

FACILITIES MANAGEMENT DIVISION

PROJECT MANUAL

INTRODUCTORY INFORMATION
BIDDING REQUIREMENTS
CONTRACTING REQUIREMENTS
SPECIFICATIONS

FOR:

**OFFICE BUILDING 8 & 9 (039 & 045)– FIRE, LIFE,
SAFETY UPGRADE**

**DEPARTMENT OF GENERAL SERVICES –
FACILITIES MANAGEMENT DIVISION**

**SACRAMENTO, SACRAMENTO COUNTY,
CALIFORNIA**

Jason Sy, Project Director
West Sacramento, California

Consultants: Dewberry Architects Inc.

DOCUMENT 00 01 01

PROJECT TITLE PAGE

Title : Office Building 8 & 9 (039 & 045)– Fire, Life, Safety Upgrade

Client Agency : Department of General Services – Facilities Management Division

Location : 714/744 P Street, Sacramento, Sacramento County, CA 95814

Project Number : 000000000009280

Project Director : Jason Sy
State of California
Department of General Services
Real Estate Services Division
Project Management and Development Branch
707 Third Street, 4th Floor
West Sacramento, California 95605
Telephone Number: (279) 799-4106
Email: Jason.Sy@dgs.ca.gov

Consultant : Dewberry Architects, Inc.
Bob Hoskins
Telephone Number: (916) 239-7252
Email: rhoskins@dewberry.com

CERTIFICATIONS PAGE

PROJECT TITLE : Office Building 8 & 9 (039 & 045)– Fire, Life, Safety Upgrade

CLIENT AGENCY : Department of General Services – Facilities Management Division

LOCATION : 714/744 P Street, Sacramento, CA 95814

PROJECT NUMBER : 000000000009280

OWNER : STATE OF CALIFORNIA

PROJECT DIRECTOR : Jason Sy
Department of General Services
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ARCHITECT



ELECTRICAL ENGINEER



MECHANICAL ENGINEER


PROJECT TITLE : Office Building 8 & 9 (039 & 045)– Fire, Life, Safety Upgrade

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REGULATORY REVIEWS:

<div><p>OFFICE OF THE STATE FIRE MARSHAL APPROVED FIRE AND PANIC ONLY</p><p>Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.</p></div>	<div><p>IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT</p><p>APP: 02-122924 INC:</p><p>REVIEWED FOR</p><p>SS <input type="checkbox"/> FLS <input type="checkbox"/> ACS <input checked="" type="checkbox"/></p><p>DATE: 10/21/2024</p></div>
STATE FIRE MARSHAL	DSA ACCESS COMPLIANCE

DOCUMENT 00 01 10

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END OF DOCUMENT

STATE OF CALIFORNIA
DEPARTMENT OF GENERAL SERVICES
FACILITIES MANAGEMENT DIVISION

DOCUMENT 00 11 00

INVITATION FOR BIDS

SEALED BIDS: DGS will receive sealed bids at 707 Third Street, West Sacramento, California 95605, **before 2:00 P.M., December 17, 2024. Bids received after this date/time will not be considered received on time.**

A public bid opening will be held on **December 18, 2024 at 2:00 P.M.**, at 707 Third Street, West Sacramento, CA 95605. Bidders may attend virtually or in person. Bidders attending the bid opening in-person will need to meet and sign in at the security guard station in the lobby at the mailing address below. At the public bid opening, all bids received before **2:00 P.M., December 17, 2024** will be opened and recorded onto a Preliminary Bid Tabulation. Bidders do not need to attend the bid opening as the Preliminary Bid Tabulation will be made available immediately after the bid opening is completed and it will be emailed to invited bidders.

The bid opening may be attended virtually via the following link:

[Join the meeting now](#)

Meeting ID: 296 832 824 204

Passcode: NQ5mQY

HAND DELIVERED BIDS: Shall be placed in the DGS/OBAS Bid/Proposal Drop Box located in the lobby at 707 3rd Street in West Sacramento. The Drop Box will be opened at 2:00 p.m. Tuesday through Thursday and bids/proposals in the box will be certified as being received before 2:00 p.m. that day.

If mailing bids, ensure the outside of the mailing reads:

ATTENTION: PAVAN RANDHAWA
OFFICE BUILDING 8 & 9 (039 & 045)– FIRE, LIFE, SAFETY UPGRADE
PROJECT: 000000000009280
DO NOT OPEN
DEPARTMENT OF GENERAL SERVICES
OFFICE OF BUSINESS AND ACQUISITION SERVICES
707 3RD STREET, MS 508, WEST SACRAMENTO, CA 95605

The bids shall include all Work pursuant to the Drawings and Project Manual, and Addenda as may be issued prior to bid opening date.

Scope of Work: Major components of Project Work consist of replacing the fire alarm system and associated fire dampers and interfacing with the existing smoke control system and fire sprinkler system.

License: Contractors' State License Classification required to bid Project is **B**.

Certificate of Reported Compliance (CRC) – Fleet Vehicles: As a condition of Contract award, prior to Contract execution, Contractor shall submit copies of the valid CRCs for any fleet retained by the

INVITATION FOR BIDS

RESDMSTR: 08/01/2024

00 11 00 - 1

000000000009280

Contractor or any listed Subcontractor, for which any vehicles subject to the California Air Resources Board In-Use Off-Road Diesel Fueled Fleet Regulations, Section 2449(i), Title 12, California Code of Regulations, are used in the completion of the work included in the Contract.

More information on the In-Use Off-Road Diesel-Fueled Fleets Regulation can be found at the following link: <https://ww2.arb.ca.gov/our-work/programs/use-road-diesel-fueled-fleets-regulation>

Generative Artificial Intelligence (GenAI) Reporting: The State of California seeks to realize the potential benefits of GenAI through the development and deployment of GenAI tools, while balancing the risks of these new technologies. Bidders must notify the State in writing if their solution or service includes, or makes available, any GenAI technology, including GenAI from third parties or subcontractors. The State has developed a GenAI Reporting and Factsheet (STD 1000) to be completed by the Bidder. Failure to disclose GenAI to the State and submit the GenAI Reporting and Factsheet (STD 1000) will result in disqualification of the Bidder and may void any resulting contract. The State reserves its right to seek any and all relief it may be entitled to as a result of such non-disclosure. Upon receipt of a Bidder GenAI Reporting and Factsheet (STD 1000), the State reserves the right to incorporate GenAI Special Provisions into the final contract or reject bids that present an unacceptable level of risk to the State.

Generative Artificial Intelligence (GenAI) Disclosure & Factsheet (STD 1000) can be viewed and downloaded at the following internet site: <https://www.documents.dgs.ca.gov/dgs/fmc/pdf/std1000.pdf>

Completed form GenAI Reporting and Factsheet (STD 1000) must be included in the bid submission, as part of Project Manual Document 00 41 00 "Bid Form". If the GenAI Disclosure & Factsheet is not submitted by the bidder, the bid shall be deemed nonresponsive.

Availability of Funds: Award of this contract is subject to the availability of funds through the State's normal budget process and/or transfer of funds to the Department of General Services through the Architecture Revolving Fund.

Pre-bid Site Inspection: Bids will only be accepted from those Contractors having attended the **MANDATORY** pre-bid site inspection tour on **December 4, 2024, at 10:00 A.M.**, at which time representatives of the State and prospective bidders shall meet at Office Building 8 & 9 lobby at 744 P Street, Sacramento, CA 95814. The State's requirements for Disabled Veteran Business Enterprise (DVBE) participation and other Contract requirements will be presented. Prime Contractors are encouraged to have their Key Administrator and DVBE office coordinator attend to receive this information and to have their questions answered. **Attendance for the entire inspection is required in order for bidders to be eligible to submit a bid.**

Executive Order N-6-22: The Bidder must be advised of Executive Order N-6-22 Russia Sanctions. On March 4, 2022, Governor Gavin Newsom issued Executive Order (EO) N-6-22 regarding Economic Sanctions against Russia and Russian entities and individuals. "Economic Sanctions" refers to sanctions imposed by the U.S. government in response to Russia's actions in Ukraine, as well as any sanctions imposed under state law. By submitting a bid, Bidder represents that it is not a target of Economic Sanctions. Should the State determine Bidder is a target of Economic Sanctions or is conducting prohibited transactions with sanctioned individuals or entities, that shall be grounds for rejection of the Bidder's bid any time prior to contract execution, or, if determined after contract execution, shall be grounds for termination by the State.

Bid: Submit on Lump Sum basis.

DVBE: Participation in Disabled Veterans Business Enterprises (DVBE) program **may** be required for this project. Refer to Project Manual Document 00 21 00, Project Manual Document 00 22 10 and Bid Forms for requirements. Bidders are advised to commence the required DVBE procedures immediately upon receipt of drawings and project manual.

DVBE Bid Incentive: The DVBE Incentive program is being applied on this project. Refer to Project Manual Document 00 21 00, Article 18.5.

Small Business Preference: Refer to Project Manual Document 00 21 00, Article 5.5

Non-Small Business Subcontractor Preference: Refer to Project Manual Document 00 21 00, Article 5.6

Bonds: Successful bidder shall furnish payment and performance bonds, each in the amount of 100 percent of the Contract price.

Non-Discrimination Program (Gov. Code, Section 12990): Refer to Project Manual Document 00 72 00, General Conditions of the Contract for Construction.

Labor Code: Pursuant to Labor Code, Section 1774, the Contractor to whom the contract is awarded, and any subcontractor under him, shall pay not less than the specified general prevailing rates of per diem to all workers employed in the execution of the contract. Pursuant to Labor Code, Section 1770 et seq., the Department of Industrial Relations (DIR) has ascertained general prevailing rate of per diem wages in the locality in which the work is to be performed. Copies of the general prevailing rate of per diem wages are available from the Department of Industrial Relations, Labor Statistics & Research Division, P.O. Box 420603, San Francisco, CA 94142, (415) 703-4780; or general prevailing rate of per diem may be accessed on the internet at Department of Industrial Relations website (<https://www.dir.ca.gov>) for the August 2024 published general prevailing rate of per diem wages for this contract. Copies of the general prevailing rate of per diem wages are on file at DGS' principal office, which shall be made available to any interested party on request. Note that when the general prevailing rate of per diem determination shows an expiration date (noted by a double asterisk**), to expire during the term of the contract, the Contractor must call or write the DIR to obtain the new rates and incorporate them in this contract for submittal of bid. The Contractor is responsible to comply with the Labor Code Sections and general prevailing rate of per diem determinations, including all the guidelines and the fine print in the general prevailing rate of per diem determinations. Refer to Project Manual Document 00 72 00, General Conditions of the Contract for Construction.

Labor Compliance Monitoring and Enforcement: This project is subject to monitoring and enforcement by the Department of Industrial Relations (DIR), Compliance Monitoring Unit. All Contractors and subcontractors, regardless of tier, shall be required to comply with the Monitoring and Enforcement Program, including, but not limited to, contractor registration, submittal of electronic certified payroll reports directly to the DIR as applicable and cooperation with on-site monitoring by DIR personnel. Refer to Labor Code 1771.4 et seq. and the General Conditions of the Contract for Construction, Document 00 72 00, Article 3.3.3 for more information.

END OF DOCUMENT

STATE OF CALIFORNIA
DEPARTMENT OF GENERAL SERVICES
REAL ESTATE SERVICES DIVISION

DOCUMENT 00 21 00

INSTRUCTIONS TO BIDDERS

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May 2024 Edition

DOCUMENT 00 21 00
INSTRUCTIONS TO BIDDERS

1. GENERAL

- 1.1 Bidder shall examine these instructions carefully and be responsive to conditions with which must be complied with prior to bid.
- 1.2 Bidders shall be aware of the requirements of codes referenced in the Bidding Requirements and in the Contract Documents. Bidders may access codes included in California law through publications or through the Internet. The web site for California law is: <http://leginfo.legislature.ca.gov/faces/codes.xhtml>.

2. COMPETENCE OF BIDDERS

2.1 License:

- .1 Bidder may only bid on work for which Bidder is properly licensed by the Contractors' State License Board.
- .2 Joint venture Bidders must possess a joint venture license. Each party to a joint venture shall be properly licensed for the Work of this Project.

- 2.2 Prior Disqualification: Public Contract Code Section 10162 provides that a bid may be rejected on the basis of a Bidder, any officer of such Bidder, or any employee of such Bidder who has a proprietary interest in such Bidder, having been disqualified, removed or otherwise prevented from bidding on, or completing a Federal, State or Local project because of a violation of a law or a safety regulation.

If the answer to the questionnaire included in the Bid Form is "yes" the Department will review the circumstances presented and if the Director deems acceptance of the bid is not in the best interest of the State, bid may be rejected.

- 2.3 Employment of Undocumented Aliens: Pursuant to Section 6101 of the Public Contract Code, the State may not award a public works contract to a bidder or contractor, nor shall a bidder or contractor be eligible to bid for or receive a public works contract, who has, in the preceding five years, been convicted of violating a state or federal law respecting the employment of undocumented aliens.

2.4 Contractor Registration:

- .1 Pursuant to Sections 1725.5 and 1771.1 of the Labor Code, all contractors and subcontractors must be currently registered with the Department of Industrial Relations in order to qualify to bid on; be listed in a bid proposal, subject to the requirements of Section 4104 of the Public Contract Code; or engage in the performance of any contract for public work.
- .2 Limited exceptions for Joint Venture Bidders and Projects with Federal Funds may apply pursuant to Section 1771.1 of the Labor Code.

- 2.5 Ineligible Subcontractors: Pursuant to Section 1777.1 or 1777.7 of the Labor Code, a contractor is prohibited from bidding on, being awarded or performing work on a public works project with a subcontractor who is ineligible to perform work on the public works project. Refer to the General Conditions of the Contract for Construction, Article 4.1.3.

- 2.6 Asbestos Abatement Certification: If Contractor performs the asbestos abatement work; Contractor must be certified for asbestos abatement work by the Contractors' State License Board. If Contractor subcontracts the asbestos abatement work, Contractor need not be certified for asbestos abatement, but the subcontractor must be certified by the Contractor's State License Board.
- 2.7 Hazardous Substance Removal Certification: If Contractor performs the hazardous substance removal work or remedial action; Contractor must be certified for hazardous substance removal work by the Contractors' State License Board. If Contractor subcontracts the hazardous substance removal work or remedial action, Contractor need not be certified for hazardous substance removal, but the subcontractor must be certified by the Contractor's State License Board.

3. EXAMINATION OF BID DOCUMENTS AND SITE

3.1 Bidder's Responsibility:

- .1 Bidder shall carefully examine the Work site, Drawings, and Specifications (contract documents). This includes reference only documents that will not be part of the agreement, but are provided in addition to documents that will be part of the agreement. See the Office of State Publishing Plan Room <https://www.ospplanroom.com/> (Details tab, Documents folder) for reference only documents.
- .2 By submitting a bid, Bidder acknowledges that the Bidder understands the character, quality and quantity of surface, locations of utilities, subsurface materials, or obstacles to be encountered; insofar as this information is reasonably ascertainable from inspection of the Work site, Drawings, and Specifications.
- .3 Bidder's examination shall include all exploratory work done by the State, as well as information presented in the Drawings, Specifications, and other documents as available.

3.2 Refer to Document 00 11 00, Invitation to Bid, for availability of bidding documents.

3.3 Failure by Bidder to acquaint itself with available information will not relieve Bidder from responsibility for estimating properly the difficulty or cost of successfully performing the Work.

3.4 In connection with the foregoing, Bidder's attention is invited to Paragraphs 3.1 and 9.1 of Document 00 72 00, General Conditions of the Contract for Construction.

4. DISCREPANCIES, CONFLICTS, OMISSIONS, OR ERRORS

- 4.1 If discrepancies, conflicts, omissions or errors are found in the Drawings and the Project Manual prior to the date of bid opening, Bidder shall request clarification from the State's Representative identified in the Project Manual. Bidder shall submit request on Request for Bidding Interpretation Form, Appendix 00 21 00.1.
- 4.2 Clarifications will be given only in the form of Addenda to all Bidders.
- 4.3 If no Addenda are issued related to supposed discrepancy, conflict, omissions or errors in figuring the Work, Bidders shall consider that discrepancies, conflicts, or omission between Drawings and Specifications shall be governed by Paragraph 1.5 of Document 00 72 00, General Conditions of the Contract for Construction.

- 4.4 Omission of an item in either the Specifications or Drawings does not create a discrepancy or conflict.

5. BIDDING DOCUMENTS

- 5.1 Bid Form: All bids must be on the forms provided by the Department of General Services. Bid not on the forms provided will be considered nonresponsive.

5.2 Completing the Bid Form:

- .1 Bidder's name should be the same as listed on Bidder's license.
- .2 Price(s) shall be in the manner required by the Bid Form.
- .3 Bid Form shall be signed by Bidder or duly authorized representative.
 - 1) If Bidder is an individual, name must be shown.
 - 2) If Bidder is a partnership, name of the partnership must be shown and one or more partners shall sign the Bid Form.
 - 3) If Bidder is a corporation, name of the corporation must be shown, the state of incorporation must be listed, the title of the signor must be shown, and the corporate seal must be used.
 - 4) Bidder business and mailing address should be shown.

5.3 Required Listing of Proposed Subcontractors:

- .1 Failure to list kind of Work, Name, or Location shall cause the bid to be rejected as non-responsive.
- .2 Bidders' attention is directed to other provisions of the Subletting and Subcontracting Fair Practices Act, beginning with Public Contract Code Section 4100, related to penalties for failure to comply with the Act by using unauthorized subcontractors or by making unauthorized substitutions. See General Conditions of the Contract for Construction, Paragraph 1.1, for definition of subcontractor, and Article 4 for further reference to subcontractors.
- .3 Bidder's attention is directed to Labor Code Section 1771.1, relating to inadvertent errors in the listing of subcontractors not currently registered with the Department of Industrial Relations.

5.4 Bidders Security:

- .1 All bids shall be accompanied by the following forms of bidder's security: Bidder's Bond, cashier's check, certified check or cash. Bidder's Bond shall be executed by an admitted surety insurer, authorized to issue surety bonds in the State of California. Bond and checks shall be made payable to the director of the Department of General Services. The security shall be in an amount equal to at least 10 percent of the amount bid. A bid shall not be considered responsive unless one of the forms of bidder's security is enclosed with it.
- .2 If Bidder's security is a Bidder's Bond, it must be executed on the form attached to the Bid Form.

5.5 Small Business:

- .1 A five percent (5%) small business preference will be granted to Bidders certified as "Small Business" in accordance with Section 1896 et. Seq., Title 2, California Code of Regulations.

- .2 If the Bidder is not already a Certified Small Business, applications for certification as "Small Business" must be submitted to the Office of Small Business and DVBE Certification (OSDS), 707 3rd Street, First Floor, Suite 1-400, West Sacramento, CA 95605; <https://www.dgs.ca.gov/PD/About/Page-Content/PD-Branch-Intro-Accordion-List/Office-of-Small-Business-and-Disabled-Veteran-Business-Enterprise/Certification-Program>. Firms can apply for small business certification online at <https://www.dgs.ca.gov/PD/Services/Page-Content/Procurement-Division-Services-List-Folder/Certify-or-Re-apply-as-Small-Business-Disabled-Veteran-Business-Enterprise>.
- .3 Submit a copy of your OSDS certification letter with the Bid Form.
- .4 Pursuant to Section 1896.14, in order to receive the small business preference, bidders must have a completed application (including proof of annual receipts) on file with the OSDS. The bidder must have requested a preference from OSDS and meet all applicable requirements under the subchapter and the State Small Business Procurement and Contract Act, (including but not limited to evidence to rebut presumptions) not later than five o'clock (5:00 p.m.) on the date on which the subject bid is opened.

5.6 Non-Small Business:

- .1 The application of the five percent (5%) small business bidding preference is now extended to a bidder, whose business is not certified as a small business but commits to subcontracting at least twenty-five percent (25%) of its net bid price to businesses that are California certified small businesses and/or microbusinesses.

When applicable this preference will be granted when the non-small business:

- Has been determined to be a responsible bidder and submitted a timely responsive bid.
- Completes Document 00 43 16-2 list of California Certified Small Businesses that he/she commits to subcontract with for a commercially useful function in the performance of the project and submits this document no later than forty-eight (48) hours after the time of receipt of bids. Ascertain that the Bidder's Name and project Work Order number are noted.
If bidder fails to submit a properly completed Document 00 43 16-2 within 48 hours after the time of receipt of bids, the claim for non-small business preference will be denied.

Submit completed Document 00 43 16-2 to Department of General Services, Administration Division, Office of Business and Acquisition Services, Contract Management Section, 707 3rd Street, Suite 2-300, West Sacramento, CA 95605 or by fax to (916) 376-1778.

6. SUBMISSION OF BID FORMS

- 6.1 It is the sole responsibility of the Bidder to see that its bid is received in proper time. Bid received after scheduled closing time for receipt of bids will be returned to Bidder unopened.
- 6.2 Bid Forms shall be submitted under sealed cover, plainly identified as a bid for the work of the Project being bid upon and addressed as directed in the Invitation to Bid and the Bid Form. Failure to do so may result in a premature opening of, or failure to open such bid. Bid Forms improperly marked may be disregarded.

7. WITHDRAWAL OF BID FORMS

- 7.1 Bids may be withdrawn prior to the time fixed in the public notice for opening of bids, provided that

a request in writing, executed by Bidder or Bidder's authorized representative, for withdrawal of such bid is filed with the Administration Division, Office of Business and Acquisition Services, Contract Management Section, or the Director of General Services at the location of the bid opening. Oral, facsimile, electronic, telegraphic, or telephonic request to withdraw the Bid Form is not acceptable. Withdrawal of a bid shall not prejudice the right of a Bidder to file a new bid.

- 7.2 This article does not authorize withdrawal of any bid after the time fixed in the Invitation to Bid for opening of bids.

8. PUBLIC OPENING OF BIDS

Bids will be publicly opened and read at time and place indicated in Invitation to Bid. Bidders or their authorized agents are invited to be present.

9. REJECTION OF IRREGULAR BIDS

- 9.1 Bids may be rejected if they show any alterations of form, additions not called for, conditional bids, incomplete bids, erasures, or irregularities of any kind. If bid amount is changed after the amount is originally inserted, the change must be initialed.
- 9.2 When Bid Form is signed by an agent, other than the officer or officers of a corporation authorized to sign contracts on its behalf, or are signed by an agent other than a partner of a partnership, or by an agent for an individual, a power of attorney must be on file with the Department of General Services prior to opening bids or shall be submitted with the Bid Form; otherwise the bid will be rejected as irregular and unauthorized.

10. COMPETITIVE BIDDING

- 10.1 If more than one Bid Form is offered by an individual, firm, partnership, corporation, association, or any combination thereof, under the same or different names, all such Bid Forms may be rejected. A party who has quoted prices on materials or work to a Bidder is not thereby disqualified from quoting prices to other Bidders, or from submitting a bid directly for materials or work.
- 10.2 Bidders are put on notice that any collusive agreement fixing the prices to be bid so as to control or affect awarding of the Contract is in violation of competitive bidding requirements of the State Contract Act and may render void any Contract let under such circumstances.

11. AWARD OF CONTRACT

- 11.1 The right is reserved to reject any and all bids and waive any irregularity in any bid received.
- 11.2 Award of the Contract, if awarded, will be to the lowest responsible Bidder whose Bid Form complies with all requirements prescribed.
- .1 Such award, if made, will be made within 45 days after opening of bids.
- .2 If lowest responsible Bidder refuses or fails to execute the Contract, the Director of General Services may award the Contract to the second lowest responsible Bidder. Such award, if made, will be made within 60 days after opening of bids.
- .3 If second lowest responsible Bidder refuses or fails to execute the Contract, the Director of General Services may award the Contract to the third lowest responsible Bidder. Such award if made, will be made within 75 days after opening of bids.

- 11.3 The above time periods within which award of Contract may be made are subject to extension of such further period as may be agreed upon in writing between the Department of General Services and the Bidder concerned.
- 11.4 When Project is segregated into more than one prime Contract, and a Bidder upon one of the prime Contracts fail or refuses to execute the Contract, then the time for award of such Contract will be extended as provided by this Article, and the time for award of each of the other segregated prime Contracts will be extended by an equivalent length of time, if required.

12. SUBSTITUTION OF ALTERNATIVE MATERIALS, ARTICLES, OR EQUIPMENT

- 12.1 Pursuant to Public Contract Code Section 3400, alternative material(s), article(s), or equipment that are of equal quality and of required characteristics for the purpose intended may be proposed during the bidding period; for use in the Work, provided the Bidder complies with the following requirements:
- .1 Proposals for alternative material(s), article(s), or equipment, requested during the bidding period, shall be submitted in writing, not later than the deadline date and time identified on the Request for Bidding Interpretation (RFBI), Appendix 00 21 00.1.
 - .2 The proposal will not be considered unless the submittal is accompanied by complete information and descriptive data necessary to determine equality of offered material(s), article(s) or equipment. Samples shall be provided when requested by the State. Burden of proof as to comparative quality, suitability, and performance of offered material(s), article(s), or equipment shall be upon the Bidder submitting the proposal. The State will be the sole judge as to such matters. In the event the State rejects the use of such alternative(s) submitted, then one of the particular products originally specified in the Contract Documents shall be furnished. If the proposal is accepted, all Bidders will be notified by Addendum.
 - .3 Refer to the General Conditions of the Contract for Construction, Clauses 2.2.7 and 3.12.10, for substitution requests after Contract Award.

13. RETURN OF BIDDER'S SECURITY

- 13.1 Within 10 days after the award of the Contract, the Department of General Services will return all Bidder's security, other than Bidder's Bonds, accompanying the Bid Forms that are not to be fully considered in making the award.
- 13.2 Retained Bidder's security will be held until the Contract has been fully executed, after which all Bidder's security, except Bidder's Bonds, will be returned.

14. CONTRACT BONDS

Contractor will be required to furnish in duplicate the Performance Bond and Payment Bond required by the State Contract Act, each in the amount of 100 percent of the Contract amount; as set forth in Paragraph 11.3 of Document 00 72 00, General Conditions of the Contract for Construction.

15. INSURANCE

Contractor will be required to furnish to the State, concurrently with execution of the Contract, a certificate of insurance coverage as required by Paragraph 11.1 of Document 00 72 00, General Conditions of the Contract for Construction.

16. EXECUTION OF CONTRACT

16.1 Contract shall be signed by successful Bidder and returned within 7 days of receipt. The Contract shall not be binding upon the State until it is executed by the Contractor and the State. Contract Documents required for execution of the Contract consist of the following:

- .1 Agreement, Document 00 52 00.
- .2 Contract Bonds.
- .3 Certificate of Insurance.
- .4 Signed set of Drawings and Project Manual for filing with the Contract.

16.2 Should Contractor begin work in advance of receiving notice that the Contract has been approved, any work performed in advance of the date of approval shall be considered as having been done at risk as a volunteer. In no event shall Contractor commence work until Contractor has received notification from the State that the certificate of insurance has been approved.

17. FAILURE TO EXECUTE CONTRACT

Failure to execute Contract within 7 days after successful Bidder has received Contract for execution may be cause for forfeiture of Bidder's security. Failure to provide required bonds and insurance constitutes failure to execute Contract.

18. PARTICIPATION IN DISABLED VETERANS BUSINESS ENTERPRISES (DVBE) PROGRAM

18.1 Pursuant to Section 10115 et seq. of the Public Contract Code, and Section 999 et seq. of the Military and Veterans Code, the Department of General Services has established an overall goal of not less than 3% participation by Disabled Veteran Business Enterprises (DVBE). However, these DVBE Participation Requirements may be modified for this project; reference Document 00 22 10 of the Project Manual for the percentage requirements.

18.2 Bids will only be accepted from those Bidders that certify that they have achieved the required participation, as outlined in Document 00 22 10 of the Project Manual, and as set forth in the Bid Form.

18.3 Applicants for DVBE certification may apply online at <https://www.dgs.ca.gov/PD/Services/Page-Content/Procurement-Division-Services-List-Folder/Certify-or-Re-apply-as-Small-Business-Disabled-Veteran-Business-Enterprise>. DVBE applicants must submit specific support documentation to the OSDS.

18.4 Bidder's attention is directed to the requirement that certifications and documentation must be submitted with the bid; otherwise bids will be considered non-responsive.

BIDDERS ARE ADVISED TO COMMENCE THE REQUIRED DVBE PROCEDURES IMMEDIATELY UPON RECEIPT OF DRAWINGS AND SPECIFICATIONS, OR NOT LESS THAN THREE (3) WEEKS PRIOR TO THE BID OPENING, WHICHEVER OCCURS FIRST.

18.5 DVBE INCENTIVE

- .1 A DVBE Incentive will be granted to Bidders in accordance with Section 999.5(a) and (d) of the Military and Veterans Code and California Code of Regulations 1896.98 et seq.
- .2 The DVBE Incentive will be applied during the bid evaluation process and will only be applied to responsive bids from responsible bidders proposing the percentage(s) of DVBE Participation

for the DVBE Incentive specified in the solicitation. Any Small Business Preference must be calculated prior to the DVBE Incentive calculation and evaluation.

- .3 The incentive will be applied when a Bidder's DVBE Participation exceeds 3% the DVBE Mandatory participation Requirement, in an attempt to displace the apparent low bidder.

