3593 - Off-site Improvement Procedures.

C. Section 01 3596 - Off-site Improvement Procedures (B-Permit).

D. Section 01 7417 – BMP Implementation Plan.

E. Section 01 7418 – Water Pollution Control.

F. Section 22 1000 - Plumbing.

G. Section 31 2313 - Excavation and Fill.

H. Section 31 2323 - Excavation and Fill for Utilities.

I. Section 32 0117 - Pavement Repair.

J. Section 32 1313 - Site Concrete Work.

K. Section 32 1343 – Pervious Concrete Pavement.

L. Section 32 1415 – Permeable Interlocking Concrete Pavers.

1.03 DEFINITIONS

A. AASHTO: American Association of State Highway and Transportation Officials.

B. ASME: American Society of Mechanical Engineers.

C. ASTM: American Society for Testing and Materials.

D. BMP: Stormwater Best Management Practice.

E. CBC: California Building Code.

F. CCTV: Closed-Circuit Television.

G. DET: Detention BMP.

H. DWV: Drain, Waste, and Vent.

I. FILT: Filter BMP.

J. GS: Gravity Separator.

K. HDPE: High Density Polyethylene.

L. IAPMO: International Association of Plumbing and Mechanical Officials.

M. IOR: Inspector of Record.

N. NPS: Nominal Pipe Size.

O. OAR: OWNER's Authorized Representative.

P. PE: Polyethylene.

Q. Post Construction BMP: Devices installed by the CONTRACTOR for storm water management to be left on site after construction completion.

R. PP: Polypropylene.

S. PVC: Poly Vinyl Chloride.

T. RET: Retention.

U. SDR: Standard Dimensions Ratio.

V. VEG: Vegetative.

W. OWNER: Compton College

1.04 REFERENCES

A. American Association of State Highway and Transportation Officials (AASHTO):

1. ASHTO M 252: Geotextile Specification for Highway Applications.
2. AASHTO M 294: Standard Specification for Corrugated Polyethylene Pipe, 300- to 1500-mm (12- to 60-in.) Diameter.

3. AASHTO M 330: Standard Specification for Polypropylene Pipe, 300- to 1500-mm (12- to 60-in.) Diameter.

B. American Society for Testing and Materials International (ASTM):

1. ASTM A888: Standard Specification for Hubless Cast Iron Soil Pipe and Fittings for Sanitary and Storm Drain, Waste, and Vent Piping Applications.
2. ASTM C14: Standard Specification for Nonreinforced Concrete Sewer, Storm Drain, and Culvert Pipe.
3. ASTM C443: Standard Specification for Joints for Concrete Pipe and Manholes, Using Rubber Gaskets.
4. ASTM C564: Standard Specification for Rubber Gaskets for Cast Iron Soil Pipe and Fittings.
5. ASTM C76: Standard Specification for Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe.
6. ASTM C857: Standard Practice for Minimum Structural Design Loading for Underground Precast Concrete Utility Structures.
7. ASTM C858: Standard Specification for Underground Precast Concrete Utility Structures.
8. ASTM C891: Standard Practice for Installation of Underground Precast Concrete Utility Structures.
9. ASTM D2564: Standard Specification for Solvent Cements for Poly (Vinyl Chloride) (PVC) Plastic Piping Systems.
10. ASTM D2665: Standard Specification for Poly (Vinyl Chloride) (PVC) Plastic Drain, Waste, and Vent Pipe and Fittings.
11. ASTM D2855: Standard Practice for the Two-Step (Primer and Solvent Cement) Method of Joining Poly (Vinyl Chloride) (PVC) or Chlorinated Poly (Vinyl Chloride) (CPVC) Pipe and Piping Components with Tapered Sockets.
12. ASTM D3034: Standard Specification for Type PSM Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings.
13. ASTM D3212: Standard Specification for Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals.
14. ASTM D448: Standard Classification for Sizes of Aggregate for Road and Bridge Construction.
15. ASTM F1866: Standard Specification for Poly (Vinyl Chloride) (PVC) Plastic Schedule 40 Drainage and DWV Fabricated Fittings.
16. ASTM F2306: Standard Specification for 12 to 60 in. [300 to 1500 mm] Annular Corrugated Profile-Wall Polyethylene (PE) Pipe and Fittings for Gravity-Flow Storm Sewer and Subsurface Drainage Applications.
17. ASTM F2418: Standard Specification for Polypropylene Corrugated Wall Stormwater Collection Chambers.
18. ASTM F2764: Standard Specification for 6 to 60 in. [150 to 1500 mm] Polypropylene (PP) Corrugated Double and Triple Wall Pipe and Fittings for Non-Pressure Sanitary Sewer Applications.
19. ASTM F2787: Standard Practice for Structural Design of Thermoplastic Corrugated Wall Stormwater Collection Chambers.