The DVBE Incentive is as follows:

Confirmed DVBE Participation	Incentive
7% and above	5%
6% to 6.99%	4%
5% to 5.99%	3%
4% to 4.99%	2%
3.01% to 3.99%	1%
0% -3%	No incentive – minimum 3% participation required

- .4 The percentage of DVBE Incentive will not exceed 5% and will not exceed \$500,000.00.
- .5 For every bidder qualifying for the DVBE incentive, the amount (dollar value) of the incentive is computed using the qualifying bidder's percentage of DVBE incentive and the lowest responsive and responsible bid price. Calculations to determine adjusted bid price are for consideration only. Bids will be awarded for the actual bid amount as verified by the State.
- .6 A certified Small Business may only be displaced by another certified Small Business with a higher percentage of DVBE participation and a lower adjusted bid price.
- 1) A certified Small Business shall not be displaced by a non-small business.
 - 2) When applying the DVBE Incentive program, bidders claiming the "Non-Certified Small Business preference" are considered a non-small business.

19. CERTIFICATE OF REPORTED COMPLIANCE – FLEET VEHICLES

- 19.1 For any project using vehicles subject to the California Air Resources Board In-Use Off-Road Diesel Fueled Fleets Regulation, Section 2449(i), Title 12, California Code of Regulations, prior to the execution of a contract, Contractor shall be required to submit copies of the valid Certificates of Reported Compliance (CRC), issued by the California Air Resources Board. CRCs shall be provided for any fleet used by the Contractor or any listed Subcontractors.
- 19.2 CRCs are required for any contract involving the operation of self-propelled off-road diesel vehicles 25 horsepower or greater and most two-engine vehicles owned and operated in California, including vehicles that are rented or leased.
- 19.3 Certificates of Reported Compliance must be retained by the Contractor for three years after the completion of the project.
- 19.4 If no vehicles subject to the California Air Resources Board In-Use Off-Road Diesel Fueled Fleets Regulation shall be used on a project by the Contractor or any Subcontractor, Contractor shall provide a certification that no vehicles subject to these regulations will be used on the project.

20. GENERATIVE ARTIFICIAL INTELLIGENCE (GenAI) REPORTING

- 20.1 Bidders must notify the State in writing if their solution or service includes, or makes available, any GenAI technology, including GenAI from third parties or subcontractors.
- 20.2 The State has developed a GenAI Reporting and Factsheet (STD 1000) to be completed by the Bidder. Failure to report GenAI to the State will result in disqualification of the Bidder. Failure to submit the GenAI Reporting and Factsheet (STD 1000) will result in disqualification of the Bidder. The State reserves its right to seek any and all relief it may be entitled to as a result of such non-disclosure.
- 20.3 Upon receipt of a Bidder GenAI Reporting and Factsheet (STD 1000), the State reserves the right to incorporate GenAI Special Provisions into the final contract or reject bids that present an unacceptable level of risk to the State.
- 20.4 Bidder must complete the GenAI Reporting and Factsheet (STD 1000), which is included as part of the Document 00 41 00, Bid Form. The form can also be viewed and downloaded at the following internet site:
<https://www.documents.dgs.ca.gov/dgs/fmc/pdf/std1000.pdf>
- 20.5 Completed STD 1000 must be included in the bid submission. If the GenAI Reporting and Factsheet (STD 1000) is not submitted by the bidder, the bid shall be deemed nonresponsive.

END OF DOCUMENT

REQUEST FOR BIDDING INTERPRETATION (RFBI)

(Email no later than December 11, 2024, 5:00 p.m.)

To: Jason Sy, Project Director
Facilities Management Division
Phone: 279-799-4106

Email: Jason.Sy@dgs.ca.gov

RFBI No.: _____
Requestor RFBI No.: _____
Request Date: _____
From (Bidder): _____

Contact: _____
Phone: _____
Fax: _____
Email: _____

All RFBI's received prior to deadline identified above, and responses from the State will be published on <http://www.caleprocure.ca.gov>. Click on "Start Search." In the event name field, enter the project number and click search. While viewing the Event Details, click on "View Event Package" to view RFBI responses.

Project No.: 000000000009280
Project Name: Office Building 8 & 9 – Fire, Life, Safety Upgrade
Location: Sacramento, CA

Drawing Reference: _____ Project Manual Reference: _____

Question:

Bidder's Authorized Signature: _____

[] Check here if additional pages attached

Page 1 of _____

SUPPLEMENTARY INSTRUCTIONS TO BIDDERS

The following requirements supplement Document 00 21 00, Instructions to Bidders:

1. PAYEE DATA RECORD

Add the following to Subarticle 6.2:

Bidders are requested to complete and return the State's Payee Data Record form, Std.204 (and Std. 205 if applicable), included with the Bid Forms. The Payee Data Record form is required in lieu of IRS W-9 when doing business with the State of California and will be used by the State to prepare tax information returns as stated on the form.

- .1 Completion and submission of the form with the Bid Forms will expedite processing of the Award of Contract.
- .2 Failure to submit the completed form with the Bid will not be cause for rejection of a Bid.
- .3 Forms of all Bidders will be kept on file by the State for use in future awarded Contracts.
- .4 Bidders who have a completed and current Payee Data Record form on file with the Department of General Services, Real Estate Services Division, Contracts Section, may so state on the form and will not be required to submit a duplicate form.
- .5 The form is subject to Section 7(b) of the Privacy Act of 1974 (Public Law 93-5791). Refer to the Privacy Statement on the back of the form.

END OF DOCUMENT

**DISABLED VETERAN BUSINESS ENTERPRISE PARTICIPATION
PROGRAM REQUIREMENTS**

Public Contract Code Section 10115 establishes a contract participation goal of at least three percent (3%) for Disabled Veteran Business Enterprise (DVBE) for State agencies.

DVBE participation is required for this contract. Mandatory participation has been set at 3%. Participation above and beyond the requirement is strongly encouraged. This bid package provides information for the DVBE Participation Program. Bidders must meet DVBE Participation Program requirements to be viewed as a responsive bidder and considered for contract award.

PLEASE READ THESE INSTRUCTIONS CAREFULLY

Bidders must fully comply with DVBE Participation Program requirements. Bidders that do not submit a complete response may find their bid determined to be non-responsive and the bid rejected.

For assistance with meeting the DVBE participation program requirements, please contact:

Department of General Services
Administrative Division
Office of Business and Acquisition Services
Contract Services Section – SB-DVBE Advocate
707 Third Street, MS 508
West Sacramento, CA 95605
Email: OBASAdvocate@dgs.ca.gov

The **Office of Small Business and DVBE Services** (OSDS) offers program information and may be reached at:

Department of General Services
Office of Small Business and DVBE Services (OSDS)
707 3RD Street, 1st Floor, Room 400
West Sacramento, CA 95605-2811

Homepage: [Apply for or Re-Apply for Certification as a Small Business and/or Disabled Veteran Business Enterprise](#)

Receptionist: (916) 375-4940
FAX: (916) 375-4950
Email: OSDSHelp@dgs.ca.gov

Mailing Address:
Office of Small Business and DVBE Services (OSDS)
Room 1-400, MS 210
P.O. Box 989052
West Sacramento, CA 95798-9052

INSTRUCTIONS FOR DVBE PARTICIPATION PROGRAM COMPLIANCE OPTIONS

If for any reason you fail to meet the DVBE Participation Requirement for this bid, your bid will be considered non-responsive.

Meet or exceed the DVBE participation requirements for the proposed contract by one of the following two (2) ways:

1. **DVBE Bidder** - If you are a DVBE bidder, agree to perform the required percentage of the contract bid amount or value with your firm or in combination with other DVBE firms. You **must** write that commitment on Article 9.2 of the Bid Form, Document 00 41 00. Instructions on how to complete this document are on that page.
2. **Non-DVBE Bidder** - If you are a non-DVBE bidder, agree to use other firms for at least the required percentage of the contract bid amount or value. You **must** write that commitment on Article 9.2 of the Bid Form, Document 00 41 00. Instructions on how to complete this document are on that page.

DVBE Certification: OSDS-DVBE certification is the only acceptable certification. To verify if a contractor is certified refer to the Cal eProcure web-site at [The State of California Certifications](#). Bidders must provide certification verification for each participating DVBE bidder, subcontractor, and/or supplier. Applicants for DVBE certification may apply online at [Apply for or Re-Apply for Certification as a Small Business and/or Disabled Veteran Business Enterprise](#). DVBE applicants must submit specific support documentation to the OSDS.

DVBE Bid Incentive: A DVBE Incentive will be granted to Bidders who have achieved DVBE participation exceeding 3% or greater of the value of the bid in accordance with Section 999.5(a) and (d) of the Military and Veterans Code and California Code of Regulations 1896.98 et seq. Refer to Project Manual Document 00 21 00, Article 18.5.

Pursuant to Military and Veterans Code §999.7, the awarding department shall withhold, on a contract entered into on or after January 1, 2021, ten thousand dollars (\$10,000) from the final payment, or the full final payment if less than ten thousand dollars (\$10,000), until a prime contractor complies with the certification requirements of subdivision (d) of Section Military and Veterans Code §999.5. A prime contractor that fails to comply with the certification requirement shall, after notice, be allowed to cure the defect. Notwithstanding any other law, if, after at least 15 calendar days but not more than 30 calendar days from the date of notice, the prime contractor refuses to comply with the certification requirements, the awarding department shall permanently deduct ten thousand dollars (\$10,000) from the final payment, or the full payment if less than ten thousand dollars (\$10,000).

ANSWERS TO FREQUENTLY ASKED QUESTIONS:

The following questions are among the most frequently asked regarding DVBE requirements:

Q: *If I am awarded the contract, am I required to use the subcontractor/supplier proposed in my bid?*

A: Yes, unless you have requested and received approval from the State for substitution. Written requests should include the person's or firm's name to be substituted, the substitution reason, the reason a non-DVBE subcontractor is proposed, if applicable and describe the business to be substituted including its business status as a sole proprietorship, partnership, corporation or other entity and the certification status of the firm, if any. See Title 2, California Code of Regulations, Section 1896.64 (c) & (d) for substitution criteria.

The request and the State's approval or disapproval is not construed as an excuse for non-compliance with any other provision of the law, including but not limited to the Subletting and Subcontracting Fair Practices Act, or any other contract requirements relating to substitution of subcontractors. Failure to adhere to at least the DVBE participation proposed by the successful Contractor may be cause for contract termination and recovery of damages under the rights and remedies due the State for default section of the contract(s) and any other penalties provided for by statute.

Q: *Who notifies the subcontractor when an award is made?*

A: Upon award to a prime Contractor, the Awarding Department notifies listed subcontractors of their contract participation. Primes are encouraged to notify their listed subcontractors immediately after an award is made to formalize their business agreements.

Q: *What happens to bids considered non-responsive to the DVBE Participation Program requirements?*

A: Non-responsive bids are subject to rejection. Many are rejected because of:

- Incomplete documentation
- Documentation not received by bid due date
- Mathematical error related to the percentages

Q: *If I am a disabled veteran business enterprise, can I meet the percentage requirements as a single company?*

A: Yes.

Q: *If my submitted bid meets the contract goal and the State decides to make multiple awards to the bid/contract, could my bid be considered non-responsive?*

A: No. The State's decision to make multiple awards will not jeopardize bid compliance.

END OF DOCUMENT

BID FORM

THE STATE OF CALIFORNIA
DEPARTMENT OF GENERAL SERVICES
REAL ESTATE SERVICES DIVISION
PROJECT MANAGEMENT AND DEVELOPMENT BRANCH

FROM: _____
(Name of Bidding Firm)

DELIVER TO: Office of Business and Acquisition Services
707 Third Street
West Sacramento, CA 95605

BEFORE 2:00 P.M., December 17, 2024

FOR: OFFICE BUILDING 8 & 9 FIRE, LIFE, SAFETY UPGRADE
DEPARTMENT OF GENERAL SERVICES – FACILITIES MANAGEMENT DIVISION
SACRAMENTO, SACRAMENTO COUNTY, CALIFORNIA
000000000009280

Plainly mark outside of envelope with "Bid For"; followed by the above title and Project Number.

The undersigned hereby proposes and agrees to furnish all labor, materials, and equipment, and to perform all work required for the above-named Project in the manner and time prescribed in the Drawings and Project Manual, dated 7/1/24 and such addenda thereto as may be issued prior to bid opening date and in accordance with prevailing wage rates ascertained by the Department of Industrial Relations and set forth on the DIR web site ([Prevailing Wage Requirements](#)) for General Prevailing Wage Rates as determined by the August 2024 DIR prevailing wage published rates. The Bid Price, set forth below in clear legible figures, includes the cost of Bonds, insurance, sales tax, and every other item of expense, direct or indirect, incidental to the Bid Price.

COMPLETE WORK

For the Lump Sum of: \$ _____

IMPORTANT - READ BEFORE SIGNING: Bid Form must be executed in same name-style in which the bidder is licensed. Bidder bidding jointly or as a combination of several business organizations is specially cautioned that such bidder must be jointly licensed in the same form and style in which the bid is executed. If making a bid as a joint venture, each person submitting the bid shall provide the information required below with respect to his or her licensure. The undersigned Bidder certifies and agrees to provide the information and comply with the requirements contained in Articles 1 through 10 on the following pages of the Bid Form. By signing, Bidder swears under penalty of perjury that the conditions of Article 2; Article 4, Paragraph 4.2; Article 7 and Article 9, Paragraph 9.2.1 are true.

Legal Name of Bidder: _____ Federal I.D. No.: _____

Contractor's License No.: _____ License Expiration Date: _____ License Classification: _____

Contractor's Public Works Registration No. (Dept. of Industrial Relations): _____

Contractor's DGS Small Business/DVBE Certification Number: _____

Business Address: _____
(Street and/or P.O. Box) (City) (State) (Zip)

E-Mail Address: _____

Business Telephone No.: _____ Facsimile No.: _____

SIGN HERE ----->

Signature of Bidder

Print Name and Title of Bidder

Executed this _____ day of _____, 20____ at _____, California.

RESDMSTR: LS: 05/01/2024

BID FORM
00 41 00 - 1

000000000009280

ARTICLE 1 – BIDDER'S BUSINESS IDENTIFICATION

THIS BID IS SUBMITTED BY (check one):

☐

Individual

☐

Partnership

☐

Joint Venture

☐

Corporation

State in which Incorporated

NOTE: If Bidder is a corporation, the State in which incorporated shall be inserted above and the legal name of the corporation shall be set forth on Page 1, together with the signature of the officer or officers authorized to sign contracts on behalf of the corporation; if Bidder is a partnership, the true name of the firm shall be set forth on Page 1, together with the signature of a partner authorized to sign contract in behalf of the partnership; and if Bidder is an individual, that person's signature shall be placed on Page 1. If signature is by an agent, other than an officer of a corporation or a member of a partnership, a Power of Attorney must be on file with the Department prior to opening bids or submitted with the bid; otherwise, the bid will be regarded as irregular and unauthorized. If bid is submitted by partnership or joint venture, the members are:

ARTICLE 2 – PREFERENCES AND INCENTIVES

2.1 Small Business Preference - By checking "yes" below, Bidder requests preference as a "Small Business" and further certifies under penalty of perjury, that the firm still meets the requirements of Section 1896 et. seq. Title 2, of the California Code of Regulations, and has either: 1) been approved by the Office of Small Business and Disabled Veteran Business Enterprise (DVBE) Services (OSDS) or; 2) submitted a complete application pursuant to Section 1896.14 to the OSDS by 5:00 p.m. on the bid opening date.

The Legal Name of Bidder and the Bidder's OSDS Certification must be executed in the same name-style in which bidder is licensed. A Bidder bidding jointly or as a combination of several business organizations is specially cautioned that such bidder must be jointly licensed in same form and style in which the bid is executed.

Special attention is directed to Section 1896.16 for penalties for furnishing incorrect supporting information in obtaining preference.

2.1.1 Small Business Preference Claimed? ☐ Yes _____ ☐ No
(List date filed if not yet certified)

2.2 Non-Small Business Subcontractor Preference - By checking "yes" below Bidder requests preference as a Non-Small Business and agrees to complete and submit Document 00 43 16-2 attached hereto, no later than forty-eight (48) hours after the time of receipt of bids (or the following business day if a weekend or state holiday). Special attention is directed to Section 1896.16 for penalties for furnishing incorrect supporting information in obtaining preference.

2.2.1 Non-Small Business Subcontractor Preference Claimed? ☐ Yes ☐ No

2.3 Disabled Veteran Business Enterprise Bid Incentive - By checking "yes" below, Bidder certifies and claims credit for achieving 1% or greater of DVBE Participation on this bid as is shown in Article 9 of this bid form and also requests that the corresponding DVBE Incentive be applied to this bid.

2.3.1 DVBE Incentive Claimed? ☐ Yes ☐ No

ARTICLE 3 – BONDING ASSISTANCE

In the event Bidder has received assistance in obtaining bonding for this Project, Bidder shall set forth name and nature of firm providing such assistance. Should that firm be listed as subcontractor, Bidder shall set forth the percentage of contract to be performed by that subcontractor.

Firm Providing Assistance and Nature of Assistance

Subcontractor: ☐ Yes ☐ No Percentage _____

ARTICLE 4 – CERTIFICATIONS - BID DEPOSITORY AND FEDERAL COURT FINDINGS

4.1 By signing this Bid Form, Bidder certifies that in preparation of this Bid Form, no bid was received by the bidder from a bid depository, which depository (as to any portion of the work) prohibits or imposes sanctions for the obtaining by bidder, or the submission to bidder by any subcontractor or vendor or supplier of goods and services, of a bid outside the bid depository. This certification shall constitute a warranty, the falsity of which shall entitle the State to pursue any remedy authorized by law, and shall include the right, at the option of the State, of declaring any contract made as a result thereof to be void.

4.2 By signing this Bid Form, Bidder swears under penalty of perjury that representations of the bid with respect to bidder's license are true and that no more than one final un-appealable finding of contempt of court by a Federal Court has been issued against the Contractor within the immediately preceding two-year period because of the Contractor's failure to comply with an order of a Federal Court which orders the Contractor to comply with an order of the National Labor Relations Board.

4.3 By signing this Bid Form, Bidder acknowledges that in accordance with the provisions of Section 3700 of the Labor Code, every contractor will be required to secure the payment of compensation to his employees. The Bidder agrees that they are aware of the provisions of Section 3700 of the Labor Code which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and will comply with such provisions before commencing the performance of the work of this contract.

4.4 By signing this Bid Form, Bidder certifies they will not ask an applicant for onsite construction-related employment to disclose orally or in writing information concerning the conviction history of the applicant on or at the time of an initial employment application.

This section shall not apply to a position for which the person or the state is otherwise required by state or federal law to conduct a conviction history background check or to any contract position with a criminal justice agency, as that term is defined in Section 13101 of the Penal Code.

This section shall not apply to a person to the extent that he or she obtains workers from a hiring hall pursuant to a bona fide collective bargaining agreement.

ARTICLE 5 – STATEMENT OF COMPLIANCE - NONDISCRIMINATION

Bidder (hereinafter referred to as "prospective contractor" in this Statement), by signing this Bid Form, hereby certifies, unless specifically exempted, compliance with Government Code Section 12990 (a-f), and CCR, Title 2, Division 4.1, Chapter 5 and Subchapter 5, Section 11102, in matters relating to reporting requirements and the development, implementation and maintenance of a Nondiscrimination Program; as set forth in the General Conditions of the Contract for Construction. Prospective contractor agrees not to unlawfully discriminate, harass or allow harassment against any employee or applicants for employment because of sex, race, color, ancestry, religious creed, national origin, physical disability (including HIV and AIDS), medical disability (cancer), age (over 40), marital status, and denial of family care leave.

ARTICLE 6 – QUESTIONNAIRE

6.1 In accordance with Public Contract Code, Section 10162, the Bidder shall complete the following questionnaire:

6.1.1 Has the Bidder, any officer of the Bidder, or any employee of the Bidder who has a proprietary interest in the Bidder, ever been disqualified, removed, or otherwise prevented from bidding on, or completing a Federal, State or Local government project because of a violation of law or a safety regulation?

☐ Yes

☐ No

6.1.2 Has the Bidder, any officer of the Bidder, or any employee of the Bidder who has a proprietary interest in the Bidder, ever received a safety violation or failed to file notifications to the Cal-OSHA, Federal OSHA, or EPA Agencies for employee records as required by CCR, Title 8, Section 5208 and CFR 40, Part 61?

☐ Yes

☐ No

If the answer to either 6.1.1 or 6.1.2 above is "Yes", then give the date(s) of the citation(s) or failure to make notifications, and explain the circumstances by attachment to this Bid Form.

6.2 In order to verify compliance with California Air Resources Board In-Use Off-Road Diesel Fueled Fleets Regulation, Section 2449(i), Title 13, California Code of Regulations, the Bidder shall complete the following questionnaire:

6.2.1. Does the work for the above-named Project involve use of vehicles subject to California Air Resources Board In-Use Off-Road Diesel Fueled Fleets Regulation?

☐ Yes

☐ No

If the answer to 6.2.1 above is "Yes", successful low Bidder shall, prior to the execution of a contract, submit copies of the valid Certificates of Reported Compliance, issued by the California Air Resources Board, for the fleet selected for the contract and listed subcontractors.

ARTICLE 7 – NON-COLLUSION DECLARATION TO BE EXECUTED BY BIDDER AND SUBMITTED WITH BID

By signing this Bid Form, Bidder, being first duly sworn, deposes and says that he or she is the authorized representative of the Bidder, the party making the foregoing bid, that the bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the bid is genuine and is not collusive or sham; that 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 Bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; that the Bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the Bidder or any other Bidder, or to fix any overhead, profit, or cost element of the bid price, or that of any other Bidder, or to secure any advantage against the public body awarding the contract of anyone interested in the proposed contract; that all statements contained in the bid are true; and, further, that the Bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid.

ARTICLE 8 – ADDENDA

In submitting this bid, Bidder represents that Bidder has examined copies of all the Contract Documents and acknowledges receipt of the following addenda:

Addendum No.: _____ Date: _____

Addendum No.: _____ Date: _____

Addendum No.: _____ Date: _____

Addendum No.: _____ Date: _____

Addendum No.: _____ Date: _____

Addendum No.: _____ Date: _____

Failure to acknowledge on the Bid Form receipt of an addendum shall not in itself be cause for withdrawal or rejection of bids, if it can be shown that bidder did, in fact, receive such addendum prior to bid opening.

ARTICLE 9 – DVBE COMPLIANCE & PARTICIPATION SUMMARY

9.1 In accordance with Public Contract Code Section 10115, et seq., the Department of General Services has established criteria to implement the DVBE Program Goal as set forth in Document 00 22 10 of the Project Manual. Document 00 22 10, DVBE PARTICIPATION PROGRAM REQUIREMENTS cites the specific percentage of DVBE Participation required for this contract. **Failure to meet this requirement will result in a non-responsive bid.**

If DVBE Participation is a requirement for this bid, Bidder must complete Article 9.2.1 - DVBE PARTICIPATION SUMMARY. Failure to meet the full percentage of required DVBE participation will cause the bid to be deemed non-responsive and the bid will be rejected by the State. Listed DVBE vendor or subcontractor relationships should be first tier.

Any DVBE person, firm, corporation or organization committed by the bidder to fulfill DVBE Participation must: 1) be certified with the OSDS, and; 2) perform or provide a Commercially Useful Function as defined in Military and Veterans Code Section 999. Failure to comply with these requirements will deem the bid non-responsive and the bid will be rejected by the State.

If DVBE participation is set at zero percent, Bidder may still claim DVBE Incentive for voluntary DVBE Participation of 1% or greater. To have DVBE Incentive applied to this bid, Bidder must claim the Incentive in ARTICLE 2.3 - PREFERENCES & INCENTIVES and complete ARTICLE 9.2 - DVBE PARTICIPATION SUMMARY of the Bid Form.

If any DVBE subcontractor will be performing work in excess of 1/2 of 1% of the bid amount, the subcontractor **MUST** be listed under ARTICLE 9.2.1 - DVBE PARTICIPATION SUMMARY **AND** ARTICLE 10 - LIST OF SUBCONTRACTORS in accordance with Public Contract Code Section 4100, et. seq.

9.2 DVBE PARTICIPATION SUMMARY

NAME OF BIDDER: _____

Completion Instructions: Capture all required and non-required first tier DVBE Participation in the space below. Identify the proposed work (services, trade or materials) to be completed by the DVBE. List the Company name, contact information, OSDS Certification Number, and the DIR Registration Number. If the Bidder is a DVBE, list only the Bidder's information as 100%; do not list additional subcontractors. Indicate the dollar amount of the work to be performed by each DVBE company and the corresponding percentage of this bid price rounded to two decimals. Add up each Dollar Amount and identify the total on the bottom row marked, TOTAL DVBE PARTICIPATION. Calculate and list the percentage of the bid price this amount represents.

Pursuant to Military and Veterans Code §999.7, the awarding department shall withhold, on a contract entered into on or after January 1, 2021, ten thousand dollars (\$10,000) from the final payment, or the full final payment if less than ten thousand dollars (\$10,000), until a prime contractor complies with the certification requirements of subdivision (d) of Section Military and Veterans Code §999.5. A prime contractor that fails to comply with the certification requirement shall, after notice, be allowed to cure the defect. Notwithstanding any other law, if, after at least 15 calendar days but not more than 30 calendar days from the date of notice, the prime contractor refuses to comply with the certification requirements, the awarding department shall permanently deduct ten thousand dollars (\$10,000) from the final payment, or the full payment if less than ten thousand dollars (\$10,000).

9.2.1 Listed hereinafter is the certified DVBE company(s) proposed to perform work if the contract is awarded to Bidder:

TYPE OF WORK PERFORMED (Service, Trade or Materials)	NAME OF DVBE COMPANY, CONTACT PERSON AND PHONE NUMBER	OSDS CERTIFICATION NUMBER	DIR REGISTRATION NUMBER	DOLLAR AMOUNT OF WORK PERFORMED	PERCENTAGE OF BID PRICE
TOTAL DVBE PARTICIPATION:					

DETERMINATION OF TOTAL DVBE PARTICIPATION: Determination of total DVBE participation will be on the basis of total sum of all listed DVBE above and as verified by the State. When there is a discrepancy between the Dollar Amount and the Percentage of Bid, the higher of the two will prevail.

ARTICLE 10 – LIST OF PROPOSED SUBCONTRACTORS

Listed hereinafter are the **name, location, license number, and registration number** of all subcontractors who will be employed, and the **kind of work** which each will perform if the contract is awarded to the undersigned. I understand that under Public Contract Code Section 4100, et. seq., I must here clearly set forth the name and location of each subcontractor who will perform work or labor or render service to me in or about the construction of the work in an amount in excess of one-half of one percent (1/2 of 1%), of my total bid, and that as to any work in which I fail to do so, I agree to perform that portion myself or be subject to penalty under the act. (Note: In case more than one subcontractor is named for the same kind of work, state the portion that each will perform.) I also understand that listed subcontractors must be registered with the Department of Industrial Relations in order to be listed for and to engage in the performance of work on Public Works projects. Notwithstanding General Conditions Paragraph 1.1, the definition of a **SUBCONTRACTOR** for the purposes of the Subletting and Subcontracting law is as follows: A trade Contractor who is licensed with the Contractors' State License Board with an A, B, C or D classification, as defined pursuant to PCC Section 4113.

- Vendors or suppliers of materials only need not be listed.
- Any DVBE subcontractor performing work in excess of ½ of 1% of the bid amount **MUST** be listed below **AND** under ARTICLE 9.2.1 - DVBE PARTICIPATION SUMMARY.

Failure to list Kind of Work, Name, Location or License Number shall cause the bid to be rejected as non-responsive.

Kind of Work	Name	Location (City)	CSLB License No.	DIR Registration No.

If further space is required below, copy this page and attached hereto to be made a part of the Bid Form. Sub List Page _____ of _____

CALIFORNIA CIVIL RIGHTS LAWS ATTACHMENT

DGSOLS 04 (Rev.01/17)

Pursuant to Public Contract Code section 2010, a person that submits a bid or proposal to, or otherwise proposes to enter into or renew a contract with, a state agency with respect to any contract in the amount of \$100,000 or above shall certify, under penalty of perjury, at the time the bid or proposal is submitted or the contract is renewed, all of the following:

1. **CALIFORNIA CIVIL RIGHTS LAWS:** For contracts executed or renewed after January 1, 2017, the contractor certifies compliance with the Unruh Civil Rights Act (Section 51 of the Civil Code) and the Fair Employment and Housing Act (Section 12960 of the Government Code); and
2. **EMPLOYER DISCRIMINATORY POLICIES:** For contracts executed or renewed after January 1, 2017, if a Contractor has an internal policy against a sovereign nation or peoples recognized by the United States government, the Contractor certifies that such policies are not used in violation of the Unruh Civil Rights Act (Section 51 of the Civil Code) or the Fair Employment and Housing Act (Section 12960 of the Government Code).

CERTIFICATION

I, the official named below, certify under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Proposer/Bidder Firm Name (Printed)	Federal ID Number
By (Authorized Signature)	
Printed Name and Title of Person Signing	
Executed in the County of	Executed in the State of
Date Executed	

NONCOLLUSION DECLARATION TO BE EXECUTED BY BIDDER AND SUBMITTED WITH
BID

The undersigned declares:

I am the _____ of _____, the party making the foregoing bid.

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

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

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

Signed

Generative Artificial Intelligence (GenAI) Disclosure & Factsheet

Bidder/Offer Information

Solicitation Number	Bidder ID/Vendor ID (optional)
Business Name	Business Telephone Number
Business Address	City State Zip Code

GenAI Disclosure & Factsheet

Will you be using or offering GenAI technology, model, or service (collectively, "system")? ☐ Yes ☐ No (If No, skip to Signature section of this form.)

If yes, provide details regarding the GenAI system"). See *GenAI Disclosure & Factsheet Definitions* at the end of this form for more information.

Failure to disclose GenAI to the State and submit the detailed description may result in disqualification and may void any resulting contract.