20. ASTM F2881: Standard Specification for 12 to 60 in. [300 to 1500 mm] Polypropylene (PP) Dual Wall Pipe and Fittings for Non-Pressure Storm Sewer Applications.
21. ASTM F2922: Standard Specification for Polyethylene Corrugated Wall Stormwater Collection Chambers.
22. ASTM F477: Standard Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe.
23. ASTM F656: Standard Specification for Primers for Use in Solvent Cement Joints of Poly (Vinyl Chloride) (PVC) Plastic Pipe and Fittings.
24. ASTM F794: Standard Specification for Poly (Vinyl Chloride) (PVC) Profile Gravity Sewer Pipe and Fittings Based on Controlled Inside Diameter.

C. Cast Iron Soil Pipe Institute (CISPI):

1. CISPI 301: Hubless Cast Iron Soil Pipe and Fittings for Sanitary and Storm Drain, Waste, and Vent Piping Applications.
2. CISPI 310: Coupling for Use in Connection with Hubless Cast Iron Soil Pipe and Fittings for Sanitary and Storm Drain, Waste, and Vent Piping Applications.

D. The International Association of Plumbing and Mechanical Officials (IAPMO):

1. IAPMO IS 6: Hubless Cast Iron Sanitary and Rainwater Systems - Installation Standards.

E. Standard Specifications for Public Works Constructions (Greenbook):

1. Section 202: Masonry Materials.
2. Section 206: Miscellaneous Metal Items.
3. Section 207: Pipe.
4. Section 208: Pipe Joint Types and Materials.
5. Section 210: Paint and Protective Coatings.
6. Section 306: Underground Conduit Construction.

1.05 SUBMITTALS

A. Shop Drawings: Submit site plan denoting locations of lines, valves, and appurtenances.

B. Product Data: Manufacturer’s catalog data for all required materials. Include technical data for accessories, information concerning gaskets, joints and couplings.

C. Certificates: Certificates attesting that tests set forth in referenced publication have been performed and the results required by design have been met.

D. Closeout Documents: At Substantial Completion submit to the OAR two CD’s and one hard copy of the documents indicated in paragraphs 1 through 5 below:

1. Maintenance Log: Provide Microsoft Excel Spreadsheet including the following information:
   a. Maintenance log and upkeep records of the installed Post Construction BMPs. Include the following headers as a minimum: “Date of Service”, “Location of BMP”, “Type of Maintenance or Service”, “Notes”, “Next Scheduled Preventive Maintenance Due”, and “Inspector Signature”.
   b. Maintenance Requirements: Include the following headers as a minimum: “BMP Description”, “Location of BMP and Map Grid Location” and “Type of Maintenance or Service Needed”, i.e.; weekly, monthly, quarterly, etcetera. “Stock No.”, “Manufacturer Contact Information”, along with “Frequency” namely: weekly, monthly, quarterly, etcetera and “Special Instructions”.
2. Maintenance Manuals: Provide Maintenance Manual for storm drainage BMP components installed along with requirements, replacement or maintenance schedule and plans with the location of each BMP component. This manual shall include product information cut sheet, shop drawings, vendor information for each component and warranty.
3. Record drawings: ‘As-Builts’ site plan(s) showing Post Construction BMP. Provide a copy of marked record set with red pencil identifying any variations from design documents.
4. Training Documentation:
   a. OWNER attendees sign off training sheet.
   b. Two DVD’s of materials covered in the training and components installed.
5. Post-Construction BMP Maintenance Plan: Submit complete Plan per Attachment “A”, edit per As-Built conditions and provide missing information.
6. Records of Closed-Circuit Television Inspection: At Substantial Completion submit to the OAR three DVD’s of Closed-circuit television inspections performed. Include the following information:
   a. Electronic Media Recordings: Visual and audio record of the entire length of pipe. For existing laterals identify problem areas, such as roots, cracks, fractures, broken pipe, and other unusual conditions found.
   b. Digital Photographs of the pipe condition, connections, points of interest and defects found. Indicate distance of defects to a point of reference such as face of building or mainline. Provide the Digital Photographs after fixing the defective pipes.
   c. Inspection Log: Provide written report including:
      1) Date and time of inspection.
      2) Name of School, Project, CONTRACTOR, and operator name.
      3) Location, material and size of pipe.
      4) Description of defects found and attempts to fix them.