1. GenAI Model Name, Version (including number of parameters)	
2. Model Owner	
3. Overview	
4. Purpose	
5. Intended Domain	
6. Model Training Data	
7. Model Information	

8. Input and Outputs	
9. Performance Metrics	
10. Optimal Conditions	
11. Poor Conditions	
12. Bias	
13. Test Data	

Explain below how you are ensuring the GenAI system is not adversely affecting “decisions that materially impact access to, or approval for, housing or accommodations, education, employment, credit, health care, and criminal justice.” (AB 302, Department of Technology: High-Risk automated decision systems: inventory).

Signature

By signing this document, I certify that I have identified and disclosed, if any, all GenAI components in the proposed solution or service.

Signature

Date

2 of 4

GenAI Disclosure & Factsheet Definitions

Please use the following definitions to complete the GenAI Disclosure and Factsheet:

1. Model Name, Version & Number of Parameters:

- Definition: The unique identifier or name assigned to the specific GenAI model or service.
- Purpose: Allows users to refer to and distinguish between different GenAI models.

2. Model Owner

- Definition: The name of the organization or entity responsible for creating or deploying the GenAI model or service.
- Importance: Helps identify the source and accountability for the GenAI system.

3. Overview:

- Definition: A concise summary of the GenAI model's purpose, functionality, and key characteristics.
- Role: Provides a high-level understanding for users and stakeholders.

4. Purpose:

- Definition: The intended use or goal of the GenAI model (e.g., image recognition, natural language processing, text summarization).
- Significance: Helps users assess whether the GenAI model aligns with their needs.

5. Intended Domain:

- Definition: The context, subject matter or domain for which the GenAI model is designed to operate effectively.
- Importance: Helps users determine if the GenAI model is suitable for their specific use case.

6. Training Data:

- Definition: Information used to train the GenAI model (e.g., labeled images, text corpora).
- Role: Influences the GenAI model's behavior and performance.

7. Model Information:

- Definition: Details about the architecture, parameters, and configuration of the GenAI model.
- Relevance: Provides insights into how the GenAI model functions.

8. Inputs and Outputs:

- Definition:
 - Inputs: The data or features provided to the model for prediction (e.g., images, text).
 - Outputs: The GenAI model's predictions or results (e.g., class labels, probabilities).
- Understanding: Crucial for integrating the GenAI model into applications.

9. Performance Metrics:

- Definition: Quantitative measures (e.g., accuracy, F1-score) used to evaluate the GenAI model's performance.
- Assessment: Determines how well the GenAI model meets its intended purpose.
- Continuous Monitoring Plan: Establishes a plan for continuous monitoring and evaluation of the GenAI model's performance.

10. Optimal Conditions:

- Definition: The ideal environment or context for the GenAI model to perform optimally.
- Contextual Guidance: Helps users achieve the best results.

11. Poor Conditions:

- Definition: Scenarios or conditions where the GenAI model's performance may degrade.
- Risk Awareness: Alerts users to potential limitations.

12. Bias:

- Definition: Any systematic error or unfairness in the GenAI model's predictions due to biased training data or design.
- Mitigation: Addressing bias is crucial for ethical and unbiased GenAI.

13. Test Data:

- Definition: Independent data used to evaluate the GenAI model's performance after training.
- Validation: Ensures the GenAI model generalizes well to unseen examples.

BIDDER'S BOND

STATE OF CALIFORNIA
DEPARTMENT OF GENERAL SERVICES

KNOW ALL MEN BY THESE PRESENTS:

That we,

_____, as Principal,
and _____

as Surety, are held and firmly bound unto the State of California, hereinafter called the State, in the penal sum of ten percent (10%) of the total amount of the bid of the Principal above named, submitted by said Principal to the State of California, Department of General Services, for the work described below, for the payment of which sum in lawful money of the United States, well and truly to be made, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

THE CONDITION of this obligation is such that:

WHEREAS, the Principal has submitted the above-mentioned bid to the State of California, Department of General Services, for certain construction specifically described as follows, for which bids are to be opened at _____
(Insert place where bids will be opened) on _____ (Insert date of bid opening)
for _____

(Copy here the exact description of work, including location, as it appears on the proposal)

NOW, THEREFORE, If the aforesaid Principal is awarded the contract and, within the time and manner required under the specifications, after the prescribed forms are presented to him for signature, enters into a written contract, in the prescribed form, in accordance with the bid, and files the two bonds with the Department, one to guarantee faithful performance and the other to guarantee payment for labor and materials, as required by law, then this obligation shall be null and void; otherwise, it shall be and remain in full force and virtue.

In the event suit is brought upon this bond by the Obligee and judgment is recovered, the Surety shall pay all costs incurred by the Obligee in such suit, including a reasonable attorney's fee to be fixed by the court.

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

(SEAL)

(SEAL)

(SEAL)

Name of Principal and Address for Service

By _____

Contractor Signature

(SEAL)

(SEAL)

(SEAL)

Name of Surety and Address for Service

By _____

Attorney-in-Fact Signature

NOTE: Signatures of those executing for the Surety must be properly acknowledged.

CERTIFICATE OF ACKNOWLEDGMENT

STATE OF CALIFORNIA

COUNTY OF _____ ss

On this _____ day of _____ in the year of 20____ before me, a notary public in and for the county and state aforesaid, personally appeared, _____ and proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and proved to me on the basis of satisfactory evidence to be the attorney-in-fact of _____ and acknowledged to me that he/she subscribed the name of the said company thereto as surety, and his/her own name as attorney-in-fact.

(SEAL)

Notary Public

DOCUMENT 00 43 16-1

LIST OF CERTIFIED SMALL BUSINESS SUBCONTRACTOR(S)

COMPLETION INSTRUCTIONS
PLEASE READ THESE INSTRUCTION CAREFULLY

IN ORDER TO GRANT A FIVE PERCENT (5%) NON-SMALL BUSINESS SUBCONTRACTOR PREFERENCE TO A NON-SMALL BUSINESS, THE BIDDER MUST COMPLETE THE CERTIFIED SMALL BUSINESS SUBCONTRACTOR SUMMARY (CSBSS) FORM 00 43 16-2. THIS FORM **MUST** BE COMPLETED BY THE NON-SMALL BUSINESS BIDDER AND RETURNED TO THE AWARDING AGENCY NO LATER THAN FORTY-EIGHT (48) HOURS AFTER THE TIME OF RECEIPT OF BIDS. IF THE BIDDER FAILS TO RETURN THE COMPLETED FORM 00 43 16-2 WITHIN 48 HOURS, THE CLAIM FOR SMALL BUSINESS PREFERENCE WILL BE DENIED.

CSBS COMPANY NAME – list the name(s) of the certified small business subcontractor(s) to be used to complete this project.

CSBS COMPANY ADDRESS – list the address(es) of the certified small business subcontractor(s) to be used to complete this project.

CSBS COMPANY TELEPHONE NUMBER – list the telephone number(s) of the certified small business subcontractor(s) to be used to complete this project.

CSBS PERCENTAGE (%) OR DOLLAR (\$) AMOUNT – list the percentage(s) or dollar amount(s) that will be given to the certified small business subcontractor(s) used to complete this project.

DESCRIPTION OF WORK – identify the proposed work including services or materials to be performed by the certified small business subcontractor(s) to complete this project.

TO OBTAIN THE 5% NON-CERTIFIED SMALL BUSINESS PREFERENCE, THE LISTED SUBCONTRACTOR(S) AND/OR SUPPLIER(S) FIRM(S) MUST BE FORMALLY CERTIFIED BY THE OFFICE OF SMALL BUSINESS AND DVBE CERTIFICATION (OSDC) AS A SMALL AND/OR MICROBUSINESS. (Prime contractors should ask Subcontractor/Supplier to provide them with a copy of their OSDC certification letter)

CERTIFIED SMALL BUSINESS SUBCONTRACTOR(S) SUMMARY

BIDDER NAME _____

PROJECT NUMBER _____

STATE OF CALIFORNIA
CERTIFIED SMALL BUSINESS SUBCONTRACTOR(S) SUMMARY

Form date 09/28/2004

Listed hereinafter is the **name of business, address, telephone number, dollar amount or percentage** of all certified subcontractors who will be employed, and the **description of the work** which each will perform if the contract is awarded to this bidder.

Failure to list name of business, address, telephone number, description of work to be performed and dollar amount or percentage of work for each subcontractor may be cause for denial of the non-small business subcontractor preference.

(If further space is required for the List of Proposed Subcontractors, additional sheets showing the required information, as indicated below, shall be attached hereto and made a part of the Bid).

CERTIFIED SMALL BUSINESS SUBCONTRACTOR (Name of Business)	CERTIFIED SMALL BUSINESS SUBCONTRACTOR (Address)	CERTIFIED SMALL BUSINESS SUBCONTRACTOR (Telephone Number)	CERTIFIED SMALL BUSINESS SUBCONTRACTOR (\$ or % Amount)	CERTIFIED SMALL BUSINESS SUBCONTRACTOR (Description of Work) (Service or Materials)

CERTIFIED SMALL BUSINESS SUBCONTRACTOR(S) SUMMARY

PAYEE DATA RECORD

(Required when receiving payment from the State of California in lieu of IRS W-9 or W-7)

STD 204 (Rev. 03/2021)

Section 1 - Payee Information**NAME** (This is required. Do not leave this line blank. Must match the payee's federal tax return)**BUSINESS NAME, DBA NAME or DISREGARDED SINGLE MEMBER LLC NAME** (if different from above)**MAILING ADDRESS** (number, street, apt. or suite no.) (See instructions on Page 2)**CITY, STATE, ZIP CODE****E-MAIL ADDRESS****Section 2 - Entity Type****Check one (1) box only that matches the entity type of the Payee listed in Section 1 above.** (See instructions on page 2)☐ **SOLE PROPRIETOR / INDIVIDUAL**☐ **SINGLE MEMBER LLC Disregarded Entity owned by an Individual**☐ **PARTNERSHIP**☐ **ESTATE OR TRUST**☐ **CORPORATION** (see instructions on page 2)☐ **MEDICAL** (e.g., dentistry, chiropractic, etc.)☐ **LEGAL** (e.g., attorney services)☐ **EXEMPT** (e.g., nonprofit)☐ **ALL OTHERS****Section 3 - Tax Identification Number**Enter your Tax Identification Number (TIN) in the appropriate box. The TIN must match the name given in Section 1 of this form. Do not provide more than one (1) TIN. The TIN is a 9-digit number. **Note:** Payment will not be processed without a TIN.

- For **Individuals**, enter SSN.
- If you are a **Resident Alien**, and you do not have and are not eligible to get an SSN, enter your ITIN.
- Grantor Trusts (such as a Revocable Living Trust while the grantors are alive) may not have a separate FEIN. Those trusts must enter the individual grantor's SSN.
- For **Sole Proprietor or Single Member LLC (disregarded entity)**, in which the sole member is an individual, enter SSN (ITIN if applicable) or FEIN (FTB prefers SSN).
- For **Single Member LLC (disregarded entity)**, in which the sole member is a business entity, enter the owner entity's FEIN. Do not use the disregarded entity's FEIN.
- For all other entities including LLC that is taxed as a corporation or partnership, estates/trusts (with FEINs), enter the entity's FEIN.

Social Security Number (SSN) or Individual Tax Identification Number (ITIN)

_____ - _____ - _____

OR

Federal Employer Identification Number (FEIN)

_____ - _____ - _____

Section 4 - Payee Residency Status (See instructions)☐ **CALIFORNIA RESIDENT** - Qualified to do business in California or maintains a permanent place of business in California.☐ **CALIFORNIA NONRESIDENT** - Payments to nonresidents for services may be subject to state income tax withholding.☐ No services performed in California☐ Copy of Franchise Tax Board waiver of state withholding is attached.**Section 5 - Certification***I hereby certify under penalty of perjury that the information provided on this document is true and correct. Should my residency status change, I will promptly notify the state agency below.***NAME OF AUTHORIZED PAYEE REPRESENTATIVE****TITLE****E-MAIL ADDRESS****SIGNATURE****DATE****TELEPHONE** (include area code)**Section 6 - Paying State Agency****Please return completed form to:****STATE AGENCY/DEPARTMENT OFFICE**

Department of General Services, Administrative Division

UNIT/SECTION

Office of Business and Acquisition Services, Contract Services Section

MAILING ADDRESS

707 Third Street, MS 508

FAX

n/a

TELEPHONE (include area code)

n/a

CITY

West Sacramento

STATE

CA

ZIP CODE

95605

E-MAIL ADDRESS

n/a

PAYEE DATA RECORD

RESDMSTR: 7.8.2021

00 45 46 - 1

00000000009280

PAYEE DATA RECORD

(Required when receiving payment from the State of California in lieu of IRS W-9 or W-7)

STD 204 (Rev. 03/2021)

GENERAL INSTRUCTIONS

Type or print the information on the Payee Data Record, STD 204 form. Sign, date, and return to the state agency/department office address shown in Section 6. Prompt return of this fully completed form will prevent delays when processing payments.

Information provided in this form will be used by California state agencies/departments to prepare Information Returns (Form 1099).

NOTE: Completion of this form is optional for Government entities, i.e. federal, state, local, and special districts.

A completed Payee Data Record, STD 204 form, is required for all payees (non-governmental entities or individuals) entering into a transaction that may lead to a payment from the state. Each state agency requires a completed, signed, and dated STD 204 on file; therefore, it is possible for you to receive this form from multiple state agencies with which you do business.

Payees who do not wish to complete the STD 204 may elect not to do business with the state. If the payee does not complete the STD 204 and the required payee data is not otherwise provided, payment may be reduced for federal and state backup withholding. Amounts reported on Information Returns (Form 1099) are in accordance with the Internal Revenue Code (IRC) and the California Revenue and Taxation Code (R&TC).

Section 1 – Payee Information

Name – Enter the name that appears on the payee's federal tax return. The name provided shall be the tax liable party and is subject to IRS TIN matching (when applicable).

- Sole Proprietor/Individual/Revocable Trusts – enter the name shown on your federal tax return.
- Single Member Limited Liability Companies (LLCs) that is disregarded as an entity separate from its owner for federal tax purposes - enter the name of the individual or business entity that is tax liable for the business in section 1. Enter the DBA, LLC name, trade, or fictitious name under Business Name.
- Note: for the State of California tax purposes, a Single Member LLC is not disregarded from its owner, even if they may be disregarded at the Federal level.
- Partnerships, Estates/Trusts, or Corporations – enter the entity name as shown on the entity's federal tax return. The name provided in Section 1 must match to the TIN provided in section 3. Enter any DBA, trade, or fictitious business names under Business Name.

Business Name – Enter the business name, DBA name, trade or fictitious name, or disregarded LLC name.

Mailing Address – The mailing address is the address where the payee will receive information returns. Use form STD 205, Payee Data Record Supplement to provide a remittance address if different from the mailing address for information returns, or make subsequent changes to the remittance address.

Section 2 – Entity Type

If the Payee in Section 1 is a(n)...	THEN Select the Box for...
Individual • Sole Proprietorship • Grantor (Revocable Living) Trust disregarded for federal tax purposes	Sole Proprietor/Individual
Limited Liability Company (LLC) owned by an individual and is disregarded for federal tax purposes	Single Member LLC-owned by an individual
Partnerships • Limited Liability Partnerships (LLP) • and, LLC treated as a Partnership	Partnerships
Estate • Trust (other than disregarded Grantor Trust)	Estate or Trust
Corporation that is medical in nature (e.g., medical and healthcare services, physician care, nursery care, dentistry, etc.) • LLC that is to be taxed like a Corporation and is medical in nature	Corporation-Medical
Corporation that is legal in nature (e.g., services of attorneys, arbitrators, notary publics involving legal or law related matters, etc.) • LLC that is to be taxed like a Corporation and is legal in nature	Corporation-Legal
Corporation that qualifies for an Exempt status, including 501(c) 3 and domestic non-profit corporations.	Corporation-Exempt
Corporation that does not meet the qualifications of any of the other corporation types listed above • LLC that is to be taxed as a Corporation and does not meet any of the other corporation types listed above	Corporation-All Other

Section 3 – Tax Identification Number

The State of California requires that all parties entering into business transactions that may lead to payment(s) from the state provide their Taxpayer Identification Number (TIN). The TIN is required by R&TC sections 18646 and 18661 to facilitate tax compliance enforcement activities and preparation of Form 1099 and other information returns as required by the IRC section 6109(a) and R&TC section 18662 and its regulations.

Section 4 – Payee Residency Status

Are you a California resident or nonresident?

- A corporation will be defined as a "resident" if it has a permanent place of business in California or is qualified through the Secretary of State to do business in California.
- A partnership is considered a resident partnership if it has a permanent place of business in California.
- An estate is a resident if the decedent was a California resident at time of death.
- A trust is a resident if at least one trustee is a California resident.
 - For individuals and sole proprietors, the term "resident" includes every individual who is in California for other than a temporary or transitory purpose and any individual domiciled in California who is absent for a temporary or transitory purpose. Generally, an individual who comes to California for a purpose that will extend over a long or indefinite period will be considered a resident. However, an individual who comes to perform a particular contract of short duration will be considered a nonresident.

For information on Nonresident Withholding, contact the Franchise Tax Board at the numbers listed below:

Withholding Services and Compliance Section: 1-888-792-4900

E-mail address: wscs.gen@ftb.ca.gov

For hearing impaired with TDD, call: 1-800-822-6268

Website: www.ftb.ca.gov

Section 5 – Certification

Provide the name, title, email address, signature, and telephone number of individual completing this form and date completed. In the event that a SSN or ITIN is provided, the individual identified as the tax liable party must certify the form. Note: the signer may differ from the tax liable party in this situation if the signer can provide a power of attorney documented for the individual.

Section 6 – Paying State Agency

This section must be completed by the state agency/department requesting the STD 204.

Privacy Statement

Section 7(b) of the Privacy Act of 1974 (Public Law 93-579) requires that any federal, state, or local governmental agency, which requests an individual to disclose their social security account number, shall inform that individual whether that disclosure is mandatory or voluntary, by which statutory or other authority such number is solicited, and what uses will be made of it. It is mandatory to furnish the information requested. Federal law requires that payment for which the requested information is not provided is subject to federal backup withholding and state law imposes noncompliance penalties of up to \$20,000. You have the right to access records containing your personal information, such as your SSN. To exercise that right, please contact the business services unit or the accounts payable unit of the state agency(ies) with which you transact that business.

All questions should be referred to the requesting state agency listed on the bottom front of this form.

STANDARD AGREEMENT

STD 213 (Rev. 03/2019)

AGREEMENT NUMBER

PURCHASING AUTHORITY NUMBER (if applicable)

1. This Agreement is entered into between the Contracting Agency and the Contractor named below:

CONTRACTING AGENCY NAME

Department of General Services, Real Estate Services Division, Project Management and Development Branch

CONTRACTOR NAME

2. The Term of this Agreement is:

START DATE

As Identified in the Notice to Proceed

THROUGH END DATE

XXX Calendar Days, commencing on the Start Date Identified in the Notice to Proceed

3. The maximum amount of this Agreement is: \$X,XXX,XXX.XX

4. The parties agree to comply with the terms and conditions of the following exhibits, which are by this reference made a part of the Agreement.

EXHIBITS	TITLE	PAGES
Project Title	Project Title Client Address City, County, CA Project Number	
Exhibit A	Performance Bond, Payment Bond, Bid Form, and Invitation to Bid	
Exhibit B	Project Manual (except Bidding Requirements), dated XXX including the following Contract Documents: Introductory Information General Conditions of the Contract for Construction Supplementary Conditions Specifications Addenda No.	
Exhibit C	XXX Drawings, dated XXX, as listed in Document 00 01 15 of the Project Manual	

Items shown with an asterisk (*), are here by incorporated by reference and made part of this agreement as if attached hereto.
These documents can be viewed at <https://www.dgs.ca.gov/ols/resources>

IN WITNESS WHEREOF, THIS AGREEMENT HAS BEEN EXECUTED BY THE PARTIES HERETO.

CONTRACTOR

CONTRACTOR NAME (if other than an individual, state whether a corporation, partnership, etc.)

CONTRACTOR BUSINESS ADDRESS	CITY	STATE	ZIP
PRINTED NAME OF PERSON SIGNING	TITLE		
CONTRACTOR AUTHORIZED SIGNATURE	DATE SIGNED		

STATE OF CALIFORNIA

CONTRACTING AGENCY NAME

CONTRACTING AGENCY ADDRESS	CITY	STATE	ZIP
PRINTED NAME OF PERSON SIGNING	TITLE		
CONTRACTOR AUTHORIZED SIGNATURE	DATE SIGNED		
CALIFORNIA DEPARTMENT OF GENERAL SERVICES APPROVAL	EXEMPTION, IF APPLICABLE		

PERFORMANCE BOND TO ACCOMPANY CONSTRUCTION CONTRACT

KNOW ALL MEN BY THESE PRESENTS:

THAT WHEREAS, The State of California, acting by and through the Department of General Services has awarded to _____, a _____ existing under and by virtue of the laws of the State of California as Contractor, a contract for the work described as follows:

Project Name
Client Agency
Project Information
Reference Number, Project Number, Contract Number

AND WHEREAS, Said Contractor is required to furnish a bond in connection with said contract, guaranteeing the faithful performance thereof;

NOW, THEREFORE, We the undersigned Contractor and surety are held and firmly bound unto the State of California in the sum of _____ Dollars, (\$000,000) to be paid to the State or its certain attorney, its successors and assigns; for which payment well and truly to be made we bind ourselves, our heirs, executors and administrators, successors and assigns, jointly and severally firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH,

That if the above bounded Contractor, his or its heirs, executors, administrators, successors or assigns, shall in all things stand to and abide by, and well and truly keep and perform the covenants, conditions and agreements in the foregoing contract and any alteration thereof made as therein provided, on his or their part to be kept and performed at the time and in the manner therein specified, and in all respects according to their true intent and meaning, and shall indemnify and save harmless the State of California, its officers and agents, as therein stipulated, then this obligation shall become and be null and void; otherwise it shall be and remain in full force and virtue.

IN WITNESS WHEREOF, We have hereunto set our hands and seals on this _____ day of _____, 20____

Name of Contractor and Address for Service

By _____
Contractor Signature

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

Name of Surety and Address for Service (SEAL)

By _____
Attorney-in-Fact Signature

CERTIFICATE OF ACKNOWLEDGMENT

STATE OF CALIFORNIA
COUNTY OF _____ ss

On this _____ day of _____ in the year of 20____ before me, a notary public in and for the county and state aforesaid, personally appeared, _____ proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and proved to me on the basis of satisfactory evidence to be the attorney-in-fact of _____ and acknowledged to me that he/she subscribed the name of the said company thereto as surety, and his/her own name as attorney-in-fact.
(SEAL)

NOTARY PUBLIC

PAYMENT BOND TO ACCOMPANY CONSTRUCTION CONTRACT
(Public Contract Code Sections 7103 and 10221)

BOND NO. _____

The premium on this bond is _____ for the term of _____ Agreement Number 20-XXXX

Know All Men By These Presents:

That the State of California, acting by and through the Department of General Services _____, has awarded to _____ whose address for service is _____, as Principal, a contract for the work described as follows:

Project Title: _____

Project Location: _____

WHEREAS, the provisions of Public Contract Code Sections 7103 and 10221 require that the Principal file a bond in connection with said contract and this bond is executed and tendered in accordance therewith.

NOW THEREFORE, Principal and _____, a Surety Corporation organized under the laws of _____, and authorized to transact a general surety business in the State of California, as Surety, are held and firmly bound to the People of the State of California in the penal sum of _____, for which payment we bind ourselves, our heirs, executors, administrators, successors and assigns jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH,

1. That if said Principal or its subcontractors shall fail to pay any of the persons named in Civil Code Section 9100, or amounts due under the Unemployment Insurance Code with respect to work or labor performed under the contract, or for any amounts required to be deducted, withheld, and paid over to the Employment Development Department from the wages of employees of the Principal and subcontractors pursuant to Section 13020 of the Unemployment Insurance Code, with respect to such work and labor, that the surety herein will pay for the same, otherwise this obligation is to be void. In case suit is brought upon this bond, the Surety will pay a reasonable attorney's fee to be fixed by the court.
2. This bond shall inure to the benefit of any persons named in Civil Code Section 9100 as to give a right of action to such persons or their assigned in any suit brought upon this bond.
3. The aggregate liability of the Surety hereunder, including costs and attorney fees, on all claims whatsoever shall not exceed the penal sum of the bond in accordance with the provisions of Section 996.470(a) of the Code of Civil Procedure.
4. This bond is executed by the Surety, to comply with the provisions of Public Contract Code Sections 7103, 10221 and 10222, of Chapter 5, Title 3, Part 6, Division 4 of the Civil Code and of Chapter 2, Title 14, Part 2 of the Code of Civil Procedure and said bond shall be subject to all of the terms and provisions thereof.
5. This bond may be cancelled by the Surety in accordance with the provisions of Section 996.310 et seq. of the Code of Civil Procedure.
6. This bond to become effective _____

(NAME OF SURETY)

(ADDRESS FOR SERVICE)

I certify (or declare) under penalty of perjury under the laws of the State of California that I have executed the foregoing bond under an unrevoked power of attorney.

Executed in _____ on _____
(CITY AND STATE) (DATE)

X

(SIGNATURE OF ATTORNEY IN FACT)

(PRINTED OR TYPED NAME OF ATTORNEY IN FACT)

Change Order

Date Issued: (Type Date)

Change Order No: _____

From Division: **Facilities Management Division**
 Branch: **N/A**
 Address: **707 Third Street, 3rd Floor**
 City, State Zip: **West Sacramento, CA 95605**

ABMS Contract No: _____
 F\$ Contract No.: _____
 Project ID: **DGS00000009280**
 Activity ID: **CN**
 Resource Type: **CONTR**
 Category: **10000**
 Revision No.: _____
 Date Revised: _____

To: (Contractor's Name:) _____
 (Contractor's Address:) _____
 (Contractor's City/State/Zip:) _____

Project: **Office Building 8&9 Fire, Life, Safety Upgrade**
 Client Agency: **FMD**
 Facility Name: **(039/045) Office Bldg 8&9**
 Facility Location: **714/744 P Street, 95814**

This Change Order is issued pursuant to the provisions of the General Conditions Article 6 of the Contract relating to **Changes in the Work** and shall not be effective until approved by the Department of General Services, REAL ESTATE SERVICES DIVISION. The State will issue the change order after the conditions have been agreed to. The contractor is directed to proceed with construction activities in such manner as to preclude the necessity for later altering the work in order to accomplish this change. This document must be completed in every detail, signed, dated and returned in **DUPLICATE** to the State's representative within **fifteen (15)** calendar days from the date of issue, as provided in the General Conditions of the Contract. Upon approval, a signed copy will be sent to the contractor as authority for proceeding with the changes (or as confirmation of previously issued instructions).

Change Order Description

<u>Item #</u>	<u>Description</u>	<u>Amount</u>
		<i>Total this Change Order</i>
		\$100,000.00

The Undersigned Contractor agrees to make this change in accordance with the printed conditions herein for
 The Additive sum of \$ _____ or deductive sum (\$ _____).

This change is approved for the sum stated above and for a time extension of _____ calendar days.

This Agreement constitutes full and final settlement for all aspects of the work described herein. As part of this agreement, Contractor waives any and all rights to claim for any delay or impact costs associated with the work described herein, including, but not limited to, inefficiency, unabsorbed and extended home office overhead and extended field office overhead.

Authorized Contractor's Signature	Title	Date
Authorized State's Representative Signature	Title	Date

Distribution of Change Order:

Originals to: 1) Contractor 2) RESD Contract Unit
Copies to: 1) Project Manager 2) State Controllers Office 3) DGS Capital Outlay Account 4) State Inspector



Document 00 72 00

General Conditions of the Contract for Construction

October 2011 Edition

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DOCUMENT 00 72 00 - GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION

ARTICLE 1 - GENERAL PROVISIONS

1.1 **DEFINITIONS:** When the following terms appear in the Contract, they shall have the following meaning:

1.1.1 **Acceptance of the Work:** Written acceptance of the Work by the Director of the Department of General Services, State of California, or the Director's designee.

1.1.2 **Act of God:** An Act of God shall include only the following occurrences or conditions and effects:

- .1 Earthquakes in excess of a magnitude of 3.5 on the Richter Scale; or
- .2 Tidal waves.

1.1.3 **Addendum (Addenda):** A document issued by the State during the bidding period which modifies, supersedes or supplements the Contract Documents.

1.1.4 **Alternative:** Refer to Approved Equal and Substitution.

1.1.5 **Applicable Codes:** Include, but are not limited to, applicable laws, statutes, regulations, rules, building and other codes, ordinances, rulings, and lawful orders of all public authorities having jurisdiction over the State, the Contractor, Subcontractors, the Project, the Work, or the execution of the Work.

1.1.6 **Approved Equal:** Material, equipment, or method approved by the State for use in the Work, as being acceptable as an equivalent in essential attributes to the material, equipment, or method specified in the Contract Documents.

1.1.7 **Agreement:** The written and executed document known as Document 00 52 00, Agreement.

1.1.8 **Architect or Engineer:** The State, or the State's consultant listed in the Contract Documents as the designer of record responsible for the preparation and coordination of the Drawings and technical sections of the Project Manual.

1.1.9 **Beneficial Occupancy:** Occupancy and use by the State of all, or part, or parts, of the Work as selected by the State, prior to Completion.

1.1.10 **Bidder:** Any individual, partnership, corporation, association, joint venture, or any combination thereof, submitting a Bid Form for the Work.

1.1.11 **Change Order:** A written order issued by the State used to determine adjustments in the Contract based on:

- .1 a change in the Work,
- .2 the amount of the adjustment in the Contract Sum, and
- .3 the extent of the adjustment in the Contract Time.

1.1.12 **Claim:** An unresolved Dispute arising under or relating to the performance of the Contract which can only be filed after Acceptance of the Work and the final statement to the Contractor.

1.1.13 **Completion:** When the entire Work has been performed in accordance with the Contract requirements as delineated in the Contract Documents and Project Manual. Completion of the Work occurs when the State's final inspection has been made and all construction, services and deliverables have been fully executed as determined by the State's Representative, including but not limited to completion of all punch-list items and delivery of as-built drawings, operation & maintenance manuals, guaranties, warranties, spare parts, reports and certifications as noted in the Project Manual, Section 01 77 00.

1.1.14 **Contract:** The Contract Documents form the Contract for Construction. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations or agreements, either written or oral. The Contract may be amended or modified by a Change Order. The Contract Documents shall not be construed to create a contractual relationship of any kind between any persons or entities other than the State and the Contractor.

- 1.1.15 Contract Documents: The Contract Documents consist of the Agreement between the State and Contractor, Payment and Performance Bonds; the Conditions of the Contract, including General, Supplementary and other Conditions; Drawings, Specifications, Addenda and Change Orders.
- 1.1.16 Contract Sum: The Contract Sum is stated in the Agreement and, including authorized adjustments by Change Order, is the total amount payable by the State to the Contractor for performance of the Work under the Contract Documents.
- 1.1.17 Contract Time: The Contract Time is the period of time, from the Start Date to the date of Completion of the Work, including authorized adjustments, allotted in the Contract.
- 1.1.18 Contractor: The individual, partnership, corporation, association, joint venture, or any combination thereof, who has entered into a contract with the State, identified as such in the Agreement, and referred to throughout the Contract as if singular in number. The term "Contractor" means the Contractor or the Contractor's representative.
- 1.1.19 Day: Calendar day, unless otherwise specifically defined.
- 1.1.20 Department: The Department of General Services, State of California.
- 1.1.21 Director: The Director of the Department of General Services, State of California, or the Director's designee.
- 1.1.22 Dispute: A demand during performance of the Work seeking adjustment or interpretation of Contract terms, payment of money, extension of time or other relief with respect to the terms of the Contract. A Dispute is not a Claim.
- 1.1.23 Drawings: The graphic and pictorial portions of the Contract Documents, illustrating the design, location and dimensions of the Work, generally including but not limited to, plans, elevations, sections, details, schedules and diagrams.
- 1.1.24 Emergency: A sudden, unexpected occurrence that poses a clear and imminent danger, requiring immediate action to prevent or mitigate the loss or impairment of life, health, property, or essential public services.
- 1.1.25 General Notes: The written instructions, provisions, conditions or other requirements appearing on the Drawings, and so identified thereon, which pertain to the performance of the Work.
- 1.1.26 Guarantee: The Contractor's assurance that the Project complies with the requirements of the Contract Documents.
- 1.1.27 Official Progress Schedule: The Contractor's baseline schedule and updates accepted by the State.
- 1.1.28 Or Equal: Refer to Approved Equal.
- 1.1.29 Owner: The State of California.
- 1.1.30 Product Data: Illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work.
- 1.1.31 Project: The total construction of which the Work performed under the Contract may be the whole or a part.
- 1.1.32 Project Manual: The volume(s) assembled for the Work which includes the Introductory Information, Bidding Requirements, Contracting Requirements, Specifications, and other information as may be listed in the Project Manual Table of Contents.
- 1.1.33 Request for Information (RFI): A written request by the Contractor submitted in a State provided format for information regarding Project specific issues.
- 1.1.34 Retention: A percentage of the Contract Sum held back upon completion of the Work, or any portion of the Work, to cover outstanding liabilities, contingencies, and the like, as specified in the Contract Documents.
- 1.1.35 Samples: Physical examples which illustrate materials, equipment or workmanship and establish standards by which the Work will be judged.

- 1.1.36 **Schedule of Values:** A document furnished by the Contractor to the State reflecting the portions of the Contract sum allotted for the various parts of the Work, and used as the basis for reviewing the Contractor's applications for payment request.
- 1.1.37 **Shop Drawings:** Drawings, diagrams, schedules, and other data specially issued for the Work by the Contractor or a Subcontractor, Sub-subcontractor, and material suppliers to illustrate some portion of the Work.
- 1.1.38 **Specifications:** That portion of the Contract Documents consisting of the written requirements for materials, standards, equipment, construction systems, and standards of workmanship for the Work, and performance of related services.
- 1.1.39 **State:** The State of California acting through the Department of General Services.
- 1.1.40 **State Construction Supervisor/Inspector:** The person(s) authorized by the State to provide inspection services, field coordination and quality control during construction.
- 1.1.41 **State Contract Act:** The act which is set forth in the California Public Contract Code, Section 10100, et seq.
- 1.1.42 **State's Representative:** Person(s) authorized by the State to act on behalf of the State for the Project.
- 1.1.43 **Subcontractor:** An individual, partnership, corporation, association, joint venture, or any combination thereof, who has a direct contract with the Contractor to perform work or labor or render service in or about the Work. The term "Subcontractor" is referred to as if singular in number and means a Subcontractor or a representative of the Subcontractor. The term "Subcontractor" shall not include those who supply materials only or a separate contractor or subcontractors of a separate contractor.
- 1.1.44 **Sub-subcontractor:** A person or entity who has a direct or indirect contract with a Subcontractor to perform a portion of the work. The term "Sub-subcontractor" is referred to as if singular in number and means a Sub-subcontractor or a representative of the Sub-subcontractor.
- 1.1.45 **Not Used**
- 1.1.46 **Substitution:** A material and/or process offered by the Contractor in lieu of the specified material and/or process, and accepted by the State in writing as being equivalent (equal) to the specified material and/or process.
- 1.1.47 **Warranty:** A Contractor's, manufacturer's or material supplier's assurance that products and services provided meet the requirements of the Contract Documents.
- 1.1.48 **Work:** Construction, services and deliverables required by the Contract Documents and Project Manual, including labor, materials, equipment, services, and documents provided or to be provided by the Contractor to fulfill the Contractor's obligations under the Contract, including but not limited to requirements such as; completion of punch-list items, as-built drawings, operation & maintenance manuals, guaranties, warranties, spare parts, reports, and certifications.

1.2 EXECUTION, CORRELATION AND INTENT

- 1.2.1 The Contract will not be binding on the State until appropriately endorsed by the State's legal Representative, in accordance with Public Contract Code, Section 10220.
- 1.2.2 Execution of the Contract by the Contractor is a representation that the Contractor is familiar with the methodology under which the work is to be performed and has correlated personal observations with requirements of the Contract Documents.
- 1.2.3 The intent of the Contract Documents is to include items necessary for completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all. Performance by the Contractor shall be required only to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the intended results.
- 1.2.4 Organization of the Specifications into Groups, Divisions, subgroups, Sections and Articles, and arrangement of Drawings shall not be the basis that Contractor utilizes in dividing the Work among Subcontractors, nor in establishing the extent of work to be performed by any trade.

1.2.5 When standards of the Federal Government, trade societies, or trade associations are referred to in the Contract Documents by specific date of issue, these shall be considered as part of the Contract Documents. When such references do not bear date of issue, current published edition at the date of the first Invitation to Bid shall be considered as part of the Contract Documents.

1.2.6 Unless otherwise stated in the Contract Documents, words and terms which have well-known or commonly accepted technical or construction industry meanings shall be used in the Contract Documents in accordance with such recognized meanings.

1.2.7 Every part of the Work shall be accomplished in workmanship-like manner by workers, laborers, or mechanics specially skilled in the class of work required. Any person the State may deem incompetent or disorderly shall be promptly removed from the Project by the Contractor upon written notice from the State, and shall not be re-employed on this Project.

1.3 **USE OF THE STATE'S DRAWINGS, PROJECT MANUAL AND OTHER DOCUMENTS:** The Drawings, Project Manual and other documents issued by the State, and copies furnished to the Contractor, are for use solely with respect to this Project. They are not to be used by the Contractor or any Subcontractor, Sub-subcontractor or material or equipment supplier on other projects, nor for additions to this Project outside the scope of the Work without the specific written consent of the State. The Contractor, Subcontractors, Sub-subcontractors and material or equipment suppliers are granted a limited license to use and reproduce applicable portions of the Drawings, Project Manual and other documents issued by the State appropriate to, and for use in, the execution of their work under the requirements of the Contract Documents.

1.4 CAPITALIZATION

1.4.1 Terms capitalized in the General Conditions of the Contract for Construction include those which are:

- .1 Specifically defined; or
- .2 Titles of numbered Articles; or
- .3 References to Paragraphs, Subparagraphs and Clauses; or
- .4 Titles of other documents.

1.5 CONFLICTS IN THE CONTRACT DOCUMENTS

1.5.1 In the event of conflict in the Contract Documents, the following priorities shall govern:

- .1 Addenda shall govern over other Sections of the Contract Documents to the extent specifically noted; subsequent Addenda shall govern over prior Addenda only to the extent specified.
- .2 The General Conditions of the Contract for Construction shall govern over Drawings and Specifications except for specific modifications stated in the Supplementary Conditions, and except for Addenda.
- .3 In case of conflict between the Drawings and the Specifications, the Specifications shall govern unless the requirement(s) in the Drawings is/are more stringent and/or of higher quality and/or of higher quantity.
- .4 In the case of conflict within the Drawings, the following shall govern:
 - 1) Schedules, when identified as such, shall govern over all other portions of the Drawings.
 - 2) Specific notes shall govern over other notes and all other portions of the Drawings, except schedules described in the preceding Clause.
 - 3) Larger scale Drawings shall govern over smaller scale Drawings.
 - 4) Detail Drawings shall govern over standard plates bound within the Project Manual.
 - 5) Figured or numerical dimensions shall govern over dimensions obtained by scaling.

1.5.2 Omissions: If the Contract Documents are not complete as to any minor detail or required construction system or with regard to the manner of combining or installing of parts, materials, or equipment, but there exists accepted trade standard for good and workmanlike construction, such detail shall be deemed to have been implied by the requirements of the Contract Documents in accordance with such standard.

- .1 "Minor Detail" shall include the concept of substantially identical components, where price of each such component is small even though aggregate cost or importance is substantial, and shall include a single component which is incidental, even though its cost or importance may be substantial. Quality and quantity of parts or material so supplied shall conform to trade standards and be compatible with type, composition, strength, size and profile of parts or materials otherwise set forth in the Contract Documents.

1.6 REQUESTS FOR INFORMATION, CLARIFICATION OR ADDITIONAL INSTRUCTIONS

1.6.1 Requests for Information (RFI): Should the Contractor discover conflicts, omissions, or errors in the Contract Documents, or have any questions concerning interpretation or clarification of Contract Documents, the Contractor shall immediately submit to the State in writing an RFI that complies with the following requirements:

- .1 All RFIs, whether by the Contractor, a Subcontractor or supplier at any tier, shall be submitted by the Contractor to the State.
- .2 RFIs shall be numbered sequentially and be presented in the format provided by the State.
- .3 The Contractor shall clearly and concisely set forth the single issue for which interpretation or clarification is sought, indicate Specification Section number, article and subarticle numbers, and Contract Drawing number, and detail, or other item involved, and state why a response is required from the State.
- .4 The Contractor shall set forth its own interpretation or understanding of the requirements, along with reasons why it has reached such an understanding in each RFI.
- .5 RFIs shall be submitted in a timely manner in order that they may be adequately researched and answered before the response affects any critical activity of the Work.
- .6 The State will review all RFIs to determine whether they are truly RFIs within the meaning of the term as defined in Paragraphs 1.1.33 and 1.6.1. RFI's which are determined to be not within the meaning of the term and/or RFIs where answers can readily be found in the Drawings and Project Manuals shall be deemed to be superfluous and the cost for reviewing these RFIs will be back-charged to the Contractor.
- .7 Responses to RFIs will be made within 14 days unless the State notifies the Contractor in writing that a response will take longer. The 14 days will begin when the RFI is received and dated by the State. Should the State respond sooner, the Contractor shall not assume that a new timeline has been established. Delays in the progress of the Work due to late submittal of RFIs by the Contractor are solely the responsibility of the Contractor.
- .8 Responses from the State will not change any requirement of the Contract unless so noted by the State in the response to the RFI.
- .9 Should the Contractor believe that a response to an RFI causes a change to the requirements of the Contract, the Contractor shall, before proceeding, give written notice to the State, indicating that the Contractor considers the State's response to the RFI to be a Change Order. An RFI will not be considered to be automatically a notice for a Change Order. The Contractor shall give separate written notice within 7 days of receipt of the State's response to the RFI. If the Contractor fails to give notice within 7 days or prior to commencement of the change, the Contractor shall forfeit the right to seek additional time or cost under Article 6.

1.6.2 Additional Detailed Instructions: The State may furnish additional detailed written and/or graphic instructions to further explain the work, and such instructions shall be a part of the Contract requirements. Should additional detailed instructions, in the opinion of the Contractor, constitute work in excess of the scope of the Work, the Contractor shall submit written notice to the State within 14 days following receipt of such instructions, and in any event prior to commencement of the work thereon. The State will then consider the notice; and, if in the State's judgment it is justified, the State's instructions will be revised or the extra work authorized in accordance with the provisions of Article 6.

ARTICLE 2 - ADMINISTRATION OF THE CONTRACT

2.1 INFORMATION AND/OR SERVICES REQUIRED OF THE STATE

2.1.1 Information and/or services under the State's control shall be furnished by the State within a mutually agreed upon response time so as to avoid delay in the orderly progress of the Work.

2.1.2 The Contractor will be furnished Drawings and Project Manuals as specified in the Contract Documents.

2.2 ADMINISTRATION OF THE CONTRACT

2.2.1 The State will provide administration of the Contract as described in the Contract Documents during construction, until final payment is due and during the correction period described in Paragraph 12.2 and throughout the guarantee period.

2.2.2 The State will visit the Project site appropriate to the stage of construction to become familiar with the progress and quality of the completed work and to determine if the Work is in accordance with the Contract Documents.

2.2.3 Unless so specified in the Contract Documents, the State will not have control over construction means, methods, techniques, sequences or procedures, or safety precautions and programs in connection with the Work. The State will not be responsible for the Contractor's failure to carry out the Work in accordance with the requirements of the Contract Documents. The State will not be responsible for acts, errors, or omissions of the Contractor, a Subcontractor, or anyone directly or indirectly employed by any of them, or of any other persons performing portions of the Work.

2.2.4 Communications Facilitating Contract Administration: Communications by and with the State's consultants shall be through the State. Communications by and with Subcontractors, Sub-subcontractors and material suppliers shall be through the Contractor. Communications by and with separate contractors shall be through the State.

2.2.5 If the State observes work that appears to not comply with the requirements of the Contract Documents, the State will have the authority to reject the Work. Whenever the State considers it necessary or advisable for implementation of the intent of the Contract Documents, the State will require additional inspection or testing of the Work, in accordance with Subparagraphs 3.13.2 and 3.13.3, whether or not such work is fabricated, installed or completed.

2.2.6 The State will review and take action upon the Contractor's submitted Shop Drawings, Product Data and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. Review of submittals is not conducted for the purpose of determining the accuracy and completeness of other details, such as dimensions and quantities, nor for substantiating instructions for installation or performance of equipment or systems, which remain the responsibility of the Contractor.

2.2.7 Substitutions and Approved Equals: Alternative material(s), article(s), or equipment that are of equal quality and of required characteristics for the purpose intended may be proposed by the Contractor. The State will examine proposed alternatives for compliance with the Contract Documents. The proposed material(s), article(s), or equipment, will be reviewed for comparative quality, suitability, and performance against the product(s) specified in the Contract Documents. Refer to Subparagraph 3.12.10, for Substitution procedures. If Contractor's substitution is accepted, the Contractor shall be responsible for the costs of any changes resulting from the substitution, including, but not limited to redesign costs of the Project.

2.2.8 The State will conduct inspections to determine the Contractor's compliance with the Contract Documents and the date of Completion; will receive, for review and record, written warranties and related documents required by the Contract Documents and assembled by the Contractor; and will issue a final Payment Authorization upon compliance with the requirements of the Contract Documents and Acceptance of the Work.

2.3 BREACHES, DEFAULTS AND TERMINATION FOR CAUSE

2.3.1 If the Director deems that the Contractor has failed to supply an adequate working force, or material of proper quality, or has failed to comply with Public Contract Code Section 10262, or has failed in any other respect to prosecute the Work with the diligence and force specified by the Contract, the Director may:

- .1 after written notice of at least 5 days to the Contractor, specifying the defaults to be remedied, provide any such labor or materials and deduct the cost from any money due or to become due to the Contractor under the Contract; or
- .2 if the Director considers that the failure is sufficient ground for such action, the Director may give written notice of at least 5 days to the Contractor and the Contractor's sureties, that if the defaults are not remedied, the Contractor's control over the Work will be terminated.

2.3.2 Should the State exercise its rights to terminate as noted in Subparagraph 2.3.1, the State may, without prejudice to any other rights or remedies of the State and subject to any prior rights of the Surety:

- .1 terminate employment of the Contractor;
- .2 take possession of the Project site, materials, equipment, tools, appliances, and construction equipment and machinery owned by the Contractor;
- .3 accept assignment of Subcontractor Agreements pursuant to Paragraph 4.4; and/or
- .4 finish the Work by whatever method(s) the State may deem expeditious and appropriate.

2.3.3 When the State terminates the Contract for reasons provided in Subparagraph 2.3.1, the Contractor shall not be entitled to receive any further payment until Completion of the Work. If the costs incurred by the State because of termination under Subparagraph 2.3.1 exceed the unpaid balance, the Contractor shall pay the difference to the State.

2.4 TERMINATION FOR THE STATE'S CONVENIENCE

2.4.1 The State reserves the right to terminate this Contract or any part thereof, due to an Act of God or for its sole convenience. In the event of such termination, the Contractor shall immediately stop hereunder and shall immediately cause its Subcontractors, Sub-subcontractors and material suppliers at any tier, to immediately stop work, leaving the site in a safe and secured condition. The Contractor shall not be paid for any work performed or costs incurred after the termination date that could have been avoided.

2.4.2 The Contractor shall be paid in accordance with the provisions of Article 8; except that the amount due the Contractor shall be based upon the State's final estimate of the Work completed, or acceptable materials furnished but not used, to the date of suspension of the Work, less any amounts required to be withheld pursuant to Article 8, and less any prior payment(s) made to, or on the account of the Contractor.

2.5 SUSPENSION BY THE STATE FOR CONVENIENCE

2.5.1 The State may, by written notice, order the Contractor to suspend, delay or interrupt the Work, in whole or in part, for such period of time as the State may determine.

2.5.2 An adjustment may be claimed by the Contractor in accordance with Article 6 and Article 7 for changes in the Work, caused by a suspension, delay or interruption. No adjustment will be made to the extent:

- .1 that Contractor's performance of the Work, is, was or would have been so suspended, delayed or interrupted by another cause for which the Contractor is responsible; or
- .2 that an equitable adjustment is made or denied under another provision of the Contract.

ARTICLE 3 - CONTRACTOR

3.1 REVIEW OF CONTRACT DOCUMENTS AND FIELD CONDITIONS BY THE CONTRACTOR

3.1.1 The Contractor shall carefully study and compare the Contract Documents with each other and shall report to the State, in writing, any errors, inconsistencies or omissions discovered. If the Contractor performs any work knowing it involves a recognized error, inconsistency or omission in the Contract Documents, without such notice to the State the Contractor shall assume responsibility for such performance and shall bear the cost for correction.

3.1.2 The Contractor shall take field measurements and verify field conditions and shall compare such field measurements, conditions and other related information known to the Contractor with the Contract Documents before proceeding.

3.1.3 The Contractor shall promptly, and before such conditions are disturbed, notify the State in writing of:

- .1 subsurface or latent physical conditions at the site differing materially from those indicated, or
- .2 unknown physical conditions at the site of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in this Contract.
- .3 Hazardous materials.

3.1.4 The State will promptly investigate the conditions, and if the State finds that such conditions do materially so differ and cause an increase or decrease in the Contractor's cost of, or the time required for, performance of any part of the Work, whether or not changed as a result of such conditions, a Change Order will be issued in accordance with Article 6.

3.2 SUPERVISION AND CONSTRUCTION PROCEDURES

3.2.1 The Contractor shall supervise and direct the Work. The Contractor shall be responsible for, and have control over, construction means, methods, techniques, sequences, procedures, safety precautions and programs in connection with the Work, and for coordinating the Work under the Contract; unless otherwise noted or specified in the Contract Documents.

3.2.2 The Contractor shall be responsible to the State for acts and omissions of the Contractor's employees, Subcontractors, Sub-subcontractors or material suppliers and their agents and employees, and other persons performing portions of the Work under a contract with the Contractor.

- .1 Subcontractor Responsibility: The Contractor shall be responsible for the actions or inaction of Subcontractors, Sub-subcontractors or material suppliers, at all tiers, regardless of whether they are a Disabled Veterans Business Enterprise (DVBE) firm or are stipulated suppliers or sole sourced. No claim, request for equitable adjustment or Change Order request shall be submitted to the State for any action of any Subcontractor, Sub-subcontractor or material supplier, at any tier, unless the Contractor can demonstrate that the State is the proximate cause of the change or delay alleged in such request. The State will not accept any responsibility or liability for any action or inaction of any Subcontractor, Sub-subcontractor or material supplier, at any tier, except to the extent that the State is the proximate cause of the change or delay.

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

3.2.4 The Contractor shall be responsible for inspections of portions of the Work already completed under the Contract to determine that such portions are in proper condition to receive subsequent work. If the Contractor determines that some work performed on the Project does not comply with the requirements of the Contract Documents, the Contractor shall repair or replace such defective work at the Contractor's sole expense.

3.2.5 Until Acceptance of the Work, the Contractor shall have the charge and care thereof, and shall bear risk of injury or damage to any part of the Work by action of the elements (except for an Act of God, or natural disaster as proclaimed by the State or Federal Government), or from any other reason except for such damages as are directly caused by acts of the Federal or State Government and the public enemy, except as provided in Paragraph 8.5.

3.3 LABOR AND MATERIALS

3.3.1 Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work. Materials, articles and equipment furnished by the Contractor for incorporation into the Work shall be new unless otherwise specified in the Contract Documents.

3.3.2 Hours of Labor: Workers are limited and restricted to 8 hours during any one calendar day, and 40 hours during any one calendar week except that pursuant to Labor Code Section 1815, any work performed in excess of 8 hours per day and 40 hours during any one week, shall be permitted upon compensation for hours worked in excess of 8 hours per day at not less than 1-1/2 times the basic rate of pay. The Contractor shall pay the State \$25 as a penalty for each worker for each calendar day worked in violation of the above limitations and restrictions.

3.3.3 Prevailing Wage: The Contractor shall comply with Labor Code, Section 1774 and 1775. Pursuant to Section 1774, the Contractor and any subcontractors, regardless of tier, shall pay not less than the specified prevailing wage rates to all workers employed in the execution of the Contract. In accordance with Section 1775, the Contractor and any subcontractor under the Contractor shall forfeit to the State not more than \$50 for each calendar day, or portion thereof, for each worker paid less than the prevailing wage rates for the work or craft, in which the worker is employed for any work executed under the Contract by the Contractor or by any subcontractor in violation of the provisions of the Labor Code; and, in particular, Labor Code, Sections 1770 to 1780, inclusive. In addition to such forfeiture, the difference between such stipulated prevailing wage rates and the amount paid to each worker for each day, or portion thereof, shall be paid to each underpaid worker by the Contractor or subcontractor. This provision shall not apply to properly registered apprentices.

- .1 Pursuant to Labor Code, Section 1770, the Director of the Department of Industrial Relations has ascertained the general prevailing rate of per diem wages and a general prevailing rate for legal holiday and overtime work for each craft required for execution of the Contract. The Contractor shall obtain copies of the prevailing rate of per diem wages from the Department of Industrial Relations, Division of Labor Statistics & Research, PO Box 420603, San Francisco, CA 94142-0603, (415) 703-4780; or wage rates may be accessed on the internet at http://www.dir.ca.gov/DLSR/statistics_research.html. The Contractor is responsible to read, understand and comply with all the guidelines, including the fine print in the prevailing wage determinations; and shall post a copy of the prevailing wage rates, specific to the Project, at the Project site.

- .2 Wage rates set forth are the minimum that may be paid by the Contractor. Nothing herein shall be construed as preventing the Contractor from paying more than the minimum rates set. No extra compensation will be allowed by the State due to the inability of the Contractor to hire labor at minimum rates, nor for necessity for payment by the Contractor of subsistence, travel time, overtime, or other added compensations, all of which possibilities are elements to be considered and ascertained to the Contractor's own satisfaction in preparing the Bid Form.
- .3 If it becomes necessary to employ crafts other than those listed in the General Prevailing Wage Rate booklet, the Contractor shall contact the Division of Labor Statistics and Research as noted above. The rates thus determined shall be applicable as minimum for the contract and incorporated in the bid. When the wage determination shows an expiration date (noted by a double asterisk**), to expire during the term of the contract, the Contractor must call or write the DIR to obtain the new rates and incorporate them in the bid to be applicable for the term of the contract.
- .4 The Contractor and each subcontractor, regardless of tier, shall keep an accurate payroll record showing the names, addresses, social security numbers, work classifications, straight time and overtime hours worked each day and week, and the actual per diem wages paid to each journeyman, apprentice, worker, or other employee employed by the Contractor and/or subcontractor in connection with the Work. Payroll records shall be certified and shall be on forms provided by the Division of Labor Standards Enforcement, or shall contain the same information as those forms. The Contractor's and subcontractor's certified payroll records for each employee shall be submitted with each payment request, covering the period of the payment request.

3.3.4 Travel and Subsistence Payments: The Contractor shall pay travel and subsistence payments to persons required to execute the Work as such travel and subsistence payments are defined in applicable collective bargaining agreements filed with the Department of Industrial Relations, pursuant to Labor Code, Sections 1773.1 and 1773.9.

3.3.5 Apprentices: Properly registered apprentices may be employed in the execution of the Work. Every apprentice shall be paid the standard wage paid to apprentices under the regulations of the craft or trade at which the apprentice is employed, and shall be employed only at the work of the craft or trade to which the apprentice is registered. The Contractor and each Subcontractor shall comply with the requirements of Labor Code, Section 1777.5, and any related regulations regarding the employment of registered apprentices.

3.4 NONDISCRIMINATION CLAUSE

3.4.1 Definitions: As they pertain to the Standard California Nondiscrimination Construction Contract Specifications:

- .1 Administrator: The Administrator, Office of Compliance Programs (OCP), California Department of Fair Employment and Housing (DFEH), or any person to whom the Administrator delegates authority.
- .2 Minority includes:
 - 1) Black (all persons having primary origins in any of the Black racial groups of Africa, but not of Hispanic origin); or
 - 2) Hispanic (all persons of primary culture or origin in Mexico, Puerto Rico, Cuba, Central or South America, or other Spanish derived culture or origin regardless of race); or
 - 3) Asian/Pacific Islander (all persons having primary origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent or the Pacific Islands); or
 - 4) American Indian/Alaskan Native (all persons having primary origins in any of the original peoples of North America and who maintain culture identification through tribal affiliation or community recognition).

3.4.2 Whenever the Contractor or any Subcontractor subcontracts a portion of the Work, it shall physically include in each subcontract of \$5,000 or more, the Nondiscrimination Clause in the Contract directly or through incorporation by reference. Any subcontract for work involving a construction trade shall also include the Standard California Construction Contract Specifications, either directly or through incorporation by reference.

3.4.3 The Contractor shall implement the specific nondiscrimination standards provided in Clauses 3.4.6.1 through 3.4.6.5.

3.4.4 Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has a collective bargaining agreement, to refer either minorities and/or women shall excuse the Contractor's obligations under these specifications, Government Code, Section 12990, or the regulations promulgated pursuant thereto.

3.4.5 In order for the nonworking training hours of apprentices and trainees to be counted, such apprentices and trainees shall be employed by the Contractor during the training period, and the Contractor shall have made a commitment to employ the apprentices and trainees upon the completion of their training, subject to the availability of employment opportunities. Trainees shall be trained pursuant to training programs approved by the U.S. Department of Labor or the California Department of Industrial Relations.

3.4.6 The Contractor shall take specific actions to implement the Contractor's nondiscrimination program. The evaluation of the Contractor's compliance with these specifications shall be based upon the Contractor's effort to achieve maximum results from the Contractor's actions. The Contractor shall be able to demonstrate fully the Contractor's efforts under Steps .1 through .5 below:

- .1 Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites and at all facilities at which the Contractor's employees are assigned to work. The Contractor, whenever possible, shall assign two or more women to each construction project. The Contractor shall specifically ensure that all leadpersons, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligations to maintain such a working environment, with specific attention to minority and/or female individuals working at such sites or in such facilities.
- .2 Provide written notification within 7 days to the Director of DFEH when the union(s) with which the Contractor has a collective bargaining agreement(s) has not referred to the Contractor a minority person and/or woman sent by the Contractor, or when the Contractor has other information that the union(s) referral process has impeded the Contractor's efforts to meet the Contractor's obligations.
- .3 Disseminate the Contractor's equal employment opportunity policy by providing notice of the policy to unions and training, recruitment and outreach programs and requesting their cooperation in assisting the Contractor to meet the Contractor's obligations; and by posting the company policy on bulletin boards accessible to all employees at each location where construction work is performed.
- .4 Ensure all personnel making management and employment decisions regarding hiring, assignment, layoff, termination, conditions of work, training, rates of pay or other employment decisions, including all supervisory personnel, superintendents, general leadpersons, on-site leadpersons, etc., are aware of the Contractor's equal employment opportunity policy and obligations, and discharge their responsibilities accordingly.
- .5 Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the equal employment opportunity policy and the Contractor's obligations under these specifications are being carried out.