1.06 QUALITY ASSURANCE

A. Comply with the following as a minimum requirement: Standard Specifications for Public Works Construction, current edition.

1.07 DELIVERY, STORAGE, AND HANDLING

A. Do not store plastic products, pipes, and fittings in direct sunlight.

B. Protect pipe, pipe fittings, and seals from dirt and damage.

C. Handle all products according to manufacturer's written rigging instructions.

1.08 TRAINING OF OWNER PERSONNEL

A. At Substantial Completion and when the storm drainage system is fully operational, knowledgeable representatives from the CONTRACTOR and manufacturer(s) of the components specified and installed at the site shall provide up to 8 hours of training. Date, time and location for the training shall be coordinated through the project OAR. Have OWNER attendees sign off training sheet and provide a copy to the OAR.

B. Training period shall cover but not be limited to the following:

1. Explain the operation of storm drainage system and its design intent.
2. Explain the maintenance requirements of every component of the system.
3. Provide recommendations of practices to minimize or eliminate negative impact on the system.
4. Provide maintenance schedule as recommended by the manufacturers for every component and review it with OWNER’s Maintenance and Operations staff.
5. Conduct a site walk, identify every component of the system and demonstrate its operation.
6. Training shall be conducted with the use of Maintenance log and Maintenance manual.

1.09 SURPLUS MATERIALS

A. Provide enough additional materials for each component of BMP that requires replacement or service during the first year.

PART 2 – MATERIALS AND PRODUCTS

2.01 PIPING MATERIALS

A. General: Minimum 5 feet away from building boundaries. For piping within 5 feet from building boundaries, and interior piping refer to Division 22 plumbing sections. Provide piping system in conformance with Section 207 - Pipe and Section 208 - Pipe Joint Types and Materials of the Standard Specifications for Public Works Construction. All Soil-tight pipes shall be provided with joints that are function of opening size, channel length, and backfill particle size. A backfill material containing a high percentage of fine-graded soils requires investigation

for the specific type of joint to be used to guard against soil infiltration, including the requirement for fabric-wrapped joints.

B. Nonreinforced Concrete Pipe (CP): ASTM C14, with bell-and-spigot ends and gasketed joints with ASTM C443 rubber gaskets.

C. Reinforced Concrete Pipe (RCP): ASTM C76, with bell-and-spigot ends and gasketed joints with ASTM C443 rubber gaskets.

D. Cast Iron Soil Pipe (CIP):

1. Hubless, service weight, ASTM A888, CISPI 301, conforming to CISPI 310 and installed in accordance to IAPMO IS 6.
2. Cast iron soil coupling: Hubless, heavy-duty with neoprene gaskets, stainless steel corrugated shields, and 4 bands of stainless-steel clamps. IAPMO, ASTM C564 and CISPI 310.
3. Approved manufacturers: American Foundry, Mission Rubber Company, Tyler, or equal.

E. Corrugated, Dual Wall, High Density Polyethylene Drainage Pipe (HDPE):

1. Corrugated PE Drainage Pipe and Fittings NPS 4 to NPS 10: AASHTO M 252, Type S (double-wall) with smooth waterway for coupling joints.
2. Corrugated PE Pipe and Fittings NPS 12 to NPS 60: AASHTO M 294 or ASTM F2306, Type S (double-wall) with smooth waterway for coupling joints.
3. Approved manufacturer: ADS, Hancor, JM Eagle, or equal.