3.4.7 Contractors are encouraged to participate in voluntary associations which assist in fulfilling their equal employment opportunity obligations. The efforts of a contractor association, joint contractor-union, contractor-community, or other similar group of which the Contractor is a member and participant, may be asserted as fulfilling any one or more of the Contractor's obligations under these specifications provided that the Contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female work-force participation, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. It is the Contractor's obligation to comply.

3.4.8 The Contractor is required to provide equal employment opportunity for all minority groups, both male and female, and all women, both minority and nonminority. Consequently, the Contractor may be in violation of the Fair Employment and Housing Act (Government Code, Section 12990 et seq.) if a particular group is employed in a substantially disparate manner.

3.4.9 Establishment and implementation of a bona fide affirmative action plan pursuant to Section 8104(b) of Title 2, California Code of Regulations (CCR), shall create a rebuttable presumption that the Contractor is in compliance with the requirements of Government Code, Section 12990, and its implementing regulations.

3.4.10 The Contractor shall not use the nondiscrimination standards to discriminate, harass or allow harassment against any person because of race, color, religion, sex, national origin, ancestry, physical disability (including HIV and AIDS), mental disability, medical condition (cancer), marital status, or age over 40, denial of family and denial of family care leave.

3.4.11 The Contractor shall not enter into any subcontract with any person or firm decertified from State contracts pursuant to Government Code, Section 12990.

3.4.12 The Contractor shall carry out such sanctions and penalties for violation of these specifications and the Nondiscrimination Clause, including suspension, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to Government Code, Section 12990 and its implementing regulations by the awarding agency. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Government Code, Section 12990.

3.4.13 The Contractor shall designate a responsible official to monitor all employment-related activity to ensure that the company's equal employment opportunity policy is being carried out, to submit reports relating to the provisions herein as may be required by OCP, and to keep records. Records shall at least include for each employee the name, address, telephone number, construction trade, union affiliation, if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice

trainee, helper or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work is performed. Records shall be maintained in any easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, the Contractor shall not be required to maintain separate records.

3.5 GUARANTEE

3.5.1 The Contractor unconditionally guarantees the Work will be completed in accordance with the requirements of the Contract Documents, and will remain free of defects in workmanship and materials for a period of 1 year from the date of Completion of the Work of the Project, unless a longer guarantee period is specifically called for in the Contract Documents. The Contractor shall repair or replace work, or adjacent work, or both, that may have been damaged or displaced, which was not in accordance with the requirements of the Contract Documents, or that may be defective in its workmanship or material within the guarantee period specified in the Contract Documents, without any expense whatsoever to the State; ordinary wear and tear and abuse excepted.

3.5.2 The Contractor further agrees, within 14 days after being notified in writing by the State, of work not in accordance with the requirements of the Contract Documents or defects in the Work, that the Contractor shall commence and execute, with due diligence, work necessary to fulfill the terms of the guarantee. If the State finds that the Contractor fails to perform the work under the guarantee, the State will proceed to have the work completed at the Contractor's expense and the Contractor will pay costs of the work upon demand. The State will be entitled to all costs, including attorney's fees necessarily incurred upon the Contractor's refusal to pay the above costs.

3.5.3 Notwithstanding the foregoing Subparagraph, in the event of an emergency constituting an immediate hazard to health or safety of State employees, property, or licensees, the State may undertake, at the Contractor's expense and without prior notice, work necessary to correct such hazardous condition(s) when it is caused by work of the Contractor not being in accordance with the requirements of the Contract Documents.

3.6 **TAXES:** The Contractor shall pay all applicable taxes for the Work, or portions thereof provided by the Contractor, which were legally enacted as of the bid date, whether or not yet effective or merely scheduled to go into effect.

3.7 PERMITS, FEES AND NOTICES

3.7.1 The Contractor shall secure and pay for required permits, governmental fees, licenses and inspections necessary to complete the Work, unless otherwise provided in the Contract Documents.

3.7.2 The Contractor shall comply with and give notices required by laws, ordinances, rules, regulations and lawful orders of public authorities bearing on the performance of the Work.

3.7.3 If the Contractor observes that portions of the Contract Documents are at variance with applicable laws, statutes, ordinances, building codes, and rules and regulations, the Contractor shall promptly notify the State in writing. If the Contractor performs work known to be contrary, or should have known to be contrary to laws, statutes, ordinances, building codes, and rules and regulations without prior notice to the State, the Contractor shall assume full responsibility for the Work and shall bear the attributable costs.

3.7.4 The Contractor is not subject to municipal, county, or district laws, rules, or regulations pertaining to building permits or regulating the design or construction of buildings upon State property, except as specified in the Contract Documents.

3.7.5 The Contractor may be subject to federal, state, municipal, county, local or district laws, rules, or regulations pertaining to off-site work, such as utility connections, fire protection systems and encroachment upon federal, state, private, city or county property, including, but not limited to storm water pollution prevention plans.

3.7.6 All construction work shall comply with the California Code of Regulations, Title 24, California Building Standards Code (CBSC), and other Applicable Codes, current edition, as of the bid date or as specified in the Specifications.

3.8 **ALLOWANCES:** The Contractor shall include in the Contract Sum, Allowances in accordance with the requirements of the Specifications, Division 01.

3.9 SUPERINTENDENT

3.9.1 The Contractor shall employ a competent Superintendent and assistants who shall be in attendance at the Project site during performance of the Work. The Superintendent, or the Contractor's duly appointed representative, shall be the person in charge of

the construction of the Work and shall represent the Contractor. Communications given to the Superintendent shall be as binding as if given directly to the Contractor. All communications shall be confirmed in writing by the Contractor. Should the State deem the Superintendent to be incompetent, the State has the authority to request the Contractor to replace this person.

3.9.2 Should the Contractor decide to replace the Superintendent, the Contractor shall notify the State in writing, no fewer than 14 calendar days prior to the replacement. The Contractor shall submit the name and resume of the new Superintendent with the letter.

3.9.3 At any other time when the Superintendent is absent from the Project site because no Work is being performed, the Superintendent shall nevertheless keep the State advised of the Superintendent's whereabouts so that the Superintendent may readily be reached and available for consultation at the Project site at any time.

3.10 CONTRACTOR'S PROGRESS SCHEDULE

3.10.1 Within the time frame specified in the specifications and prior to the first payment request, the Contractor shall submit to the State a Progress Schedule, including submittal schedules, prepared in accordance with the Specifications, Division 01. The Progress Schedule shall show the order in which the Contractor proposes to execute the Work, dates on which the Contractor will start each major subdivision of the Work, and projected dates of completion of each such subdivision in accordance with the requirements of the Contract Documents. The Contractor shall submit adjusted Progress Schedules, including submittal schedules, to reflect changed conditions in accordance with the requirements of the Contract Documents with each payment request.

3.10.2 The Contractor shall, unless otherwise specified in the Contract Documents, or directed by the State in writing, show in the schedule that physical construction of the Work will start within 10 calendar days of the start date stipulated in the Notice to Proceed, and show execution to Completion, in accordance with the specified schedule, subject to adjustment in accordance with the requirements of the Contract Documents.

3.10.3 The Contractor shall provide an adequate work force, materials of proper quality, and equipment to properly execute the Work and to ensure completion of each part in accordance with the Progress Schedule and within the Contract Time specified.

3.10.4 The Contractor shall submit to the State a Schedule of Values consistent with the Progress Schedule and Article 8. The Schedule of Values will be used as a basis for payment in accordance with Article 8.

3.10.5 The State's review and acceptance of the Progress Schedule is for compliance with the requirements of the Contract Documents only. Review and acceptance by the State of the Progress Schedule does not mean approval and does not relieve the Contractor of any of the Contractor's responsibility for the accuracy or feasibility of the Progress Schedule, or of the Contractor's ability to meet the interim Project milestone dates and the date of Completion. The State's review and acceptance does not expressly or impliedly warrant, acknowledge or admit the reasonableness of the logic, durations, manpower or equipment loading of the Progress Schedule.

3.11 DOCUMENTS AND SAMPLES AT THE PROJECT SITE

3.11.1 The Contractor shall maintain at the Project site one record copy of the Drawings, Project Manual, Addenda, Change Orders and other modifications, in good order and marked currently to record changes and selections made during construction; and in addition, Shop Drawings, Product Data, Samples and similar required submittals. These shall be available to the State and shall be delivered to the State upon completion of the Work.

3.11.2 Daily Records Clause: The Contractor shall prepare and maintain daily inspection records to document the progress of the Work on a daily basis. Daily Records shall include a daily accounting of labor and equipment on the site for the Contractor and Subcontractors, at any tier. Daily Records shall make a clear distinction between work being performed under Change Order, base scope work, and/or disputed work. Daily Records shall be copied and provided to the State at the end of every week, unless otherwise agreed to in writing.

3.12 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES (SUBMITTALS)

3.12.1 Shop Drawings, Product Data, Samples and similar submittals are not Contract Documents. Their purpose is to demonstrate those portions of the work for which submittals are required and the way the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents. Review by the State is subject to the limitations of Subparagraph 2.2.6.

3.12.2 The Contractor shall review, approve and submit to the State Shop Drawings, Product Data, Samples and similar submittals required by the Contract Documents within the number of days set forth in the Specifications, Division 01; except finishes which shall be submitted in a sequence so as to cause no delay in the progress of the Work or in the activities of the State or separate

contractors. Submittals that are not required by the Contract Documents may be returned to the Contractor without action.

3.12.3 The Contractor shall perform no portion of the Work requiring submittal and review of Shop Drawings, Product Data, Samples or similar submittals until the respective submittal has been reviewed by the State. Such work shall be in accordance with reviewed submittals.

3.12.4 By submitting Shop Drawings, Product Data, Samples and similar submittals, the Contractor represents that the Contractor has determined and verified materials, field measurements and related field construction criteria, and has checked and coordinated the information contained within the submittal(s) with the requirements of the Contract Documents.

3.12.5 The Contractor shall not be relieved of the responsibility for any deviation from the requirements of the Contract Documents by the State's review of submittals unless the Contractor has specifically informed the State, in writing, or as directed by the State, of such deviation at the time of submittal, and the State has given written consent to the specific deviation. The State's review shall not relieve the Contractor of responsibility for errors or omissions in submittals. Any resulting cost increase due to such a deviation shall be the sole responsibility of the Contractor.

3.12.6 The Contractor shall respond per requirements of the Contract Documents, in writing or on resubmitted submittals, to revisions other than those requested by the State on previous submittals. After the second resubmittal of a specific item, that is still not accepted, the Contractor will be charged all costs of submittal review. The charges will be deducted from the Contract Sum.

3.12.7 Informational submittals on which the State is not expected to take action, may be identified in the Contract Documents.

3.12.8 When professional certification of performance criteria of materials, systems or equipment is required by the Contract Documents, the State will be entitled to rely upon the accuracy and completeness of such calculations and certifications.

3.12.9 When descriptive catalog designations, including manufacturer's name, product brand name, or model number(s) are referred to in the Contract Documents, such designations shall be considered as being those found in industry publications of current issue at date of first Invitation to Bid.

3.12.10 Substitutions and Approved Equals: Alternative material(s), article(s), or equipment that are of equal quality and of required characteristics for the purpose intended may be proposed by the Contractor for use in the Work, provided the Contractor complies with the Specifications, Division 01, and the following requirements:

- .1 The Contractor shall submit a proposal for the alternative material(s), article(s), or equipment, in writing, within 35 days after Contract start date stated in the Notice to Proceed. In exceptional cases where the best interests of the State so require, the State may give written consent to a submittal or resubmittal received after expiration of the time limit designated.
- .2 The proposal will not be considered unless the submittal is accompanied by complete information and descriptive data necessary to determine equality of offered material(s), article(s), or equipment. Samples shall be provided when requested by the State. Burden of proof as to comparative quality, suitability, and performance of offered material(s), article(s), or equipment shall be upon the Contractor. The State will be the sole judge as to such matters. In the event the State rejects the use of such alternative(s) submitted, then one of the particular products originally specified in the Contract Documents shall be furnished.
- .3 If mechanical, electrical, structural, or other changes are required for installation, fit of alternative materials, articles, or equipment, or because of deviations from Contract Drawings and Specifications, such changes shall not be made without consent of the State, and shall be made without additional cost to the State.

3.13 TESTS AND INSPECTIONS

3.13.1 The Contractor shall at all times permit the State, its agents, officers, and employees to visit the Project site and inspect the Work, including shops where work is in preparation. This obligation shall include maintaining proper facilities and safe access for such inspection. Including, but not limited to providing lifts, ladders, scaffolds, platforms and paths of travel. When the Contract Documents require a portion of the Work to be tested, such portion of work shall not be covered up until inspected and approved by the State. The Contractor shall be solely responsible for notifying the State where and when the work is ready for inspection and testing. Should any work be covered without the required testing and approval, such work shall be uncovered and recovered at the Contractor's expense. Whenever the Contractor intends to perform work on Saturday, Sunday, or a legal holiday, the Contractor shall give written notice to the State of such intention at least 48 hours prior to performing the Work, so that the State may make necessary arrangements.

3.13.2 If the State determines that portions of the Work require additional testing, inspection or approval not included in the Contract Documents, the State will instruct the Contractor, in writing, to make arrangements for additional testing, inspection or

approval by an entity acceptable to the State, and the Contractor shall give 48 hours written notice to the State of where and when tests and inspections will be conducted so that the State may observe the procedures. The State will bear the costs except as provided in Subparagraph 3.13.3.

3.13.3 If procedures for testing, inspection or approval under Subparagraphs 3.13.1 and 3.13.2 reveal failure of a portion(s) of the Work to comply with the Contract Documents, the Contractor shall bear all costs made necessary by such failure(s) including those of repeated procedures and compensation for the State's services and expenses.

3.13.4 Required certificates of testing, inspection or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor and delivered to the State within 14 days after each test.

3.14 **USE OF PROJECT SITE**

3.14.1 The Contractor shall confine operations at the Project site to areas permitted by law, ordinances, permits and the Contract Documents.

3.14.2 The Contractor shall perform no operations of any nature on or beyond the limits of Work or premises, except as such operations are authorized in the Contract Documents, or authorized by the State.

3.14.3 The Contractor shall ensure the limits of Work to be free of graffiti or other similar defacements during the time of the Contract; if such defacement occurs, then the Contractor shall properly remove, repair, or correct the affected area(s), or as otherwise directed by the State. The Contractor shall protect exposed surfaces within the limits of Work, with anti-graffiti coatings, and maintain such protection continuously effective during the time of the Contract.

3.14.4 Prohibitions: Pursuant to Subparagraph 3.2.2., the use of alcohol and tobacco products, and the use or possession of weapons, or illegal controlled substances by the Contractor, or others under the Contractor's control, on State property is not allowed. Residing on site in temporary facilities by the Contractor, or others under the Contractor's control, is not allowed unless otherwise specified in the Specifications, Division 01.

3.15 **CUTTING AND PATCHING**

3.15.1 The Contractor shall be responsible for cutting, fitting or patching as required to complete the Work.

3.15.2 The Contractor shall not damage nor endanger the Work by cutting, patching or otherwise altering the construction, and shall not cut nor otherwise alter the construction without prior written consent of the State.

3.16 **CLEANING UP**

3.16.1 The Contractor shall keep the Project site and surrounding areas free from waste materials and/or rubbish caused by operations under the Contract and at other times when directed by the State. At all times while finish work is being accomplished, floors shall be kept clean, free of dust, construction debris and trash. Upon completion of the Work, the Contractor shall remove from the Project site the Contractor's tools, construction equipment, machinery, and any waste materials not previously disposed of, leaving the Project site thoroughly clean, and ready for the State's final inspection.

3.16.2 If the Contractor fails to clean up as provided in the Contract Documents, the State may do so and charge the cost thereof to the Contractor.

3.17 **ACCESS TO WORK:** The Contractor shall provide the State continuous and safe access to the Work. Including, but not limited to providing lifts, ladders, scaffolds, platforms and paths of travel.

3.18 **ROYALTIES AND PATENTS:** The Contractor shall pay royalties and license fees. The Contractor shall defend suits or claims for infringement of patent rights and hold the State harmless.

3.19 **INDEMNIFICATION**

3.19.1 **Duty To Defend:** To the fullest extent permitted by law, the Contractor shall defend the State and any officer or employee of the State from and against suits filed against the State alleging claims, (including costs of attorneys fees) by reason of liability imposed by law and claims, including but not limited to, claims of personal injury, death, damage to property and loss of use thereof, or any claims arising out of the Contractor's performance of the Contract, or damages of other relief based on allegations of the failure of the Contractor, or the Contractor's Subcontractors to properly perform their obligations under the Contract, of the Contractor's violations of any legal duties, even if the allegations of any suit are groundless, false or fraudulent, and the Contractor

may make such investigation and settlement of any suit as the Contractor deems expedient. This duty to defend is separate and independent from the Contractor's duty to indemnify and hold harmless the State from such claims. Any failure to fulfill this obligation shall be a default of the Contractor's performance obligations under the Contract.

3.19.2 Duty to Indemnify: To the fullest extent permitted by the law, the Contractor shall hold harmless and indemnify the State and any officer or employee of the State from and against claims, losses and expenses (including costs of attorneys fees) by reason of liability imposed by law for claims, including but not limited to, claims of personal injury, death, damage to property and loss of use thereof, or any claims arising out of the Contractor's performance of the Contract, or damages or other relief based on allegations of the failure of the Contractor, or the Contractor's Subcontractors to properly perform their obligations under the Contract, or the Contractor's violations of any legal duties. Any failure to fulfill this obligation shall be a default of the Contractor's performance obligations under the Contract.

3.20 AIR POLLUTION: The Contractor and Subcontractors shall comply with State and/or local air pollution control rules, regulations, ordinances, and statutes that apply to work performed under the Contract. If there is a conflict between the State and local air pollution control rules, regulations, ordinances and statutes, the most stringent shall govern.

3.21 CERTIFICATION BY CONTRACTOR OF RECYCLED CONTENT: The Contractor shall certify in writing, under penalty of perjury, to the State, the minimum, if not exact, percentage of recycled content, both postconsumer material and secondary material, as defined in Public Contract Code Sections 12153 and 12200 and 12209, in materials, goods, or supplies offered or products used in the performance of the Contract, regardless of whether the product meets the required recycled percentage as defined in Sections 12153 and 12200 and 12209. The Contractor may certify that the product contains zero recycled content.

3.22 UNFAIR BUSINESS PRACTICES: The Contractor agrees and will require the Subcontractors and suppliers to agree to assign to the State 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. Section 15), or under the Cartwright Act (commencing with Section 16700 of the Business and Professions Code), arising from the purchase of goods, services or materials, pursuant to the Contract Documents or subcontract thereunder. An assignment made by the Contractor, and additional assignments made by Subcontractors and suppliers, shall be deemed to have been made and will become effective at the time the State tenders final payment to the Contractor, without further acknowledgment of the parties.

3.23 CHILD SUPPORT COMPLIANCE ACT: For any contract in excess of \$100,000, the Contractor acknowledges in accordance with Public Contract Code Section 7110, that: (a) the Contractor recognizes the importance of child and family support obligations and shall fully comply with all applicable state and federal laws relating to child and family support enforcement, including, but not limited to, disclosure of information and compliance with earnings assignment orders, as provided in Chapter 8 (commencing with Section 5200) of Part 5 of Division 9 of the Family Code; and (b) the Contractor, to the best of its knowledge is fully complying with the earnings assignment orders of all employees and is providing the names of all new employees to the New Hire Registry maintained by the California Employment Development Department.

3.24 NOT USED

3.25 CONTRACTOR REQUIRED NOTIFICATION OF CHANGES: The Contractor shall notify the State's Representative in writing of any change to Contractor's name, status, or information including but not limited to:

1. Name
 - a. An amendment is required to change the Contractor's name as listed on this Agreement. Upon receipt of Contractor's notification and legal documentation of the name change, the State will process the amendment. Payment of invoices presented with a new name cannot be paid prior to approval of said amendment.
 - b. The State shall not be liable for penalties or interest on payments which are delayed due to Contractor's change of name and subsequent amendment processing.
2. Address/Location
3. Federal Employer Identification Number (FEIN)
4. Type of Organization or Legal Status – including:
 - a. Corporate
 - b. Partnership
 - c. Individual/Sole-Ownership
 - d. Joint Venture
 - e. Limited Liability Company
 - f. DBA
5. Ownership
6. Officers or Key Personnel
7. License
8. Other (Bankruptcy, Etc.)

Contractor shall immediately provide an updated Standard Form 204 (IRS/FTB form) to the Contracts Management & Procurement Services Section within five (5) calendar days of any such relevant change.

The State shall not be liable for penalties or interest on payments which are delayed do to Contractor's lack of proper or timely notice and documentation of a relevant change in status which impacts the State's ability to pay.

Contractor shall submit the firm's status change in writing including the Contract Number, Project Title and all necessary backup and legal documentation to support the status change to:

The State Department of General Services
Real Estate Services Division
Contracts Management & Procurement Services Section
707 Third Street, Suite 2-350
West Sacramento, CA 95605

ARTICLE 4 - SUBCONTRACTORS

4.1 SUBLETTING AND SUBCONTRACTING

4.1.1 The Contractor shall adhere to the rules governing subcontracting as set forth in the Subletting and Subcontracting Fair Practices Act, commencing with Public Contract Code, Section 4100. Subcontractor substitutions shall be in accordance with provisions of the Subletting and Subcontracting Fair Practices Act, beginning with Public Contract Code, Section 4100. Violations of this Act by the Contractor may subject the Contractor to penalties and disciplinary action as provided by the Subletting and Subcontracting Fair Practices Act.

4.1.2 The Contractor shall be responsible for the Work. Persons engaged in the Work of the Project are the responsibility and under the control of the Contractor. The Contractor shall give personal attention to fulfillment of the Contract and shall keep the Work under the Contractor's control. When any Subcontractor fails to execute a portion of the Work in a manner satisfactory to the State, the Contractor shall remove such Subcontractor immediately upon written request notice from the State, and the Subcontractor shall not again be employed on the Project. Although Specification Sections of the Contract Documents may be arranged according to various trades or general grouping of work, the Contractor is not obligated to sublet work in any manner. The State will not entertain requests to arbitrate disputes among Subcontractors or between the Contractor and Subcontractor(s) concerning responsibility for performing any part of the Work.

4.1.3 The State may not permit a contractor or subcontractor who is ineligible to bid or work on, or be awarded, a public works project pursuant to Sections 1777.1 or 1777.7 of the Labor Code to bid on, be awarded, or perform work as a subcontractor on a public works project.

- .1 Any contract on a public works project entered into between a contractor and a debarred subcontractor is void as a matter of law. A debarred subcontractor may not receive any public money for performing work as a subcontractor on a public works contract, and any public money that may have been paid to a debarred subcontractor by a contractor on the project shall be returned to the awarding body. The Contractor shall be responsible for the payment of wages to workers of a debarred subcontractor who has been allowed to work on the Project.

4.2 SUBCONTRACTUAL RELATIONS

4.2.1 The Contractor shall make available to each proposed Subcontractor, prior to the execution of a Subcontractor Agreement, copies of the Contract Documents to which the Subcontractor will be bound. Upon written request of the Subcontractor, the Contractor shall identify to the Subcontractor the terms and conditions of the proposed Subcontractor Agreement which may or may not be at variance with the Contract. Subcontractors shall similarly make copies of applicable portions of such documents available to their respective proposed Sub-subcontractors. The Contractor shall, by Subcontractor Agreement, require each Subcontractor, to the extent of the work to be performed by the Subcontractor:

- .1 To be bound to the Contractor by terms of the Contract.
- .2 To assume toward the Contractor the obligations and responsibilities which the Contractor, by the Contract, assumes toward the State.
- .3 To preserve and protect the rights of the State under the Contract Documents with respect to the work to be performed by the Subcontractor.
- .4 To be allowed, unless specifically provided otherwise in the Subcontractor Agreement, the benefits of rights, remedies and redress against the Contractor that the Contractor, by the Contract, has against the State.
- .5 To enter into similar agreements with Sub-subcontractors.

4.2.2 Subcontractor Payments: The Contractor shall pay the Contractor's Subcontractors for work performed no later than 10 days after receipt of each progress payment. If there is a good faith dispute over all or any portion of the amount due a Subcontractor on a progress payment, the Contractor may withhold no more than 150 percent of the disputed amount. This provision shall apply to Sub-subcontractors also. A violation of these requirements invokes the payment and penalty provisions of Public Contract Code, Section 10262 and Section 10262.5.

4.3 **DISABLED VETERAN BUSINESS ENTERPRISE PROGRAM:** Pursuant to Public Contract Code (PCC) Section 10115 et. seq., the Contractor shall use, employ and utilize Disabled Veteran Business Enterprise (DVBE) subcontractors, sub-subcontractors or material suppliers who were listed in their bid documents for DVBE Program participation, to the full extent of the amount of money and/or percentage of commitment manifested in the bid documents. If the Contractor wishes to substitute any listed DVBE subcontractors, sub-subcontractors or material suppliers for just and legal cause, the Contractor shall follow the dictates of PCC Sections 4107 and 10115.12b, as well as Military and Veterans Code (M&VC) Section 999.5(e) and California Code of Regulations, Title 2, Section 1896.64. The DVBE may only be replaced by another DVBE and shall obtain the written authorization of the State prior to any such substitutions. The Contractor shall not unilaterally substitute a listed DVBE subcontractor, sub-subcontractor or material supplier. Failure of Contractor to seek substitution and adhere to the DVBE participation requirement identified in the bid may be cause for contract termination, recovery of damages under rights and remedies due to the State, and penalties as outlined in M&VC Section 999.9; PCC Sections 4110 and PCC Section 10115.10.

4.4 **CONTRACT ASSIGNMENTS:** Performance of the Contract may not be assigned except upon written consent of the State. Consent will not be given to an assignment which would relieve the Contractor or the Contractor's Surety of their responsibilities under the Contract.

ARTICLE 5 - CONSTRUCTION BY THE STATE OR BY SEPARATE CONTRACTORS

5.1 STATE'S RIGHT TO PERFORM CONSTRUCTION AND TO AWARD SEPARATE CONTRACTS

5.1.1 The State reserves the right to perform work or operations related to the Project with the State's own work force, and to award separate contracts in connection with other portions of the Project, and other construction or operations on the Project site or adjacent to the Project. The Contractor shall at all times conduct the Work so as to impose no hardship on the State or others engaged in work on the Project, nor to cause any unreasonable delay or hindrance to the Project.

5.1.2 When separate contracts are awarded for different portions of the Project, "the Contractor" in the Contract Documents in each case shall mean the contractor who executes each separate contract. Each contractor is the intended third part beneficiary of other contracts for the Project.

5.1.3 The Contractor shall not cause unnecessary hindrance or delay to another contractor working on or near the Project. If the performance of any contract for the Project is likely to be interfered with by the simultaneous execution of some other separate contract or contracts, the State will decide which contractor may proceed.

5.1.4 Costs caused by defective or ill-timed work shall be borne solely by the responsible contractor.

5.2 MUTUAL RESPONSIBILITY

5.2.1 The Contractor shall cooperate fully with the State and separate contractors with regard to the execution of their work as follows:

- .1 The Contractor shall cooperate fully with the State and all separate contractors with regard to introduction and storage of their materials and equipment.
- .2 The Contractor shall coordinate with the State and separate contractors with regard to construction scheduling and sequence of operations, subject to approval of the State.
- .3 Each contractor shall monitor the schedule and progress of each other contractor whose work affects its work, and shall provide timely notice to the State of potential problems of interface so that the State can mitigate the problem.
- .4 The Contractor shall properly connect the Work to the work of the State or the separate contractors.
- .5 The Contractor shall inspect the work of the State or other contractors affecting the Work and promptly report to the State in writing irregularities or defects in the separate work, which renders it unsuitable for reception or connection of the Work.
- .6 Failure of the Contractor to inspect and report shall constitute acceptance of the other work as fit and proper to receive the Work, except as to defects which may develop in the other work after execution of the Contractor's Work.

5.2.2 Claims Between Separate Contractors:

- .1 Should the Contractor cause damage to the work or property of any separate contractor on the Project, the Contractor shall, upon due notice, settle with such other contractor by agreement, mediation or arbitration, if they will so settle.
- .2 If such separate contractor sues the State or initiates an arbitration proceeding on account of any damage alleged to have been so sustained, the State will notify the Contractor who shall defend such proceedings at the Contractor's sole expense.
- .3 The Contractor shall pay or satisfy any judgement or award against the State, arising therefrom. In addition, the Contractor shall pay the State for attorney's fees, court, arbitration or mediation costs and additional administrative, professional, consultant, inspection, testing and other service costs which the State has incurred.

5.2.3 The Contractor shall promptly remedy damage wrongfully caused by the Contractor to any completed or partially completed construction or to any property of the State or separate contractors as provided in Subparagraph 10.1.6.

5.2.4 Cutting and Patching Under Separate Contracts: The Contractor shall be responsible for any cutting, fitting and patching that may be required to complete the Work, except as otherwise specifically provided for in the Contract Documents. The Contractor shall not endanger any work of the State or of any other contractor by cutting, excavating, or otherwise altering any work, except with the written consent of the State.

5.3 **STATE'S RIGHT TO CLEAN UP:** If a dispute arises among the Contractor, separate contractors and/or the State as to the responsibility under their respective contracts for maintaining the Project site and surrounding areas free from waste materials and rubbish as described in Paragraph 3.16, the State may clean up and allocate the costs among those responsible.