F. Corrugated, Dual or Triple Wall, Polypropylene Pipe (PP):

1. Corrugated PP Drainage Pipe and Fittings NPS 12 to NPS 60: ASTM F2764, ASTM F2881, or AASHTO M 330, Type S (double-wall) or Type D (triple-wall), for respective diameters. Provide coupling joints with smooth waterway.
2. Approved manufacturers: ADS, Prinsco, or equal.

G. PVC (Poly Vinyl Chloride) Schedule 40 DWV Pipe:

1. Conform to ASTM D2665, ASTM F794, and ASTM F1866.
2. Installer of PVC Schedule 40 DWV piping system shall carry ASTM D2855 and ASME B31.3 qualification. Installer shall provide proof of these qualifications to IOR prior to commencing work.
3. Containers for solvent and primer shall be clearly marked with manufacturer's data. Solvent and primer shall not be more than one year old. The safety placards must be visible.
4. Blue or red-hot glue shall not be used.
5. Approved manufacturers and products:
   a. Pipe: Charlotte pipe and foundry, Harvel Plastics Inc., JM Eagle, Spears Manufacturing Company, or equal.
   b. Primer: Weld-On P-70 by IPS, Conforming to ASTM F656.
   c. Cement: Weld-On 711 (gray) by IPS, Conforming to ASTM D2564.

H. PVC (Poly Vinyl Chloride) SDR-35 Pipe, 6” through 15”:

1. Conform to ASTM D3034.
2. Gasketed Joints: Elastomeric gasket joints conforming to ASTM D3212.
3. Gaskets: Chloroprene conforming to ASTM F477.
4. Approved manufacturers: Charlotte pipe and foundry, Harvel Plastics Inc., JM Eagle, Spears Manufacturing Company, or equal.

2.02 BEDDING MATERIAL FOR PIPE

A. General: Conform to the requirements of Section 312313 - Excavation and Fill or Section 312323 - Excavation and Fill for Utilities, as required.

B. Approved manufacturers and products:

1. Propex Fabrics, Inc.: Geotex 451.
2. TenCate Geosynthetics Americas: Mirafi 140N.
3. US Fabrics, Inc.: 120NW.
4. Equal products.

2.03 PERFORATED SUBSURFACE DRAIN PIPE

A. Shop-perforated with perforations symmetrically located within a maximum arc of 160 degrees. Perforations shall provide a total open area of at least 0.3 square inches per linear foot of pipe, with a minimum of one perforation per linear foot, except for joint areas. Perforation shall be either holes or slots. Hole diameters of ¼ inch minimum to 3/8 inch maximum. Width of slots of 3/16 inch minimum to 5/16 inch maximum with slot length not exceeding 4 inches.

B. Aggregate Around Perforated Pipe shall be 6 inches of gravel containing no particles finer than a 3/8-inch to 1/2-inch sieve opening size.

2.04 STORMWATER TREATMENT SYSTEMS /BMPS

A. DET-1: Proprietary Detention BMPs – Reinforced Precast Concrete, approved manufacturers and products:

1. Jensen Precast: Precast-Concrete-Detention-Reservoir.
2. Oldcastle Precast Inc.: Storm Capture-Detention.
3. Storm Trap: Single-Trap-Detention.
4. Equal products.

B. FILT-2: Cartridge Media Filters, approved manufacturers and products:

1. Baysaver Technologies Inc.: Bayfilter.
2. Contech: Storm Filter.
3. OldCastle Precast Inc.: Perk Filter.
4. Equal products.

C. GS-2: Catch Basin Inserts, approved manufacturers and products:

1. AbTech Industries: UUF DI-DO.
2. ADS-FlexStorm: FlexStorm Pure or Catch-it.
3. Aquashield Inc.: Aqua-Guardian.
4. Ecosense International: EcoSense International's Catch Basin Insert.
5. Oldcastle Precast Inc.: FLoGard, or GISB.
6. UltraTech International Inc.: Ultra-Drain Guard.
7. Equal products.

D. GS-3: Downspout Filters, approved manufacturers and products:

1. Oldcastle Precast Inc.: FLoGard +Plus.
2. Equal products.

E. GS-5: Stormwater Interceptors, approved manufacturers and products:

1. Jensen Precast: JPHV-stormwater-interceptors-with-bypass.
2. Oldcastle Precast Inc.: Storm Capture Detention.
3. Oldcastle Precast Inc.: NSBB, Nutrient Separating Baffle Box.
4. Storm Trap: Single-Trap-Detention.
5. Equal products.