ARTICLE 6 - CHANGES IN THE WORK

6.1 GENERAL

6.1.1 The State may order changes, including but not limited to, revisions to the Contract Documents, performance of extra work, and the elimination of work, without invalidating the Contract. Orders for such changes will be in writing. Changes shall not affect the obligations of the sureties on the contract bonds nor require their consent. Contract Time and Contract Sum will be adjusted, by written Change Order for changes which materially increase or decrease the time or cost or performance.

- .1 Proposed Change Order: The Contractor will be issued a written proposed Change Order by the State describing the intended changes to the Work.
- .2 Timeline: Within 14 days the Contractor shall submit to the State the Contractor's proposed cost estimate to be added or deducted from the Contract Sum due to the change, authenticated in full by completely detailed estimates and other authenticators of the cost by the Contractor, Subcontractors, Sub-subcontractors, vendors or material suppliers, and any adjustments of time of Completion of the entire Work that is directly attributable to the State's proposed Change Order.
- .3 Agreement: If an agreement is reached as to the adjustment in compensation for performance of changed Work, but an agreement is not reached as to the adjustment of Time for such Work, then the Contractor shall proceed with the Work at the agreed cost, reserving to the Contractor the right to further pursue the Contractor's claim for adjustment of time in accordance with Paragraphs 7.4 and 9.1.
- .4 Failure to Submit Cost Estimate: If the Contractor fails to submit the cost estimate within the 14 days timeline, or there is failure to agree to the Cost, then the State shall have the right to issue an order in writing to the Contractor to commence Work immediately, and the Contract Sum shall be changed in accordance with the State's estimate of cost, unless, within 14 days following completion of the added Work or with written notice to delete the Work, the Contractor submits to the State written proof that the State's estimate is in error.

6.1.2 The Contractor, when ordered by the State, shall proceed with changes before agreement is reached on adjustment, if any, in compensation or time for performance, and shall furnish to the State records as specified in Clause 6.2.1.3. If the Contractor fails to provide such records, the State's records will be used for the purpose of adjustment, if any, in Contract Time and Contract Sum.

- .1 Contractor may make payment requests for such work.

6.1.3 The Contractor will forfeit compensation for cost and /or time for proceeding with changes to the Work without written authorization from the State. The Contractor shall notify the State, in writing, and request an evaluation whenever it appears a change is necessary. This written notice shall be made within 24 hours of such discovery. If the State concurs with the Contractor's request for a change to the Work, the State will follow the procedures under Article 6. Delays as a result of these requests will be the

responsibility of the Contractor.

6.2 CHANGE ORDER

6.2.1 Methods used in determining adjustments to the Contract Sum shall be based on one of the following methods:

- .1 By mutual acceptance of a lump sum increase or decrease in costs. Upon the State's written request, the Contractor shall furnish a detailed estimate of increase or decrease in costs, together with cost breakdowns and other support data within the time specified in such request. The Contractor shall be responsible for any additional costs caused by the Contractor's failure to provide the estimate within the time specified.
- .2 By the State, on the basis of the State's estimate of increase or decrease in the costs.
- .3 By the State, whether or not negotiations are initiated as provided in Clause 6.2.1.1, by actual and necessary costs, as determined by the State, on the basis of records. Beginning with the first day and at the end of each day, the Contractor shall furnish to the State detailed hourly records for labor, construction equipment, and services; and itemized records of materials and equipment used that day in performance of the changes. Such records shall be on a form acceptable to the State. Such records shall be signed by the Contractor and, when agreed to by the State, will become the basis for compensation for the changed work. Such agreement shall not preclude subsequent adjustment based upon later audit by the State.
- .4 By unit prices stated in the Contract Documents, or subsequently agreed upon.
- .5 By a manner agreed upon by the State and the Contractor.

6.2.2 Allowable Costs: The only costs which will be allowed due to changes in the Work shall be computed in the following manner:

- .1 Labor: Compensation for labor shall include the applicable payroll cost for labor, including first level supervision providing physical construction labor directly engaged in performance of the changes. Others, who may be involved in the preparation of the change order, including, but not limited to supervisors, superintendent, engineers, or estimators, shall be considered as overhead costs under Clause 6.2.2.4. Payroll cost for labor shall be the General Prevailing Wage Rates applicable for this project and in the locality for performance of the changes. In addition to the published rates, only social security, worker compensation, state and federal taxes shall be included in the total payroll cost. Other costs shall be considered as mark-ups under Clause 6.2.2.4. Use of a classification which would increase labor costs will not be permitted.
- .2 Materials and Equipment: Compensation for materials and equipment shall include the necessary costs for materials and equipment directly required for performance of the changes. Cost of materials and equipment may include costs of transportation and delivery. If discounts by suppliers are available to the Contractor, they shall be credited to the State. If materials and equipment are obtained from a supply or source owned by, or in part, by the Contractor, payment therefore will not exceed current wholesale prices for such materials and equipment. If, in the opinion of the State, the cost of materials and equipment is excessive, or if the Contractor fails to furnish satisfactory evidence of costs from supplier, the cost of materials and equipment shall be the lowest current wholesale price at which similar materials and equipment are available in quantities required. The State reserves the right to furnish materials and equipment required for performance of the changes, and the Contractor shall have no claim for costs or mark-ups on such materials and equipment.
- .3 Construction Equipment:
 - .1 Compensation for construction equipment shall include the necessary costs for use of construction equipment directly required for performance of the changes. Any use for less than 30 minutes shall be considered one-half hour. No costs will be allowed for time while construction equipment is inoperative, idle, or on stand-by, for any reason, unless such times have been approved in advance by the State. Rental time for construction equipment moved by its own power shall include the time required to move construction equipment to the Work site from the nearest available source for rental of such equipment, and time required to return such equipment to the source. If construction equipment is not moved by its own power, loading and transportation costs will be paid in lieu of such rental time. Neither moving time nor loading and transportation costs will be allowed if the construction equipment is used for any work other than the changes. No allowance will be made for individual pieces of construction equipment and tools having a replacement value of \$500 or less. No construction equipment costs will be recognized in excess of rental rates established by distributors or equipment rental agencies in the locality for performance of the changes.
 - .2 Unless otherwise approved by the State, the allowable rate for use of construction equipment shall constitute full compensation to the Contractor for cost of fuel, power, oil, lubrication, supplies, necessary attachments, repairs and maintenance of any kind, depreciation, storage, insurance, labor except for construction equipment operators and any and all costs to the Contractor incidental to the use

of such construction equipment.

- .4 Mark-Ups for Added Work:
 - .1 General: The following allowance for mark-ups for performance of the changes shall constitute full compensation for additional field and home office overhead, profit, insurance, taxes (excluding sales taxes for materials incorporated into the project), and bonds, and other costs not covered under Clauses 6.2.2.1 through 6.2.2.3.
 - .2 Contractor: When work is added, the Contractor may claim mark-up in addition to authorized allowable costs, a reasonable sum as compensation for the items identified in 6.2.2.4.1 above, subject to proof of entitlement based on actual job costs, actual job experience, the Contractor's bidding data, and industry custom and practice. Under no circumstance can this sum exceed the following percentages:
 - .1 Contractor Labor : 21 percent, includes bond cost.
 - .2 Contractor Materials and Equipment : 16 percent, includes bond cost.
 - .3 Subcontractor Work : 6 percent of Subcontractor's costs, includes bond cost.
 - .1 Calculations of the Contractor's allowable 6 percent mark-up of the Subcontractor's Work shall not include the Subcontractor's allowable mark-up. Compounding of mark-up is not allowed.
 - .3 Subcontractors: When work is added, the Subcontractor may claim mark-up in addition to authorized allowable costs, a reasonable sum as compensation for the items identified in 6.2.2.4.1 above, subject to proof of entitlement based on actual job costs, actual job experience, the Subcontractor's bidding data, and industry custom and practice. Under no circumstance can this sum exceed the following percentages:
 - .1 Subcontractor Labor : 20 percent
 - .2 Subcontractor Materials and Equipment : 15 percent
 - .3 The aggregate mark-ups for all Subcontract tiers shall not exceed 20 percent for labor and 15 percent for materials and equipment. Compounding of mark-up is not allowed.
- .5 For Deleted Work: When the State is entitled to a credit for deleted work, the credit shall include direct labor, materials, and supervision plus overhead of the Contractor or Subcontractor, as applicable for the deleted work. Deleted overhead shall be computed as no less than 5 percent of the direct labor, materials, and supervision, and should reflect the actual savings to the Contractor resulting from the deletion based upon actual job prices for the work at issue, actual job experience, the Contractor's bidding data for the project and industry custom and practice. For example, if a \$10,000 item of work is deleted, the credit to the State would be no less than \$10,500.
- .6 For Combination of Added and Deleted Work: For Change Orders that involve both added and deleted work, the Contract Sum will be adjusted based on the following computation: Cost before mark-ups of added and deleted work shall each be separately estimated. If a difference between costs results in an increase to the Contract Sum, a mark-up for added work shall be applied to the difference. If a difference in costs results in a decrease, then the 5 percent credit to the State for deleted overhead set forth above shall be applied to the difference.
- .7 General Limitations: Costs to the Contractor for changes which exceed market values prevailing at the time of the change will not be allowed unless the Contractor establishes that all reasonable means for performance of the changes at prevailing market values have been investigated and the excess cost could not be avoided. Notwithstanding actual charges to the Contractor on work performed or furnished by others, no mark-ups will be allowed in excess of those specified in Clause 6.2.2.4 above.

6.2.3 Cost Disallowance: Costs which will not be allowed or paid in Change Orders or Claim settlements under this Contract include, but are not limited to, interest cost of any type other than those mandated by statute; Claim preparation or filing costs; legal expenses; the costs of preparing or reviewing proposed Change Orders or Change Order proposals concerning Change Orders which are not issued by the State; lost revenues; lost profits; lost income or earnings; rescheduling costs; costs of idled equipment when such equipment is not yet at the site or has not yet been employed on the Work; lost earnings or interest on unpaid retainage; claims consulting costs; the costs of corporate officers or staff visiting the site or participating in meetings with the State; any compensation due to the fluctuation of foreign currency conversions or exchange rates; or loss of other business.

6.3 **ACCEPTANCE OF CHANGE ORDERS:** The Contractor's written acceptance of a Change Order shall constitute final and binding agreement to the provisions thereof and a waiver of Claims in connection therewith, whether direct, indirect, or consequential in nature.

6.4 **EFFECT ON SURETIES:** Alterations, extensions of time, extra and additional work, and other changes authorized by the Contract Documents may be made without securing consent of Surety(s) on Contract Bonds.

ARTICLE 7 - TIME

7.1 NOTICE TO PROCEED

7.1.1 The Contractor will be notified of the Contract start date as stated in the Notice to Proceed. Notwithstanding other provisions of the Contract, the State will not be obligated to accept or to pay for work furnished by the Contractor prior to the start date stated in the Notice to Proceed whether or not the State has knowledge of the furnishing of such work. The Contractor shall not be allowed on the site of the Work until the Contractor's Contract bonds and certificates of insurance comply with requirements of the Contract.

7.1.2 Work under the Contract shall be conducted in accordance with Paragraph 3.10. The Contractor shall not begin any Work until authorized in writing by the State.

7.2 **CONTRACT TIME:** The Contract Time is the period set forth in Document 00 73 00, Supplementary Conditions. The start and completion dates will be stated in a Notice to Proceed. It is essential that the Project be completed within the time fixed for Completion in Document 00 73 00 or liquidated damages will be assessed for delay. All portions of the Work shall be completed and shall be ready for full use by the State on, or prior to, the date of Completion.

7.2.1 Time is of the essence in this Contract.

7.3 **LIQUIDATED DAMAGES:** For every day that the Work remains unfinished after the time fixed for Completion in the Contract Documents, as modified by any approved extension of time, damage will be sustained by the State. Because of the difficulty in computing actual material loss and disadvantages to the State, it is determined in advance that the Contractor will pay the State the amount of damages set forth in the Agreement, as representing a reasonable forecast of actual damages which the State will suffer by failure of Contractor to complete the Work within the time fixed for Completion in the Contract. Execution of the Agreement shall constitute acknowledgment by the Contractor that the Contractor agrees that the State will actually suffer damages in the amount fixed for every Day during which Completion of the Work is avoidably delayed beyond the time fixed for Completion in the Contract.

7.4 TIME EXTENSIONS

7.4.1 Request for Time Extension: In the event the Contractor requests an extension of Contract Time for unavoidable delay, the Contractor shall furnish such justification and supporting evidence as the State may deem necessary for the determination as to whether the Contractor is entitled to an extension of Contract Time. The Contractor shall submit justification in writing no later than 7 days after the initial occurrence of any delay. The justification shall be based on the Official Progress Schedule as updated at the time of occurrence of the delay or execution of work related to any changes to the scope of the Work. The justification shall include, but is not limited to the following information:

- .1 Duration to perform activity(ies) relating to changes in the Work and resources (manpower, equipment, material, etc.) required to perform these activities within the stated duration.
- .2 Logical ties to the Official Progress Schedule for proposed changes or delay showing activity(ies) in the schedule start or completion dates are affected by the change or delay.

7.4.2 The State, upon receipt of such justification and supporting evidence, shall make its finding of fact. The State's decision shall be final and conclusive and the State will advise the Contractor in writing of such decision. If the State finds that the Contractor is entitled to an extension of Contract Time, the State's determination as to the total number of extension days shall be based upon the latest updated version of the Official Progress Schedule. Such data will be included in the next monthly updating of the schedule.

7.4.3 Time Extensions: For delays that the State agrees are unavoidable, and are Justified in accordance with Subparagraph 7.5.2, the Contractor shall, pursuant to the Contractor's application, be allowed an extension of time beyond the Contract Time. During such extension of time, neither extra compensation for engineering and inspection nor liquidated damages will be charged to the Contractor. Time extensions shall be granted only for delays or changes that extend the Completion date, based on the latest accepted updated version of the Official Progress Schedule. Time extensions for delays and changes shall not exceed one day for each day that the Contract Completion date of the Official Progress Schedule is extended by this change or delay.

7.5 DELAYS IN COMPLETION OF THE WORK

7.5.1 Notice of Delays: Whenever the Contractor foresees delay in the continuance and Completion of the Work, or immediately upon the occurrence of any delay which the Contractor regards as unavoidable, the Contractor shall notify the State in writing, in a separate notice of the delay. The Contractor's notice shall include the probability of the occurrences of such delay and its cause in

order that the State may take immediate steps to prevent the occurrence or continuance of the delay. If the delay cannot be prevented, the State will determine whether the delay is unavoidable and to what extent continuance and Completion of the Work is anticipated to be delayed.

- .1 The Contractor shall make no claim for delay not called to the attention of the State in writing, at the time of its occurrence.
- .2 Delay in the continuance of parts of the Work that does not prevent or delay the continuance of other parts of the Work or the Completion of the whole Work within the Contract Time shall be deemed to constitute neither avoidable delays nor unavoidable delays, within the meaning of the Contract. Such delay will be considered Unjustified and no extension to the Contract Time and/or additional compensation will be granted.

7.5.2 Justified Delay: Justified Delay in the continuance or Completion of the Work shall include delays which result from causes beyond the control of the Contractor and which could not have been avoided by the exercise of due care and diligence on the part of the Contractor or the Contractor's Subcontractors. Delay in Completion of the Work due to Contract modifications ordered by the State and unforeseeable delays in continuance or completion of the work of other contractors employed by the State may be considered Justified Delays insofar as they interfere with the Contractor's Completion of the Work within the Contract Time. Delays due to normal weather conditions which prevent the Contractor from proceeding with the controlling item on the Official Progress Schedule will not be regarded as a Justified Delay.

- .1 Justified Delay will result in an extension beyond the Contract Time in accordance with Paragraph 7.4.
- .2 Justified Delay that includes Contract modifications ordered by the State may entitle the Contractor to extra compensation in accordance with the provisions of Article 6.
- .3 Delay that results from causes beyond the control of the State and is determined by the State to be the Contractor's responsibility shall be considered Unjustified and will result in no extension in the Contract Time or extra compensation. The State's decision shall be final and conclusive.
- .4 The State will determine the net difference between overlapping or concurrent Justified Delays and Unjustified Delays and whether the Contractor is entitled to any extension in the Contract Time and/or extra compensation. The State's decision shall be final and conclusive.

7.5.3 Weather Delays: If weather conditions are the basis for delays in the continuance or completion of the Work, such delay shall be documented by 5 year climatological data obtained by the Contractor, from the nearest nationally recognized reporting station to the Work site, substantiating that weather conditions were abnormal for the period of time and could not have been reasonably anticipated, and that weather conditions had an adverse effect on the scheduled construction. The State will not be responsible for additional costs of the Contractor caused by weather delays, including, but not limited to, costs of extended overhead.

7.6 ACCELERATION

7.6.1 The State reserves the right to accelerate the Work of the Contract. In the event that the State directs acceleration, such directive will be only in written form. The Contractor shall keep cost and other Project records related to the acceleration directive separately from normal Project costs and records, and shall provide a written record of acceleration cost to the State on a daily basis.

7.6.2 In the event that the Contractor believes that some action or inaction on the part of the State constitutes an acceleration directive, the Contractor shall immediately notify the State in writing that the Contractor considers the actions an acceleration directive. This written notification shall detail the circumstances of the acceleration directive. The Contractor shall not accelerate work efforts until the State responds to the written notification. If acceleration is then directed or required by the State, cost records referred to above shall be maintained by the Contractor and provided to the State on a daily basis.

7.6.3 In order to recover additional costs due to acceleration, the Contractor shall document that additional expenses were incurred and paid by the Contractor. Labor costs recoverable will be only overtime or shift premium costs or the cost of additional laborers brought to the site to accomplish the accelerated work effort. Equipment costs recoverable will be only the cost of added equipment mobilized to the site to accomplish the accelerated work effort.

ARTICLE 8 - PAYMENTS AND COMPLETION

8.1 SCHEDULE OF VALUES: Before the first payment request, the Contractor shall submit to the State a Schedule of Values allocated to portions of the Work, included with the Contractor's Progress Schedule, and supported by such data to substantiate the accuracy as the State may require. This Schedule of Values, unless objected to by the State, shall be used as a basis for progress payments.

8.2 TIMELINESS OF PAYMENTS

8.2.1 Upon receipt of a payment request by the designated State's Representative with updated Progress Schedule from the Contractor, the State will review same to determine if it is a proper payment request based on the approved Schedule of Values. Any payment request determined by the State not to be suitable for payment shall be modified and processed in accordance with the State's assessment or returned to the Contractor for resubmittal. The reason(s) the payment request was deemed unsuitable shall be stated in writing.

8.2.2 Actual payment request submittal date shall be established by the State. Thereafter, the payment request submittal date will be monthly on the same date.

8.2.3 The State will make progress payments pursuant to Public Contract Code, Section 10261.5.

8.3 RETENTIONS

8.3.1 Upon submittal and receipt of a monthly payment request in accordance with Paragraph 8.2 above, the following shall apply:

- .1 The Contractor's payment request shall include the total amount of Work completed to date, including materials as verified by the State, furnished and delivered on the Project site, not used, or in a secure off-site facility, pursuant to Public Contract Code, Section 10261. All materials included in the Contractor's payment requests furnished and delivered on the Project site, not used, and /or in a secure off-site facility shall be used exclusively for the Project. It shall be the sole responsibility of the Contractor to maintain, protect and secure such materials.
- .2 The State shall retain not less than 5 percent of the estimated value of Work completed.

8.3.2 Securities in Lieu of Retention: At the request and expense of the Contractor, and in accordance with Public Contract Code, Section 10263, the Contractor may provide securities in lieu of retention.

8.4 **ASSIGNMENT OF CONTRACT FUNDS:** The Contractor may assign moneys due or to become due under the Contract, through an amendment to the Contract. Any assignment of moneys earned by the Contractor shall be subject to proper retention in favor of the State and to deductions provided for in the Contract. Moneys withheld, whether assigned or not, are subject to being used by the State to the extent permitted by law, for the Completion of the Work in the event that the Contractor is in default of the Contract.

8.5 OCCUPANCY BY THE STATE PRIOR TO COMPLETION OF THE WORK

8.5.1 The State reserves the right to occupy all or any part of the Project prior to Completion of the Work, upon written notice. Such occupancy or use is herein referred to as Beneficial Occupancy. In this event, the Contractor shall be relieved of responsibility to the State for liability arising out of such occupancy by the State. Nevertheless, the Builder's Risk Coverage must remain in effect, with either a "consent to occupy" endorsement or a waiver of occupancy endorsement, with no right of recovery against the State.

8.5.2 The State's Beneficial Occupancy does not constitute Completion of the Work or Acceptance of the Work by the State, or any portion of the Work, nor will it relieve the Contractor of responsibility for correcting defective Work or materials found at any time before Acceptance of the Work, as set forth in Article 12 or during the Guarantee period as set forth in Paragraph 3.5, or after the State's acceptance, as set forth in Subparagraph 8.6.1. However, when the Project includes separate buildings, and one or more of the buildings is entirely occupied by the State, then upon written request by the Contractor and by written consent from the State, the Guarantee period will commence to run from the date of the State's occupancy of such building or buildings.

8.6 ACCEPTANCE OF THE WORK AND FINAL PAYMENT

8.6.1 When the Contractor considers the Work complete, the Contractor shall request a final inspection in writing to be conducted by the State.

- .1 The Contractor shall request this final inspection only when all Work, including deficient items identified on previous inspections, have been completed and deliverables delivered as noted in the Project Manual, Section 01 77 00.
- .2 The State Representative shall conduct a final inspection within 14 days of receipt of a written request from the Contractor for final inspection.
- .3 If, after the inspection, the State Representative determines that the Work is complete, the State Representative will establish a date for Completion of the Work. The State Representative will then recommend to the Director of the Department of General Services, or the Director's designee, to accept the Work within 60 days from the

date of Completion of the Work.

- .4 Upon Acceptance of the Work by the Director:
 - a) The Retention held by the State will be released, and
 - b) The Contractor will be relieved of the duty of maintaining and protecting the Work.
- .5 If the State determines that the Work is not complete, the Contractor will be notified in writing of deficiencies. After correcting all deficiencies the Contractor shall again initiate the procedures for final inspection as set forth above. If the process of re-inspection and correction of deficiencies goes beyond the Contract Time, the Contractor shall be assessed liquidated damages.
- .6 Determination by the State that the Work is complete or Acceptance of the Work will not bar any Claim against the Contractor pursuant to Paragraph 3.5.

8.6.2 Upon Acceptance of the Work, the State will submit a final statement to the Contractor:

- .1 The final statement shall take into account the Contract Sum as adjusted by any Change Orders, amounts already paid to the Contractor, sums to be withheld for incomplete Work, liquidated damages, stop notices, and for any other cause under the Contract.
- .2 A warrant in the amount of the sum due the Contractor, if any, will be issued.
- .3 If the Contractor owes any amount to the State, the final statement shall serve as an invoice to the Contractor.

8.6.3 The Contractor is required to pay Subcontractors from which a Retention has been withheld within 7 days of receipt from the State of Retention proceeds.

8.6.4 The Contractor has 30 days after receipt of the final statement to file a Claim with the State.

- .1 All Claims shall comply with the requirements of Subparagraph 9.1.2.
- .2 Failure to file a Claim within the 30 day period constitutes a failure to diligently pursue and exhaust the required administrative procedures set forth in the Contract. Such failure shall constitute waiver of additional rights to compensation under the Contract or the right to request Equitable Adjustment.
- .3 If the Contractor does not file a Claim within the 30 day period, the final warrant made by the State will become a complete and final settlement between the State and the Contractor.

8.7 **INTEREST:** Payments due and unpaid under the Contract shall earn interest pursuant to Public Contract Code, Sections 7107 and 10261.5.

ARTICLE 9 - DISPUTES AND CLAIMS

9.1 DISPUTE AND CLAIM PROCEDURES

9.1.1 Dispute as to Contract Requirements: When the Contractor and the State fail to agree whether or not any work is within the scope of Contract requirements, the Contractor shall immediately perform such work upon receipt of a written notice to do so by the State. Within 14 days after receipt of such notice to perform disputed work, the Contractor may submit a written protest to the State, specifying in detail the Contract requirements that were exceeded, and approximate change in cost resulting so that the State will have notice of a potential Claim. Failure to submit a protest within the specified period shall constitute a waiver of any and all rights to an adjustment in Contract Sum and Contract Time due to such work, and the Contractor thereafter shall not be entitled to adjustment of Contract Sum or Contract Time. For any such work that is found to exceed Contract requirements, there shall be an adjustment in Contract Sum and Contract Time on same basis as any other change in the Work.

- .1 The Contractor shall provide supporting data and shall provide and maintain records of costs attributable to Disputes in similar manner as for Change Orders in Article 6.
- .2 The State's Representative and the Contractor's Superintendent will make every reasonable effort to resolve the Dispute prior to proceeding to the next step.
- .3 Either the State or the Contractor may call a special meeting for the purpose of resolving the Dispute. Such a meeting will be held within 7 days of written request thereof.
- .4 If the Dispute as to the Contract Documents has not been resolved, the Contractor shall, within 14 days after the special meeting, take one or more of the following actions:
 - .1 submit additional supporting data requested by the State;
 - .2 modify the initial Dispute; or
 - .3 notify the State that the initial Dispute stands as is.
- .5 If the Dispute has not been resolved within 7 days after the Contractor's action in response to Clause 9.1.1.4, another meeting may be scheduled, at the State's option, with senior management personnel of the State and the Contractor. The purpose of this meeting is to resolve the Dispute prior to proceeding to the action under

Subparagraph 9.1.2.

9.1.2 Claim Submission and Documentation: If a Dispute has not been resolved at the time of the State's final statement, the Contractor shall submit within 30 days a Claim along with detailed documentation required by Subparagraph 9.1.1 for the State's consideration.

- .1 The Contractor shall furnish 3 certified copies of the required Claim documentation. The Claim documentation shall be complete when furnished. The evaluation of the Contractor's Claim will be based upon State records and the Claim documents furnished by the Contractor.
- .2 Claim documentation shall conform to generally accepted accounting principles and shall be in the following format:
 - .1 General Introduction
 - .2 General Background Discussion
 - .3 Issues
 - .1 Index of Issues (listed numerically)
 - .2 For each issue
 - .1 Background
 - .2 Chronology
 - .3 Contractor's position (reason for State's potential liability)
 - .4 Supporting documentation of merit or entitlement
 - .5 Supporting documentation of damages
 - .6 Begin each issue on a new page
 - .4 All critical path method (CPM) schedules, both as-planned, monthly updates, schedule revisions, and as-built along with the computer disks of all schedules related to the Claim.
 - .5 Productivity exhibits (if appropriate)
 - .6 Summary of Issues and Damages
- .3 Supporting documentation of merit for each issue shall be cited by reference, photocopies, or explanation. Supporting documentation may include, but shall not be limited to, General Conditions; General Requirements; technical Specifications; Drawings; correspondence; conference notes; Shop Drawings and submittals; Shop Drawing logs; survey books; inspection reports; delivery schedules; test reports; daily reports; subcontracts; fragmentary critical path method (CPM) schedules or time impact analyses; photographs; technical reports; requests for information; field instructions; and all other related records necessary to support the Contractor's Claim.
- .4 Supporting documentation of damages for each issue shall be cited, photocopied, or explained. Supporting documentation may include, but shall not be limited to, documents related to the preparation and submission of the bid; certified, detailed labor records, including labor distribution reports; material and equipment procurement records; construction equipment ownership costs records or rental records; Subcontractor or vendor files and cost records; service cost records; purchase orders; invoices; Project as-planned and as-built cost records; general ledger records; variance reports; accounting adjustment records; and any other accounting materials necessary to support the Contractor's Claim.
- .5 Each copy of the Claim documentation shall be certified by a responsible officer of the Contractor in accordance with the requirements of the Contract Documents.
- .6 Should the Contractor be unable to support any part of the Claim, and it is determined that such inability is attributable to falsity of such certification or misrepresentation of fact or fraud on the part of the Contractor, the Contractor shall be liable to the State as provided for under California Government Code, Section 12650 et seq., known as the False Claims Act.
- .7 The State will render a written decision to the Contractor relative to the Claim. The State's written decision shall be final and binding on the party(ies) but subject to arbitration. The State may withhold from the final payment an amount not to exceed 150 percent of the disputed amount. If there is a Surety and there appears to be a possibility of a Contractor's default, the State may, but is not obligated to, notify the Surety and request the Surety's assistance in resolving the controversy.
- .8 All issue items to be included in the Complaint in Arbitration shall be a part of the Claim submitted with the required documentation under this Subparagraph 9.1.2. Issues not included in the Claim under Subparagraph 9.1.2 shall not be considered.

9.1.3 Arbitration: Any Claim filed in compliance with Subparagraph 9.1.2 not resolved by the above procedures shall be resolved by arbitration in accordance with the provisions of Public Contract Code Section 10240 et seq., and Title 1, California Code of Regulations, Section 1300 et seq., unless the State and the Contractor agree in writing to waive arbitration and proceed to litigation. Either party may initiate arbitration by filing a Complaint in Arbitration with the Office of Administrative Hearings in

Sacramento, California, in compliance with the requirements of Public Contract Code Section 10240, et seq., and Title 1, California Code of Regulations, Section 1300 et seq. Arbitration shall be conducted in Sacramento, California.