F. RET-4: Drywells

1. Pre-Cast Liner: Reinforced 4000 PSI concrete. 48" I.D., 54" O.D.
2. Overflow/Riser Pipe: Minimum 6" I.D. Schedule 40 Poly Vinyl Chloride (PVC) solid wall with debris shield.
3. Drainage Screen: Minimum 6" I.D., Schedule 40 PVC slotted screen with 0.120-inch slots continuous, with a minimum of 160 slots per foot.
4. Rock: Clean washed rock uniformly graded between 3/8" and 1-1/2".
5. Absorbent: Hydrophobic petrochemical sponge with minimum four (4) quart capacity used in all chambers.
6. Approved manufacturers and products:
   a. Torrent Resources: MaxWell.
   b. Equal products.

G. RET-7a: Proprietary Retention/Infiltration BMPs – Polypropylene or Polyethylene

1. Molded PP or PE with open bottom. Thermoplastic Corrugated Wall Chambers (Chambers): Provide in conformance with ASTM F 2418 "Standard Specification for Polypropylene Corrugated Wall Stormwater Collection Chambers", ASTM F 2922 "Standard Specification for Polyethylene Corrugated Wall Stormwater Collection Chambers", and ASTM F 2787 "Standard Practice for Structural Design of Thermoplastic Corrugated Wall Stormwater Collection Chambers".
2. Filtering Material: ASTM.D448, washed, crushed stone or ¾" to 2" gravel. For more information refer to plans, and manufacturer installation manual.
3. Filter Mat, applicable to isolator/main row: Geotextile woven or spun filter fabric, in one or more layers. For more information refer to plans, and manufacturer installation manual.

4. Provide non-woven geotextile fabric around the entire system to prevent migration of fines into the rock voids. For more information refer to plans, and manufacturer installation manual.
5. Pipe Systems: Perforated manifold, header, and lateral piping complying with AASHTO M 252 for NPS 10 and smaller, AASHTO M 294 for NPS 12 to NPS 60. Include proprietary fittings, couplings, seals, and filter fabric.
6. Approved manufacturers and products:
   a. ADS - Storm Tech: MC3500, MC4500, SC740 or DC780.
   b. Contech: ChamberMaxx.
   c. NDS: StormChambers SC34 or SC44.
   d. Prinsco: HydroStor HS180 or HS75.
   e. Triton: S22 or S29.
   f. Equal products.

H. RET-7b: Proprietary Retention/Infiltration BMPs – Reinforced Precast Concrete, approved manufacturers and products:

1. Jensen Precast: Precast-Concrete-Arches.
2. Oldcastle Precast Inc.: Storm Capture Infiltration.
3. StormTrap: Single-Trap-Infiltration.
4. Equal products

I. VEG-6: Proprietary Biotreatment Devices, approved manufacturers and products:

1. BioClean: Modular Wetlands System.
   a. Infiltration media shall be ARCOSA.
2. Contech: Filterra Bioretention Systems.
   a. Infiltration media shall be Filterra Media consist of a combination of natural sand, gravel, and organic materials.
3. DeepRoot Urban Landscape: Silva Cell 2.
4. Oldcastle: BioPod Underground.
   a. Infiltration media shall be StormMix.
5. Equal products.

2.05 MISCELLANEOUS MATERIALS

A. Metal Covers, Grates, Frames and Accessories:

1. Conform to Section 206 - Miscellaneous Metal Items of the Standard Specifications for Public Works Construction.
2. Hot-dip galvanize steel parts after fabrication in accordance with Section 210 - Paint and Protective Coatings of the Standard Specifications for Public Works Construction.
3. Grates and Frames:
   a. Vandal-proof design and construction.
   b. ADA compliant, in conformance to CBC 11B-302.3.
   c. Rated for vehicular traffic on areas intended for use by motor vehicles.
   d. Hot-dip galvanized.

B. Concrete, Mortar and Related Materials: Conform to Section 32 1313 - Site Concrete Work.

C. Manhole Brick Mortar, Grout, and Plaster: Conform to Standard Specifications for Public Works Construction, Section 202 - Masonry Materials.

D. Underground Concrete Structures: Shall be precast and rated for H-20 traffic loading and applicable soil loads. The materials and structural design of the devices shall be per ASTM C857 and ASTM C858.

2.06 NAMEPLATES

A. Stainless steel or aluminium nameplate permanently fastened to BMP showing the following information:

1. BMP ID number and BMP type.
2. Next service day followed by a 1-inch by 4-inch long blank space.
3. Manufacturer name, model number, telephone number and stock ID number.
4. Installation or production date.
5. 1-inch by 4-inch blank space for OWNER's use.

PART 3 – EXECUTION

3.01 GENERAL INSTALLATION REQUIREMENTS

A. CONTRACTOR shall arrange for a preconstruction meeting with the manufacturer's representative to review the basic principles for proper installation of Underground BMP type products prior to any installation.

B. Underground Concrete modules shall be installed in accordance with manufacturer's instructions and the current ASTM C891 procedures.

3.02 EXCAVATION, BACKFILLING AND COMPACTING

A. Conform to the requirements of Section 31 2313 - Excavation and Fill or Section 31 2323 - Excavation and Fill for Utilities, as required.

3.03 INSTALLATION OF PIPE

A. Conform to Section 306 - Underground Conduit Construction of the Standard Specifications for Public Works Construction.

B. Non-ferrous drainpipe installed with less than 12 inches of cover to finish grade shall be provided with a 4-inch thick concrete pipe encasement.

3.04 DRAINAGE APPURTENANCES

A. Catch basins, junction chambers, manholes, box culverts, outlet chambers and other drainage structures: Construct as indicated on Drawings and as specified in Section 32 1313 - Site Concrete Work, and in compliance with the Standard Specifications for Public Works Construction, Section 303 - Concrete and Masonry Construction.

B. Ensure that Post Construction BMP have a visible identifying manufacturer tag with product identification, manufacturer contact information, date of last service and date of next service due.

C. Provide storm drain stencil per City or County requirements as applicable.

3.05 STORMWATER TREATMENT SYSTEMS/BMPs

A. (Shall be completed once a geotechnical report is submitted to analyze and design the appropriate LID BMP)

3.06 ABANDONED DRAINAGE LINES AND STRUCTURES

A. Cap or plug existing drain lines that are cut and abandoned and remove existing drainage structures that are abandoned.

3.07 CLOSED-CIRCUIT TELEVISION INSPECTION

A. Coordinate with OAR time and date of inspection. Project Inspector shall be present during the CCTV inspection.

B. Clean laterals by hydraulic jet.

C. Perform internal closed-circuit television inspection of lateral from the building to the public mainline. Record drain line in its entirety with no breaks or interruptions. Move camera at a speed no greater than 30 feet per minute, stopping for a minimum of ten seconds to record pipe connections, defects, and points of interest.

D. Maintain technical quality, sharp focus and distortion free picture. Pan, tilt, and rotate as necessary to best view and evaluate connections, defects and points of interest.

E. Minimum Requirements for Closed-circuit Television Equipment:

1. Television camera specially designed for pipe inspections, and operative in 100 percent humidity conditions.
2. Camera and television monitor capable of producing minimum 470H-line resolution color video picture.

3. Camera capable to inspect lines as small as three inches up to 70 feet from storm drain mainline.
4. Camera lighting shall be suitable to allow clear picture of inner wall at least ten feet in front.

F. Defective Work:

1. New Lines: Defective Work found shall be repaired at CONTRACTOR's expense. Perform a new closed-circuit television inspection at no cost to OWNER.
2. Existing Laterals:
   a. If roots, sludge, or sediment material or other defect not related to the Work of this project impedes inspection, withdraw camera, restart inspection from opposite end and notify OAR of defects found.
   b. If obstruction or stoppage was caused by Work related to this project, remove obstruction at no cost to OWNER. Perform a new closed-circuit television inspection at CONTRACTOR's expense.

3.08 CLEANUP

A. Remove rubbish, debris, and waste materials and legally dispose of off the Project site.

B. Maintain Post Construction BMP after installation and keep a maintenance log to be turned over to OAR at Substantial Completion.

3.09 PROTECTION

A. Protect the Work of this section until Substantial Completion.

END OF SECTION