9.2 AUDIT AND ACCESS TO RECORDS

9.2.1 The Contractor shall maintain books, records, documents, and other evidence directly pertinent to the performance of the Work under this Contract, in accordance with generally accepted accounting principles and practices consistently applied. The Contractor shall also maintain all financial information and data used by the Contractor in the preparation or support of any cost submission, including the Contractor's original bid required for this Contract, or any Change Order, Claim, or other request for equitable adjustment, and a copy of the cost summary or information submitted to the State. The State's Representative shall have access upon 24 hours advance written notice, at all times during normal business hours, to such books, records, documents, financial information, and all other evidence for the purpose of inspection, audit, and copying. The Contractor shall, at no cost to the State, provide proper facilities for such access, inspection and copying purposes.

9.2.2 The Contractor agrees to make the provisions of Paragraph 9.2 applicable to this Contract, and Change Orders, Claims, or other requests for Equitable Adjustment affecting the Contract Time or Contract Sum. The Contractor agrees to include the provisions of Paragraph 9.2 in subcontracts and sub-subcontracts or purchase orders, at any tier, and make Paragraph 9.2 applicable to subcontracts, at any tier, in excess of \$10,000, and to make the provisions of Paragraph 9.2 applicable to Change Orders, Claims, and other requests for Equitable Adjustment related to Project performance.

9.2.3 Audits conducted under Paragraph 9.2 shall be in accordance with general accepted auditing standards and established procedures and guidelines of the reviewing or audit agency.

9.2.4 The Contractor agrees to the disclosure of all information and reports resulting from access to records under the provisions of Paragraph 9.2, to the State, and other affected agencies.

9.2.5 Records under the provisions of Paragraph 9.2 shall be maintained and made available during the performance of the Work under this Contract until 3 years past final payment, and until final settlement of all Disputes, Claims, or litigation, whichever occurs later. In addition, those records which relate to any portion of this Contract, to any Change Order, to any Dispute, to any litigation, to the settlement of any Claim arising out of such performance, or to the cost or items to which an audit exception has been taken, shall be maintained and made available until final payment or final resolution of such Dispute, litigation, Claim, or exception, whichever occurs later.

9.2.6 The right of access provisions of Paragraph 9.2 applies to financial records pertaining to this Contract and Change Orders and Claims. In addition, this right of access applies to records pertaining to all contracts, Change Orders, and Contract Amendments:

- .1 To the extent the records pertain directly to Contract performance;
- .2 If there is any indication that fraud, gross abuse, or corrupt practices may be involved;
- .3 If the Contract is terminated for default or convenience.

9.2.7 Access to records is not limited to the required retention periods. The authorized State Representatives shall have access to records at any reasonable time for as long as the records are maintained.

9.2.8 Further, the Contractor agrees to include a similar right of the State to audit records and interview staff in any subcontract related to performance of this Agreement, in regards to the Disabled Veterans Business Enterprise (DVBE) Program.

ARTICLE 10 - PROTECTION OF PERSONS AND PROPERTY

10.1 SAFETY OF PERSONS AND PROPERTY

10.1.1 The Contractor shall initiate, maintain and supervise -safety precautions and programs in connection with the performance of the Work.

10.1.2 The Contractor shall take precautions for safety and provide protection to prevent damage, injury or loss to:

- .1 Employees working under the Contract and other persons who may be affected thereby;
- .2 The Work and materials and equipment to be incorporated therein, whether in storage on or off the Project site, under care, custody or control of the Contractor or the Contractor's Subcontractors or Sub-subcontractors; and
- .3 Other property at the Project site, or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures and utilities, except as otherwise noted or specified.

10.1.3 The Contractor shall comply with applicable laws, ordinances, rules, regulations and lawful orders of public authorities bearing on the safety of persons or property, or their protection from damage, injury or loss.

10.1.4 The Contractor shall erect and maintain, as required by existing conditions and performance of the Contract, safeguards for safety and protection, including posting danger signs and other warnings against hazards, promulgating safety regulations and notifying the State, other Owners (other than the State) and users of adjacent sites and utilities.

10.1.5 The Contractor shall comply with applicable laws, ordinances, rules, regulations and lawful orders of public authorities regarding the storage and/or use of explosives or other hazardous materials or equipment necessary for execution of Work. The Contractor shall employ properly qualified personnel for supervision of same.

10.1.6 The Contractor shall remedy damage and loss to property referred to in Clauses 10.1.2.2 and 10.1.2.3 caused in whole or in part by the Contractor, a Subcontractor, a Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is responsible under Clauses 10.1.2.2 and 10.1.2.3. The foregoing obligations of the Contractor are in addition to the Contractor's obligations under Paragraph 3.19.

10.1.7 The Contractor shall not permit any part of the Work or Project site to be loaded so as to endanger its safety.

10.1.8 When conditions of the Work, in the judgment of the State, present risk of injury or death to persons or property damage, the State, may direct the Contractor, at the Contractor's sole expense, to close down the Work and not commence work again until dangerous conditions are eliminated.

10.1.9 The Contractor, at the Contractor's own cost, shall rebuild, repair, restore and make good damages to any portion of the Work affected by such causes before Acceptance of the Work.

10.2 **EMERGENCIES:** In an emergency affecting safety of persons or property, the Contractor shall act, at the Contractor's sole discretion, to prevent any threatened damage, injury or loss. Additional compensation or extension of Contract Time claimed by the Contractor because of an emergency will be reviewed as provided in Article 6.

10.3 **DRUG-FREE WORKPLACE**

10.3.1 By signing the Agreement, the Contractor certifies, under penalty of perjury under the laws of the State of California, that the Contractor will comply with the requirements of the Drug-Free Workplace Act of 1990 (Government Code, Section 8350 et seq.), and will provide a drug-free workplace by taking the following actions:

- .1 Publish a statement notifying employees that unlawful manufacture, distribution, dispensation, possession, or use of a controlled substance is prohibited and specifying actions to be taken against employees for violations.
- .2 Establish a Drug-Free Awareness Program to inform employees about:
 - .1 The dangers of drug abuse in the workplace;
 - .2 The person's or company's policy of maintaining a drug-free workplace;
 - .3 Any available counseling, rehabilitation, and employee assistance programs; and,
 - .4 penalties that may be imposed upon employees for drug abuse violations.
- .3 Provide, as required by Government Code, Section 8355(c), that every employee who works under the Contract will:
 - .1 receive a copy of the company's drug-free workplace policy statement; and
 - .2 agree to abide by the terms of the company's statement as a condition of employment.

ARTICLE 11 - INSURANCE AND BONDS

11.1 CONTRACTOR'S INSURANCE

11.1.1 General Insurance Requirements:

- .1 Contractor shall procure and maintain insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder and the results of that work by the Contractor, its agents, representatives, employees or subcontractors.
 - .1 Contractor shall furnish the State with original certificates and endorsements effecting coverage required by this clause. All certificates and endorsements are to be received and approved by the State before work commences.
 - .2 The State reserves the right to require complete, certified copies of all required insurance policies, including endorsements affecting the coverage required by these specifications at any time.
- .2 Insurance Companies shall be acceptable to Department of General Services (DGS) and Office of Risk and Insurance Management (ORIM). Insurance is to be placed with insurers with a current A.M. Best's rating of no less than A-VI. Exception may be made for the State Compensation Insurance Fund. If self-insured, review of financial information may be required.
- .3 Except as otherwise provided for Builders Risk/Installation Floater under Clause 11.1.2.4, all coverage shall be in force until the Acceptance of the Work by the Director of DGS. If the insurance expires, the Contractor shall immediately provide a new current certificate or be declared in breach of Contract. The State reserves the right to withhold all progress and retention payments until the breach is cured to the satisfaction of the State. Renewal insurance certificates must be tendered to the State prior to or exactly at the expiration of the previous insurance certificate. There shall be no gap in insurance coverage. This renewed insurance shall be in accordance with the terms of the Contract.
- .4 Insurance policies shall contain a provision that coverage will not be cancelled without 30 days prior written notice to the State.
- .5 The Contractor shall be responsible for any deductible or self-insured retention contained within the insurance.
- .6 In the event the Contractor fails to keep in effect at all times the specified insurance coverage, the State may, in addition to the remedies noted in Article 11.1.1.3 above and any other remedies it may have, remove the Contractor from the work site and/or may terminate this Contract upon the occurrence of such event, subject to the provisions of this Contract. In the event, the State elects to remove the Contractor from the work site, the Contractor will not be entitled to additional days or compensation.
- .7 Any insurance required to be carried shall be primary.
- .8 Minimum Scope of Insurance - Coverage shall be at least as broad as:
 - .1 Insurance Services Office Commercial General Liability coverage (occurrence Form CG 0001). The insurance Certificate shall show the GL form number.
 - .2 Insurance Services Office Form Number CA 0001 covering Automobile Liability, "any auto", or "scheduled, hired and nonowned".
- .9 The State reserves the right to require the Contractor to provide the subcontractors' insurance certificates and policies, when so directed by the State.

11.1.2 Insurance Requirements: The Contractor shall furnish to the State evidence of the required insurance as follows:

- .1 Commercial General Liability: The Contractor shall maintain commercial general liability with limits of not less than \$5,000,000 per occurrence for bodily injury and property damage liability combined. If Commercial General Liability insurance or other form with a general aggregate limit is used, either the general aggregate limit shall apply separately to this project/location or the general aggregate limit shall be twice the required occurrence limit. If the aggregate applies "per project or location", it shall so state on the certificate. The policy shall include coverage for liabilities arising out of premises, operations, independent contractors, products, completed operations, personal and advertising injury, and liability assumed under an insured contract. This insurance shall apply separately to each insured against whom claim is made or suit is brought subject to the Contractor's limit of liability. The policy shall include the Department of General Services and the State of California, its officers, agents, and employees, as additional insureds, but only insofar as the operations under the Contract are concerned.
 - .1 Additional Insured coverage shall be provided in the form of an insured endorsement (CG 20 10 11 85 r equivalent) to the contractor's insurance policy. The endorsement must be attached to the certificate.

- .2 Deductibles and Self-Insured Retentions (for Commercial General Liability): Any deductibles or self-insured retentions must be declared to and approved by the State. At the option of the State, either: the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects the State of California and the Department of General Services, its officers, agents, employees and servants or the Contractor shall provide a financial guarantee satisfactory to the State guaranteeing payment of losses and related investigations, claim administration, and defense expenses.
- .2 Automobile Liability: The Contractor shall maintain motor vehicle liability with limits of not less than \$1,000,000 per accident for bodily injury and property damage. The State is to be covered as additional insured with respect to liability arising out of automobiles owned, leased, hired or borrowed by or on behalf of the contractor.
- .3 Workers' Compensation: The Contractor shall maintain statutory workers' compensation and employer's liability coverage for all its employees who will be engaged in the performance of the Contract, including special coverage extensions where applicable as required by the State of California. The Workers' Compensation policy shall be endorsed with a waiver of subrogation in favor of the State for all work performed by the contractor, its employees, agents and subcontractors. Except for State Fund, all subrogation waiver endorsements shall be on a separate form attached to the certificate. The Contractor shall maintain Employer's Liability coverage of \$1,000,000 per accident for bodily injury or disease.
- .4 Builders Risk/Installation Floater: The Contractor shall maintain in force, at its own expense, Builders Risk/Installation Floater covering the Contractor's labor, materials, and equipment to be used for completion of the Work performed under this Contract against all risks of direct physical loss, excluding earthquake and flood, for an amount equal to the full amount of the Contract Sum.
 - .1 The Contractor agrees as a provision of the contract to waive all rights of recovery against the State.
 - .2 The State of California, Department of General Services shall be a named insured or additional insured under the policy.
 - .3 The policy shall have a loss payable clause in favor of the State of California, Department of General Services.
 - .4 The requirement for maintaining the Builders Risk/Installation Floater shall be in full force at all times during the entire duration of the Contract Time without any gaps, delays or breaks in coverage. This includes Beneficial Occupancy and authorized adjustment for time extensions. Coverage shall be maintained until Completion of the Work, except for delivery of as-built drawings, operation and maintenance manuals, guarantees, warranties, spare parts, reports and certifications as noted in the Closeout Procedures section of the Project Manual and as determined by the State's Representative in writing.

11.1.3 Neither the State, nor any officer or employee of the State, shall be liable for any loss or damage that may happen to the Work, or any part thereof; nor to any of the materials or other items used or employed in performing the Work; nor for injury to any person or persons, either workers or the public, for damage to property from any cause which might have been prevented by the Contractor, or the Contractor's employees or agents, against all of which injuries or damages the Contractor shall properly guard. The Contractor shall indemnify and hold harmless the State, and all officers and employees of the State, from all suits, actions or claims brought for, or on account of injuries or damages received or sustained by any person or persons, by or from the Contractor, the Contractor's employees or agents, in construction of the Work, or by or in consequence of the Contractor's failure to properly guard the same, or by or as a result of any act or omission of the Contractor, the Contractor's employees or agents. In addition to any remedy authorized by law, moneys due the Contractor under the Contract, as considered necessary by the State, may be retained until disposition has been made of such suits, actions, or claims for damages; however, this provision shall not be construed as precluding the State from enforcing any right of offset the State may have to any such moneys.

11.2 **NO PERSONAL LIABILITY:** Neither the State, nor any other officer or employee of the State will be personally responsible for liabilities arising under the Contract.

11.3 **PERFORMANCE BOND AND PAYMENT BOND**

11.3.1 The Contractor shall furnish bonds, each in the amount of 100 percent of the Contract Sum, covering faithful performance of the Contract and payment of obligations arising thereunder, as stipulated in the bidding requirements or as specifically required in the Contract Documents.

11.3.2 Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bond(s) or permit a copy to be made.

ARTICLE 12 - UNCOVERING AND CORRECTION OF WORK

12.1 UNCOVERING AND CORRECTION OF WORK

12.1.1 If a portion of the Work is covered prior to the State's review, it shall, if requested in writing by the State, be uncovered for the State's observation and replaced at the Contractor's expense without change in the Contract Time.

12.1.2 The Contractor shall notify the State 2 working days prior to covering any work.

12.2 CORRECTION OF WORK

12.2.1 The Contractor shall promptly correct work rejected by the State or Work failing to conform to the requirements of the Contract Documents, whether or not fabricated, installed or completed. The Contractor shall bear the costs of correcting such rejected work, including additional testing and inspections required and compensation for the State's services and expenses made necessary thereby.

12.2.2 Notwithstanding Paragraph 3.5, in the event of an emergency constituting an immediate hazard to the health or safety of any persons or property, the State may undertake, at the Contractor's expense and without prior notice, work necessary to correct such hazardous condition(s) arising from work performed by the Contractor that is not in conformance with the requirements of the Contract Documents.

12.2.3 The Contractor shall remove from the Project site portions of the Work that are not in accordance with the requirements of the Contract Documents, and are neither corrected by the Contractor nor accepted by the State.

12.2.4 If the Contractor fails to correct nonconforming work, as per Paragraph 3.5, the State may correct the nonconforming work in accordance with Paragraph 2.3. If the Contractor does not proceed with correction of such nonconforming work, within such time fixed by written notice from the State, the State may remove and store the salvable materials articles and/or equipment at the Contractor's expense. If the Contractor does not pay all costs of such removal and storage within 14 days after written notice, the State may, upon 14 additional calendar days written notice, sell such materials articles and/or equipment at an auction or private sale, and shall account for the proceeds thereof, after deducting costs and damages that would have been borne by the Contractor, including compensation for the State's services and expenses made necessary thereby. If the proceeds of a sale do not cover all costs that the Contractor would have borne, the Contract Sum shall be reduced by the deficiency. If payments then or thereafter due the Contractor are not sufficient to cover such amount, the Contractor shall pay the difference to the State.

12.2.5 The Contractor shall bear the cost of correcting destroyed or damaged Work executed by the State or separate contractors, whether fully completed or partially completed, which is caused by the Contractor's correction or removal of Work that is not in accordance with requirements of the Contract Documents.

12.2.6 Nothing contained in this Paragraph 12.2 shall be construed to establish a period of limitation with respect to other obligations that the Contractor might have in the Contract Documents. Establishment of the time period of 1 year, as described in Subparagraph 3.5.1, relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with requirements of the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.

12.3 **ACCEPTANCE OF NONCONFORMING WORK:** If the State prefers to accept any or all of the Work that is not in accordance with requirements of the Contract Documents, the State may do so instead of requiring its correction and/or removal, in which case the Contract Sum will be reduced as appropriate and equitable. Such adjustment shall be effected whether or not final payment to the Contractor has been made.

ARTICLE 13 - MISCELLANEOUS PROVISIONS

13.1 **GOVERNING LAW:** The Contract shall be governed by the law of the State of California.

13.2 **SUCCESSORS AND ASSIGNS:** The Contract binds the Contractor, the Contractor's partners, successors, assigns and legal representatives to the State in respect to covenants, agreements and obligations contained in the Contract Documents. Neither party to the Contract shall assign the Contract as a whole without written consent of the other. If either party attempts to make such an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations in the Contract Documents.

13.3 **WRITTEN NOTICE:** Written notice shall be deemed to have been duly served if delivered in person to the individual; or a member of the firm or entity; or to an officer of the corporation for which it was intended; or if delivered to or sent by US mail to the last business address known to the party giving notice.

13.4 **CONTRACTOR'S USE OF COMPUTER SOFTWARE:** The Contractor, by signing the Agreement, certifies that it has appropriate systems and controls in place to ensure that State funds will not be used in the performance of the Contract for the acquisition, operation or maintenance of computer software in violation of copyright laws.

13.5 **INDEPENDENT CONTRACTOR:** Contractor, and the agents, subcontractors, and employees of the Contractor, in the performance of this Contract, shall act in an independent capacity and not as officers or employees or agents of the State.

13.6 **UNENFORCEABLE PROVISIONS:** In the event that any provision of this Contract is unenforceable or held to be unenforceable, then the parties agree that all other provisions of this Contract have force and effect and shall not be affected thereby.

13.7 **EXPATRIATE CORPORATIONS:** Contractor hereby declares that it is not an expatriate corporation or subsidiary of an expatriate corporation within the meaning of Public Contract Code Section 10286 and 10286.1, and is eligible to contract with the State.

13.8 **DOMESTIC PARTNERS:** For Contracts executed or amended after July 1, 2004, the Contractor may elect to offer domestic partner benefits to the Contractor's employees in accordance with Public Contract Code Section 10295.3. However, the Contractor cannot require an employee to cover the costs of providing any benefits which have otherwise been provided to all employees regardless of marital or domestic partner status.

13.9 **AIR OR WATER POLLUTION VIOLATION:** Under the State laws, the Contractor shall not be: (1) in violation of any order or resolution not subject to review promulgated by the State Air Resources Board or an air pollution control district; (2) subject to cease and desist order not subject to review issued pursuant to Section 13301 of the Water Code for violation of waste discharge requirements or discharge prohibitions; or (3) finally determined to be in violation of provisions of federal law relating to air or water pollution.

13.10 **CERTIFICATION BY CONTRACTOR OF DISABLED VETERAN BUSINESS ENTERPRISE/SMALL BUSINESS PARTICIPATION**

13.10.1 If, for this agreement, the Contractor made a commitment to achieve disabled veteran business enterprise (DVBE) participation, the Contractor must certify in writing to the State, the total amount the Contractor received under the contract, the name and address of the DVBE firms that participated in the performance of the contract, the amount each DVBE received from the Contractor, that all payments have been made to the DVBE and the actual percentage of DVBE participation achieved. Additionally, if for this agreement, the Contractor made a commitment to achieve 25% Small Business participation, the Contractor must certify in writing to the State, the actual percentage of Small Business participation that was achieved. The Contractor is instructed to comply with the procedures stated in CLOSEOUT PROCEDURES, Section 01 77 00. This certification shall be completed pursuant to Section 999.5 of the Military and Veterans Code (M&VC) and Section 14841 of the Government Code. A person or entity that knowingly provides false information shall be subject to a civil penalty for each violation.

END OF DOCUMENT

DOCUMENT 00 73 00
SUPPLEMENTARY CONDITIONS

Requirements included herein supplement DOCUMENT 00 72 00 - GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION.

1. ARTICLE 1 – GENERAL PROVISIONS

Paragraph 1.1, DEFINITIONS

Add the following definition:

Construction Manager: A consultant firm, Cumming, retained for this Project by the State to assist the Department of General Services.

Hazardous Materials: These materials include but are not limited to products and materials containing: Asbestos, Lead, PCB's, Petroleum fuels and lubricants (including chemical additives), oxidizers, corrosives, solvents, acids and carcinogens.

2. ARTICLE 2 – ADMINISTRATION OF THE CONTRACT

Paragraph 2.6, RUSSIAN SANCTION ORDERS

Add the following Subparagraph 2.6

2.6 On March 4, 2022, Governor Gavin Newsom issued Executive Order (EO) N-6-22 regarding Economic Sanctions against Russia and Russian entities and individuals. "Economic Sanctions" refers to sanctions imposed by the U.S. government in response to Russia's actions in Ukraine, as well as any sanctions imposed under state law. The EO directs state agencies to terminate contracts with, and to refrain from entering any new contracts with, individuals or entities that are determined to be a target of Economic Sanctions. Accordingly, should the State determine Contractor is a target of Economic Sanctions or is conducting prohibited transactions with sanctioned individuals or entities, that shall be grounds for termination of this agreement. The State shall provide Contractor advance written notice of such termination, allowing Contractor at least 30 calendar days to provide a written response. Termination shall be at the sole discretion of the State.

Paragraph 2.7. GENERATIVE ARTIFICIAL INTELLIGENCE (GenAI) REPORTING

2.7 During the term of the contract, Contractor must notify the State in writing if their services or any work under this contract includes, or makes available, any previously unreported GenAI technology, including GenAI from third parties or subcontractors. Contractor shall immediately complete the GenAI Reporting and Factsheet (STD 1000) to notify the State of any new or previously unreported GenAI technology. At the direction of the State, Contractor shall discontinue the use of any new or previously undisclosed GenAI technology that materially impacts functionality, risk or contract performance, until use of such GenAI technology has been approved by the State.

Failure to disclose GenAI use to the State and submit the GenAI Reporting and Factsheet (STD 1000) may be considered a breach of the contract by the State at its sole discretion and the State may consider such failure to disclose GenAI and/or failure to submit the GenAI Reporting and Factsheet (STD 1000) as grounds for the immediate termination of the contract. The State is entitled to seek any and all relief it may be entitled to as a result of such non-disclosure.

The State reserves the right to amend the contract, without additional cost, to incorporate GenAI Special Provisions into the contract at its sole discretion and/or terminate any contract that presents an unacceptable level of risk to the State.

3. ARTICLE 3 – CONTRACTOR

Paragraph 3.2, SUPERVISION AND CONSTRUCTION PROCEDURES

Delete Subparagraph 3.2.5 in its entirety and replace it with new Subparagraph 3.2.5 as follows:

3.2.5 Until Acceptance of the Work, the Contractor shall have the charge and care thereof, and shall bear risk of injury or damage to any part of the Work by action on the elements (except for an Act of God, or natural disaster as proclaimed by the State or Federal Government provided that the loss does not involve Contractor negligence and if the Work damaged is built in accordance with the Contract and applicable building standards), or from any other reason except for such damages as are directly caused by acts of the Federal or State Government and the public enemy, except as provided in Paragraph 8.5.

Paragraph 3.3, LABOR AND MATERIALS

Delete Subparagraph 3.3.3 in its entirety and replace it with new Subparagraph 3.3.3 as follows:

3.3.3. Prevailing Wage: The Contractor shall comply with Labor Code Sections 1774 and 1775. Pursuant to Section 1774, the Contractor and every subcontractor, regardless of tier, shall pay not less than the specified prevailing wage rates to all workers employed in the execution of the Contract. In accordance with Section 1775, the Contractor shall forfeit to the State up to \$200 for each day, or portion thereof, for each worker paid less than the prevailing wage rates for the work or craft in which the worker is employed for any work executed under the Contract by the Contractor or by any subcontractor, regardless of tier, in violation of the provisions of the Labor Code; and, in particular, Labor Code Sections 1770 to 1780, inclusive. In addition to such forfeiture, the difference between such stipulated prevailing wage rates and the amount paid to each worker for each day, or portion thereof, shall be paid to each underpaid worker by the Contractor. This provision shall not apply to properly registered apprentices.

- .1 Pursuant to Labor Code, Section 1770, the Director of the Department of Industrial Relations has ascertained the general prevailing rate of per diem wages and a general prevailing rate for legal holiday and overtime work for each craft required for execution of the Contract. The Contractor shall obtain copies of the prevailing rate of per diem wages from the Department of Industrial Relations, Division of Labor Statistics & Research, PO Box 420603, San Francisco, CA 94142-0603, (415) 703-4780; or wage rates may be accessed on the internet at [Prevailing Wage Requirements](#). The Contractor is responsible to read, understand and comply with all the guidelines, including the fine print in the prevailing wage determinations; and shall post a copy of the prevailing wage rates, specific to the Project, at the Project site.
- .2 Wage rates set forth are the minimum that may be paid by the Contractor. Nothing herein shall be construed as preventing the Contractor from paying more than the minimum rates set. No extra compensation will be allowed by the State due to the inability of the Contractor to hire labor at minimum rates, nor for necessity for payment by the Contractor of subsistence, travel time, overtime, or other added compensations, all of which possibilities are elements to be considered and ascertained to the Contractor's own satisfaction in preparing the Bid Form
- .3 If it becomes necessary to employ crafts other than those listed in the General Prevailing Wage Rate booklet, the Contractor shall contact the Division of Labor Statistics and Research as noted above. The rates thus determined shall be applicable as minimum for the contract and incorporated in the bid. When the wage determination shows an expiration date (noted by a double asterisk**), to expire during the term of the contract, the Contractor must call or write the DIR to obtain the new rates and incorporate them in the bid to be applicable for the term of the contract.
- .4 The Contractor and each subcontractor, regardless of tier, shall keep an accurate payroll

record showing the names, addresses, social security numbers, work classifications, straight time and overtime hours worked each day and week, and the actual per diem wages paid to each journeyman, apprentice, worker, or other employee employed by the Contractor and/or subcontractor in connection with the Work. Payroll records shall be certified and shall be on forms provided by the Division of Labor Standards Enforcement, or shall contain the same information as those forms. The Contractor's and subcontractor's certified payroll records for each employee shall be submitted with each payment request, covering the period of the payment request unless requested otherwise by the Labor Commissioner of the Department of Industrial Relations pursuant to Labor Code Section 1771.4(c)(2)(b) monthly payrolls should be sent directly to the Department of Industrial Relations in the current prescribed electronic format. Refer to [Certified Payroll Reporting](#) for access to the electronic Certified Payroll (eCRP) Application.

- .5 Labor Compliance Monitoring and Enforcement: This project is subject to monitoring and enforcement by the Department of Industrial Relations (DIR), Compliance Monitoring Unit. All Contractors and subcontractors, regardless of tier, shall be required to comply with the Monitoring and Enforcement Program, including, but not limited to, contractor registration, submittal of electronic certified payroll reports directly to the DIR and cooperation with on-site monitoring by DIR personnel.

Paragraph 3.13, TESTS AND INSPECTIONS

Delete Subparagraph 3.13.1 in its entirety and replace with the following Subparagraph 3.13.1.

3.13.1 The Contractor shall at all times permit the State, its agents, officers, and employees to visit the Project site and inspect the Work, including shops where the work is in preparation. This obligation shall include maintaining proper facilities and safe access for such inspection. Including, but not limited to providing lifts, ladders, scaffolds, platforms and paths of travel. When the Contract Documents require a portion of the Work to be tested, such portion of the work shall not be covered up until inspected and approved by the State. The Contractor shall be solely responsible for notifying the State where and when the work is ready for inspection and testing and shall give written notice no fewer than two business days prior to the time of inspection. For inspections that require the State Fire Marshal's (SFM) presence, the Contractor shall provide the State's Inspector of Record (IOR) written notice where and when the work is ready for inspection no fewer than three business days prior to the time of inspection.

Should any work be covered without the required testing and approval, such work shall be uncovered and recovered at the Contractor's expense.

Delete Subparagraph 3.13.2 in its entirety and replace with the following Subparagraph 3.13.2.

3.13.2 If the State determines that portions of the Work require additional testing, inspection or approval not included in the Contract Documents, the State will instruct the Contractor, in writing, to make arrangements for additional testing, inspection or approval by an entity acceptable to the State, and the Contractor shall give written notice to the State of where and when tests and inspections will be conducted no fewer than two business days prior to the time of the additional testing, inspection or approval so that the State may observe the procedures. For inspections that require the State Fire Marshal's (SFM) presence, the State's Inspector of Record (IOR) will make the necessary arrangements with the SFM. The Contractor shall provide a written notice no fewer than three business days prior to the time of inspection.

The State will bear the costs except as provided in Subparagraph 3.13.3.

Paragraph 3.25, CONTRACTOR REQUIRED NOTIFICATION OF CHANGES

SUPPLEMENTARY CONDITIONS

Delete Paragraph 3.25 in its entirety and replace with the following Paragraph 3.25

3.25 **CONTRACTOR REQUIRED NOTIFICATION OF CHANGES:** The Contractor shall notify the State's Representative in writing of any change to Contractor's name, status, or information including but not limited to:

1. Name
 - a. An amendment is required to change the Contractor's name as listed on this Agreement. Upon receipt of Contractor's notification and legal documentation of the name change, the State will process the amendment. Payment of invoices presented with a new name cannot be paid prior to approval of said amendment.
 - b. The State shall not be liable for penalties or interest on payments which are delayed due to Contractor's change of name and subsequent amendment processing.
2. Address/Location
3. Federal Employer Identification Number (FEIN)
4. Type of Organization or Legal Status – including:
 - a. Corporate
 - b. Partnership
 - c. Individual/Sole-Ownership
 - d. Joint Venture
 - e. Limited Liability Company
 - f. DBA
5. Ownership
6. Officers or Key Personnel
7. License
8. Other (Bankruptcy, Etc.)

Contractor shall immediately provide an updated Standard Form 204 (IRS/FTB form) to the Architectural, Construction and Engineering Contracts Section within five (5) calendar days of any such relevant change.

The State shall not be liable for penalties or interest on payments which are delayed due to Contractor's lack of proper or timely notice and documentation of a relevant change in status which impacts the State's ability to pay.

Contractor shall submit the firm's status change in writing including the Contract Number, Project Title and all necessary backup and legal documentation to support the status change to:

The State Department of General Services, Administration Division
Office of Business and Acquisition Services, Contracts Services Section
707 Third Street, Suite 2-300
West Sacramento, CA 95605-2811

Paragraph 3.4, NONDISCRIMINATION CLAUSE

Delete Paragraph 3.4 in its entirety and replace with the following:

3.4.1. During the performance of this contract, the recipient, contractor, and its subcontractors shall not deny the contract's benefits to any person on the basis of race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, genetic information, marital status, sex, gender, gender identity, gender expression, age, sexual orientation, or military and veteran status, nor shall they discriminate

unlawfully against any employee or applicant for employment because of race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, genetic information, marital status, sex, gender, gender identity, gender expression, age, sexual orientation, or military and veteran status. Contractor shall insure that the evaluation and treatment of employees and applicants for employment are free of such discrimination.

3.4.2. Contractor shall comply with the provisions of the Fair Employment and Housing Act (Gov. Code, § 12900 et seq.), the regulations promulgated thereunder (Cal. Code Regs., tit. 2, § 11000 et seq.), the provisions of Article 9.5, Chapter 1, Part 1, Division 3, Title 2 of the Government Code (Gov. Code, §§ 11135-11139.5), and the regulations or standards adopted by the awarding state agency to implement such article.

3.4.3. Contractor or recipient shall permit access by representatives of the Department of Fair Employment and Housing (DEFH) and the awarding state agency upon reasonable notice at any time during the normal business hours, but in no case less than 24 hours' notice, to such of its books, records, accounts, and all other sources of information and its facilities as said Department or Agency shall require to ascertain compliance with this clause.

3.4.4. Recipient, contractor and its subcontractors shall give written notice of their obligations under this clause to labor organizations with which they have a collective bargaining or other agreement.

3.4.5. The contractor shall include the nondiscrimination and compliance provisions of this clause in all subcontracts to perform work under the contract.

3.4.6 STANDARD CALIFORNIA NONDISCRIMINATION CONSTRUCTION CONTRACT SPECIFICATIONS (GOV. CODE SECTION 12990)

These specifications are applicable to all state contractors and subcontractors having a construction contract or subcontract of \$5,000 or more.

- .1 As used in the specifications:
 - a. "Act" means the Fair Employment and Housing Act.
 - b. "Administrator" means Administrator, Office of Compliance Programs, California Department of Fair Employment and Housing, or any person to whom the Administrator delegates authority;
- .2 Whenever the contractor or any subcontractor subcontracts a portion of the work, it shall include in each subcontract of \$5,000 or more the nondiscrimination clause in this contract directly or through incorporation by reference. Any subcontract for work involving a construction trade shall also include the Standard California Construction Contract Specifications, either directly or through incorporation by reference.
- .3 The contractor shall implement the specific nondiscrimination standards provided in paragraphs 6(a) through (e) of these specifications.

- .4 Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the contractor has a collective bargaining agreement, to refer members of any group protected by the Act shall excuse the contractor's obligations under these specifications, Government Code section 12990, or the regulations promulgated pursuant thereto .5. In order for the nonworking training hours of apprentices and trainees to be counted, such apprentices and trainees must be employed by the contractor during the training period, and the contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor or the California Department of Industrial Relations.
- .5 In order for the nonworking training hours of apprentices and trainees to be counted, such apprentices and trainees must be employed by the contractor during the training period, and the contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor or the California Department of Industrial Relations.
- .6 The contractor shall take specific actions to implement its nondiscrimination program. The evaluation of the contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The contractor must be able to demonstrate fully its efforts under steps a. through e. below:
- a. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and at all facilities at which the contractor's employees are assigned to work. The contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the contractor's obligations to maintain such a working environment.
 - b. Provide written notification within (7) seven days to the director of the DFEH when the referral process of the union or unions with which the contractor has a collective bargaining agreement has impeded the contractor's efforts to meet its obligations.
 - c. Disseminate the contractor's equal employment opportunity policy by providing notice of the policy to unions and training, recruitment and outreach programs and requesting their cooperation in assisting the contractor to meet its obligations; and by posting the company policy on bulletin boards accessible to all employees at each location where construction work is performed.
 - d. Ensure all personnel making management and employment decisions regarding hiring, assignment, layoff, termination, conditions of work, training, rates of pay or other employment decisions, including all supervisory personnel, superintendents, general foremen, on-site foremen,

etc., are aware of the contractor's equal employment opportunity policy and obligations, and discharge their responsibilities accordingly.

- e. Ensure that seniority practices, job classifications, work assignments, and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the equal employment opportunity policy and the contractor's obligations under these specifications are being carried out.
- .7 Contractors are encouraged to participate in voluntary associations that assist in fulfilling their equal employment opportunity obligations. The efforts of a contractor association, joint contractor-union, contractor-community, or other similar group of which the contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under these specifications provided that the contractor actively participates in the group, makes every effort to assure that the group has a positive impact on equal employment opportunity in the industry, ensures that the concrete benefits of the program are reflected in the contractor's workforce participation, and can provide access to documentation that demonstrates the effectiveness of actions taken on behalf of the contractor. The obligation to comply, however, is the contractor's.
- .8 The contractor is required to provide equal employment opportunity for all persons. Consequently, the contractor may be in violation of the Fair Employment and Housing Act (Government Code section 12990 et seq.) if a particular group is employed in a substantially disparate manner.
- .9 The contractor shall not use the nondiscrimination standards to discriminate against any person because race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, genetic information, marital status, sex, gender, gender identity, gender expression, age, sexual orientation, or military and veteran status.
- .10 The contractor shall not enter into any subcontract with any person or firm decertified from state contracts pursuant to Government Code section 12990.
- .11 The contractor shall carry out such sanctions and penalties for violation of these specifications and the nondiscrimination clause, including suspension, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to Government Code section 12990 and its implementing regulations by the awarding agency. Any contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Government Code section 12990.
- .12 The contractor shall designate a responsible official to monitor all employment related activity to ensure that the company equal employment opportunity policy is being carried out, to submit reports relating to the provisions hereof as may be required by OCP and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, status, (e.g., mechanic, apprentice trainee, helper, or laborer), dates of changes in status, hours

worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in any easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.

4. ARTICLE 4 – SUBCONTRACTORS

Paragraph 4.2, SUBCONTRACTUAL RELATIONS

Delete Paragraph 4.2.2 and replace it with the following Paragraph 4.2.2:

4.2.2 Subcontractor Payments: Subcontractors and Sub-subcontractors shall be paid for work performed in accordance with Public Contract Code Sections 10262 and 10262.5.

Delete Paragraph 4.3 and replace it with the following Paragraph 4.3

4.3 DISABLED VETERAN BUSINESS ENTERPRISE PROGRAM: Pursuant to Public Contract Code (PCC) Section 10115 et. seq., the Contractor shall use, employ and utilize Disabled Veteran Business Enterprise (DVBE) subcontractors, sub-subcontractors or material suppliers who were listed in their bid documents for DVBE Program participation, to the full extent of the amount of money and/or percentage of commitment manifested in the bid documents. If the Contractor wishes to substitute any listed DVBE subcontractors, sub-subcontractors or material suppliers for just and legal cause, the Contractor shall follow the dictates of PCC Sections 4107 and 10115.12b, as well as Military and Veterans Code (M&VC) Section 999.5(e) and California Code of Regulations, Title 2, Section 1896.64. The DVBE may only be replaced by another DVBE and shall obtain the written authorization of the State prior to any such substitutions. The Contractor shall not unilaterally substitute a listed DVBE subcontractor, sub-subcontractor or material supplier. Failure of Contractor to seek substitution and adhere to the DVBE participation requirement identified in the bid may be cause for contract termination, recovery of damages under rights and remedies due to the State, and penalties as outlined in M&VC Section 999.9; PCC Sections 4110 and PCC Section 10115.10.

5. ARTICLE 7 – TIME

Paragraph 7.2, CONTRACT TIME

Delete Subparagraph 7.2.1 and replace it with the following Subparagraph 7.2.1:

7.2.1 Time is of the Essence in this Contract. The Contractor shall complete all the Work of the Contract within the Contract Time of:

THREE HUNDRED SIXTY-FIVE (365)

calendar days, starting on the Start Date stipulated in the Notice to Proceed, which the Contractor will receive not less than 5 days in advance.

Paragraph 7.3, LIQUIDATED DAMAGES

Add the following Subparagraphs 7.3.1 and 7.3.2:

7.3.1 The Contractor shall pay to the State the sum of \$500 per day for each and every calendar day delay in finishing of Work under this Contract beyond the Contract time.

7.3.2 If the Contractor is more than 14 calendar days behind schedule at any point during the

Contract Time, based on the latest updated Official Progress Schedule, the State will withhold \$500 per day for each and every day that the Contractor is behind schedule from the monthly payment for that month. If the Contractor recoups all or a portion of the delay during the next pay period, the amount withheld will be reduced accordingly.

6. ARTICLE 8 – PAYMENTS AND COMPLETION

Paragraph 8.2, TIMELINESS OF PAYMENTS

Delete Paragraph 8.2.3 and replace it with following Paragraph 8.2.3:

- 8.2.3 The State will make progress payments pursuant to Public Contract Code, Sections 10261 and 10261.5.

Paragraph 8.3, RETENTIONS

Delete Subparagraph 8.3.1.2 and replace it with the following Subparagraph 8.3.1.2:

- .2 The State shall retain 5 percent of the estimated value of Work completed.

Paragraph 8.5, OCCUPANCY BY THE STATE PRIOR TO COMPLETION OF THE WORK

Delete Paragraph 8.5.1 and replace it with the following:

- 8.5.1 The State reserves the right to occupy all or any part of the Project prior to Completion of the Work, upon written notice. Such occupancy or use is herein referred to as Beneficial Occupancy. In this event, the Contractor shall be relieved of responsibility to the State for liability arising out of such occupancy by the State.

7. ARTICLE 11 – INSURANCE AND BONDS

Paragraph 11.1, CONTRACTOR'S INSURANCE

Delete Paragraph 11.1 and replace it with the following 11.1:

11.1 CONTRACTOR'S INSURANCE

11.1.1 General Insurance Requirements:

- .1 Contractor shall procure and maintain insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder and the results of that work by the Contractor, its agents, representatives, employees or subcontractors.
- .1 Contractor shall furnish the State with certificates and endorsements effecting coverage required by this clause. All certificates and endorsements are to be received and approved by the State before work commences.
- .2 The State reserves the right to require complete, certified copies of all required insurance policies, including endorsements affecting the coverage required by these specifications at any time.
- .2 Insurance Companies shall be acceptable to Department of General Services (DGS) and Office of Risk and Insurance Management (ORIM). Insurance is to be placed with insurers with a current A.M. Best's rating of no less than A-VII, unless otherwise acceptable to DGS, Office of Risk and Insurance Management. Exception may be made for the State Compensation Insurance Fund. If self-insured, review of financial information may be

- required.
- .3 Except as otherwise provided for Builders Risk/Installation Floater under Clause 11.1.2.4, all coverage shall be in force until the Acceptance of the Work by the Director of DGS. If the insurance expires, the Contractor shall immediately provide a new current certificate or be declared in breach of Contract. The State reserves the right to withhold all progress and retention payments until the breach is cured to the satisfaction of the State. Renewal insurance certificates must be tendered to the State prior to or exactly at the expiration of the previous insurance certificate. There shall be no gap in insurance coverage. This renewed insurance shall be in accordance with the terms of the Contract.
 - .4 Contractor is responsible to notify the State a minimum of five (5) business days before the effective date of any cancellation, non-renewal or material change that affects required insurance coverage.
 - .5 Unless otherwise stated in the contract, the Contractor shall be responsible for any premium deductible or self-insured retention contained within the insurance.
 - .6 All insurance policies required by this contract must allow the State to pay and/or act as the contractor's agent in satisfying any self-insured retention (SIR). The choice to pay and/or act as the contractor's agent in satisfying any SIR is at the State's discretion.
 - .7 In the event the Contractor fails to keep in effect at all times the specified insurance coverage, the State may, in addition to the remedies noted in Article 11.1.1.3 above and any other remedies it may have, remove the Contractor from the work site and/or may terminate this Contract upon the occurrence of such event, subject to the provisions of this Contract.

In the event, the State elects to remove the Contractor from the work site, the Contractor will not be entitled to additional days or compensation.
 - .8 Any insurance required to be carried shall be primary and not excess or contributory, to any other insurance carried by the State.
 - .9 Any required endorsement requested by the State must be submitted with all requested certificates of insurance and not substituted by referring to such coverage on the certificate of insurance.
 - .10 Minimum Scope of Insurance - Coverage shall be at least as broad as:
 - .1 Insurance Services Office Commercial General Liability coverage (occurrence Form CG 0001).
 - .2 Insurance Services Office Form Number CA 0001 covering Automobile Liability, "any auto", or "all owned, hired and non-owned".
 - .11 All coverage and limits available to the contractor shall also be available and applicable to the State.
 - .12 Contractor shall procure and maintain insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder by the Contractor, his agents, representatives, employees, or subcontractors.
 - .13 With the exception of Builders Risk/Installation Floater, Contractor shall require and verify that all subcontractors maintain insurance coverage and limits meeting or exceeding all the requirements stated herein. Contractor shall ensure that the Department of General Services and the State of California, its officers, agents, and employees, as additional insured on insurance required from subcontractors but only insofar as the operations under the Contract are concerned. For Commercial General Liability coverage subcontractors shall provide coverage with a form at least as broad as CG 20 38 04 13. The State reserves the right to require the Contractor to provide the subcontractors' insurance certificates and policies, when so directed by the State.
- 11.1.2 Insurance Requirements: The Contractor shall furnish to the State evidence of the required insurance as follows:
- .1 Commercial General Liability: The Contractor shall maintain commercial general liability with limits of not less than \$5,000,000 per occurrence for bodily injury and property damage liability combined. If Commercial General Liability insurance or other form with a general

aggregate limit is used, either the general aggregate limit shall apply separately to this project/location or the general aggregate limit shall be twice the required occurrence limit. If the aggregate applies "per project or location", it shall so state on the certificate. The policy shall include coverage for liabilities arising out of premises, operations, independent contractors, products, completed operations, personal and advertising injury, and liability assumed under an insured contract. This insurance shall apply separately to each insured against whom claim is made or suit is brought subject to the Contractor's limit of liability. The policy shall include the Department of General Services and the State of California, its officers, agents, and employees, as additional insureds, but only insofar as the operations under the Contract are concerned.

- .1 Additional Insured coverage shall be provided in the form of an insured endorsement as broad as the (CG 20 10 11 85) to the contractor's insurance policy. All coverage and limits available to the named insured shall be available and applicable to the additional insured. The endorsement must be attached to the certificate.
- .2 Deductibles and Self-Insured Retentions (for Commercial General Liability): Any deductibles or self-insured retentions must be declared to and approved by the State. At the option of the State, either: the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects the State of California and the Department of General Services, its officers, agents, employees and servants or the Contractor shall provide a financial guarantee satisfactory to the State guaranteeing payment of losses and related investigations, claim administration, and defense expenses.
- .2 Automobile Liability: The Contractor shall maintain motor vehicle liability with limits of not less than \$1,000,000 per accident for bodily injury and property damage. The State is to be covered as additional insured with respect to liability arising out of automobiles owned, leased, hired or borrowed by or on behalf of the contractor. The policy shall include the Department of General Services and The State of California, its officers, agents, and employees, as additional insureds, but only insofar as the operations under the Contract are concerned. All coverage and limits available to the named insured shall also be available and applicable to the additional insured.
- .3 Workers' Compensation: The Contractor shall maintain statutory workers' compensation and employer's liability coverage for all its employees who will be engaged in the performance of the Contract, including special coverage extensions where applicable as required by the State of California. The Workers' Compensation policy shall be endorsed with a waiver of subrogation in favor of the State for all work performed by the contractor, its employees, agents and subcontractors. Except for State Fund certificates, all subrogation waiver endorsements shall be submitted on a separate form. The Contractor shall maintain Employer's Liability coverage of \$1,000,000 per accident for bodily injury or disease.
- .4 Builders Risk/Installation Floater: The State shall insure all Work while in the course of construction, reconstruction, remodeling or alteration, including materials incorporated in the Work, against physical loss or damage resulting from the perils normally insured under an All-Risk Builders Risk/Installation Floater policy, including, but not limited to theft, fire and vandalism. The State will self-insure against Acts of God and natural disasters proclaimed by the State or Federal Government. The State will issue to the Contractor a "Summary of Coverage" provided under this Clause 11.1.2.4 Summary of Coverage and Certificate of Insurance will be provided to contractor as part of the executed contract.
 - .1 The proceeds under the Builder's Risk/Installation Floater Insurance procured by the State will be payable to the State and Contractor as their respective interests, from time to time, may appear.
 - .2 State's Builders Risk/Installation Floater Insurance shall provide limited coverage for materials in transit and materials stored off-site, and full coverage for materials at the Project site; however, the Contractor is responsible for reviewing the "Summary of Coverage" and reporting values that exceed the limits provided within the Summary of Coverage. Notification to the State does not provide coverage.

Value increases must be approved by the insurance carrier and contractor must have a Certificate of Insurance issued by the insurance carrier showing the increased values. Lacking confirmation from the State's insurance carrier that additional coverage was procured, Contractor will be responsible for damages in excess of the coverage limits provided within the Summary of Coverage.

- .3 Nothing in this Clause 11.1.2.4 shall be construed to relieve the Contractor of Contractor's responsibilities referred to under Clause 11.1.1 and Clause 11.1.2.
- .5 Insurance policies referred to in this Clause 11.1.2.4 shall provide the following:
 - .1 That the policies are primary and do not participate with nor are excess over any other valid collectible insurance carried by the Contractor.
 - .2 That the Insurer waives the right of subrogation against the Contractor.

END OF DOCUMENT

SECTION 01 11 00

SUMMARY

PART 1 GENERAL

1.01 WORK INCLUDED

- A. Work required to be performed by the Contractor comprises:

OFFICE BUILDING 8 & 9 – FIRE, LIFE, SAFETY UPGRADE
DEPARTMENT OF GENERAL SERVICES – FACILITIES MANAGEMENT DIVISION
OFFICE BUILDING 8 & 9 (039 & 045)
SACRAMENTO, SACRAMENTO COUNTY, CALIFORNIA

in conformity with the Drawings and Specifications hereinafter identified; including furnishing all material, labor, plant, tools, equipment, and services necessary therefor and incidental thereto, complete and ready for use, except as hereinafter otherwise provided.

1.02 WORK NOT INCLUDED

- A. Except for such auxiliary work as is shown or specified or is necessary as a part of the construction, the following work is NOT included in this Contract.
1. Work shown but marked "NIC" (Not in Contract). "BUA" (By Using Agency), or otherwise designated to be done by others.

1.03 LOCATION OF SITE

- A. The site of the work is on State of California property located at
OFFICE BUILDING 8 & 9 (039 & 045), 714/744 P STREET, SACRAMENTO, SACRAMENTO
COUNTY, CA

1.04 SPECIFICATIONS

- A. The Specifications are those bound in the Project Manual and enumerated in the Table of Contents. The General Conditions of the Contract for Construction, Supplementary Conditions, and Division 01 of the Specifications apply to all Work of this Contract.

1.05 DRAWINGS

- A. The Drawings consist of Drawing Sheets as listed in Document 00 01 15 of Project Manual.

1.06 CONTRACTOR'S SETS OF DRAWINGS AND PROJECT MANUALS

- A. State Furnished Drawings and Project Manuals: Upon award of Contract, the State will provide Drawings and Project Manuals upon Contractor request as follows:
1. Electronic Files
 2. Drawings: 5 sets
 3. Project Manuals: 5 sets.
- B. Additional Sets shall be the responsibility of the contractor.

1.07 SECURITY REGULATIONS

- A. Contractor shall cooperate with the Building authorities and shall observe and comply with all regulations presently in force on Building grounds. Refer to Section 01 31 00, Project Management and Coordination.
- B. After award of Contract, there will be a project start meeting, at which time security regulations will be reviewed with Contractor and subcontractor.

1.08 INTERRUPTION OF SERVICES

- A. Contractor shall make provisions to accomplish the work of this Contract without undue interference with Building operations. Interruptions to services for the purpose of making or breaking connection shall be made only after consultation with the State a minimum of one week in advance of connection break and shall be at such time and of such duration as may be directed.
- B. In addition, existing electrical, mechanical and security lines disconnected for work of this Contract shall not remain disconnected for more than 4 hours. If electrical power cannot be restored within the 4-hour period, Contractor shall provide temporary electrical service to restore required electrical power at Contractor's expense.

1.09 SEQUENCE OF CONSTRUCTION OPERATIONS

- A. Before starting construction operations, Contractor shall confer with the State to review sequence of construction operations.
- B. Contractor shall prepare schedules as set forth in Section 01 32 16, Progress Schedules and Reports.

1.10 HOURS OF WORK

- A. Contractor shall perform Work of this Contract on normal workdays and within normal work hours; 7:30 am to 4:30 pm. Work that interferes with building occupants and work performed in common work areas shall be performed within the hours of 7:00PM to 3:30AM Monday through Friday, as requested by State Representative and at no additional cost to the State. After hours work and work on Saturdays, Sundays, and holidays, may be permitted if approval is received from the State at least 3 working days in advance.

1.11 SITE CONDITIONS AND REQUIREMENTS

- A. Contractor shall keep drainage facilities, walks, and paved areas clean and free of mud and dirt, obstacles, etc. so that normal drainage and pedestrian and vehicular travel may be maintained.
- B. Do not use landscaped area(s) for work operations or storage.

1.12 PROTECTION OF EXISTING STRUCTURES AND UTILITIES

- A. Refer to the General Conditions of the Contract for Construction for Contractor responsibilities.
- B. Damage to existing improvements caused by Contractor's operations shall be repaired to restore damaged items to their original condition. Cost of such repair shall be borne entirely by Contractor.
- C. Drawings indicate existing structures, drainage lines, water, gas, electrical and other similar items and utilities which are known to the State.

- D. Locate known existing structures and utilities before proceeding with operations which may damage same. Maintain them in service, except as otherwise specified, provide protection and repair damage to them caused by the Work at no increase in Contract price.
- E. Additional utilities whose locations are unknown to the State may exist. Contractor shall be alert to their existence. If encountered, immediately report to the State for disposition of same.
- F. Contractor shall have City-accepted plans prior to beginning construction work within street right of way.

1.13 ASBESTOS CONTAINING MATERIALS DISCOVERED AND DISTURBED IN THE COURSE OF PERFORMING CONTRACT WORK

- A. In the event that existing construction materials are identified as containing asbestos materials and/or are disturbed in the course of performing work under this Contract, Contractor shall cease work around the suspect area immediately and notify the State Inspector and/or Project Director. Site conditions and extent of asbestos related work will be assessed by the State, to determine required changes in the work. Affected work activities under this Contract shall not resume until such determination is made by the State.

1.14 PAYMENT FOR DAMAGE TO TREES

- A. If any tree is injured or destroyed during the course of, or as a result of, construction operations, Contractor shall repair the damage and in addition, Contractor shall pay the State an amount calculated in accordance with cost schedule below.
- B. "Injury" is defined, without limitation, as bruising, scarring, tearing, or breaking of roots, branches, or trunk.
- C. It is and will be impracticable and difficult to determine actual damage, whether physical or esthetic, therefore, the State has assigned a total value to a tree based on its diameter at 30" above ground. Total value shown shall be paid the State for a tree totally destroyed.
- D. For injuries to roots or branches, the State will assign a value proportionate to total value of the tree.
- E. Proportional amount of total value shown shall be paid the State, for each tree injured, as follows:
 - 1. Divide total value of tree by its circumference to get value per inch of circumference.
 - 2. Measure circumferential length of injury.
 - 3. Multiply circumferential length of injury by value per circumferential inch; the result is the amount of damage for each injury.

Example:

A tree with a diameter of 10" at 30" above the ground is valued at \$2,400. Its circumference at that point is 31.5"; $\$2,400 \div 31.5 = \76.19 (the value per inch of circumference).

An injury of 8" of circumference is valued at $8 \times \$76.19$ or \$609.52.

Tree Value Cost Schedule

Tree Diameter Total Value
at 30" Height of Tree

Tree Diameter Total Value
at 30" Height of Tree

3/4"	\$50	10"	\$2,400
1"	100	12"	\$3,400
2"	200	14"	\$4,800
3"	300	16"	\$6,400
4"	400	18"	\$8,400
6"	800	19" & over	\$500 per in. diam.
8"	1,400		

- F. Trees specified to be pruned, removed in whole or in part are not subject to damage provisions under this Article.
- G. Trees which have been injured by work under this Contract shall be repaired by licensed tree surgeon. Repair shall include shaping of wounds, removal of severely injured branches and sealing of wounds and cuts with approved tree dressing as approved by the State.
- H. Total amount of tree damages shall be deducted from final payment due the Contractor. Injured or destroyed trees will remain the property of the State and shall remain or be removed by Contractor as directed by the State.

1.15 MAINTENANCE OF EXISTING LANDSCAPED AREAS

- A. Within the area of work, Contractor shall maintain, irrigate and protect plants, trees and shrubs; and shall keep necessary irrigating systems in operation. Keep vehicular traffic to bare minimum over tree roots; traffic shall be avoided near trees, plants and over lawns.
- B. Existing lawn areas damaged during the course of Contract Work shall be replaced with sod, including soil preparation and fertilization of areas to receive sod. Existing shrubs damaged during Contract Work shall be replaced with plants of same kind and size.
- C. Landscape maintenance period for new planted lawns and/or shrubs shall continue for a minimum of 60 calendar days. Planting shall be kept in a healthy growing condition by watering, weeding, cultivating, pruning, mowing, edging, spraying, fertilizing, and by performing other necessary maintenance operation. Improper maintenance or possible poor condition of planting at termination of scheduled maintenance period may cause postponement of final completion date of Contract.
- D. Contractor shall return the grounds back to the State in condition equal to or better than existed upon commencement of work.

END OF SECTION

SECTION 01 25 00

SUBSTITUTION PROCEDURES

PART 1 GENERAL

1.01 ACTION SUBMITTALS

- A. Substitution Request Form: CSI Form 13.1A.
- B. Documentation:
 - 1. Justification.
 - 2. Coordination information.
 - 3. Detailed comparison.
 - 4. Product Data.
 - 5. Samples.
 - 6. Certificates and qualification data.
 - 7. List of similar installations.
 - 8. Material test reports.
 - 9. Research reports.
 - 10. Detailed comparison of Contractor's construction schedule.
 - 11. Cost information.
 - 12. Contractor's certification.
 - 13. Contractor's waiver of rights to additional payment or time.
- C. Architect's Action: If necessary, Architect will request additional information within seven days of receipt of a request for substitution. Architect will notify Contractor of acceptance or rejection within 15 days of receipt, or days of receipt of additional information.

1.02 SUBSTITUTIONS

- A. Substitutions for Cause: Not later than 15 days prior to time required for preparation and review of submittals.
- B. Substitutions for Convenience: Not allowed.

END OF SECTION

SECTION 01 25 00

PAYMENT PROCEDURES

PART 1 GENERAL

1.01 SUMMARY

A. Schedule of Values:

1. Format: Line items based on Project Manual table of contents and consistent with format of AIA Document G703.
2. Provide multiple line items for principal subcontract amounts in excess of five percent of the Contract Sum.

B. Applications for Payment:

1. Payment Application Times: Indicated in the Agreement.
2. Payment Application Forms: AIA Document G702 and AIA Document G703 Waiver of Mechanic's Lien: Submitted from subcontractors, sub-subcontractors, and suppliers for construction period covered by previous application.

END OF SECTION

SECTION 01 31 00

PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.01 PROJECT CONTROL

- A. The State's Representative will outline and detail communication, correspondence and coordination procedures at Project start meeting.
- B. Examination of Site: Contractor and subcontractors shall visit the site prior to bidding and prosecution of the Work and shall familiarize themselves with existing conditions and be prepared to carry out the Work within existing limitations.
- C. Condition of Work in Place: Inspect and take responsibility for previously prepared or installed work of other contractors before applying subsequent materials or finishes. If work is in unsatisfactory condition, notify the State. Do not proceed until defective work has been corrected.
- D. Coordination:
 - 1. Subletting and Subcontracting Responsibilities: Refer to General Conditions of the Contract for Construction, Article 4.
 - 2. Contractor shall coordinate the Work with related work being done by the State and other contractors operating in the area. This coordination shall include reasonable adjustments of schedule in order to allow other contractors or State to do their work.
 - 3. Contractor shall coordinate electrical/mechanical work, particularly between general trades and mechanical/electrical trades so that sleeves, hangers, chases, openings, etc., required for pipe, conduit, and other installations of like character are duly and properly provided for and installed as work progresses.
 - 4. Contractor shall carefully examine Drawings relating to entire work with actual conditions so that Work will be accommodated in spaces provided. General arrangement and location of elements of various systems is shown on the Drawings or specified. Final locations, levels, etc., shall be governed by actual material size used, by building conditions encountered, and by work of all trades. Space conflicts and interferences shall be resolved before work is installed.5. Contractor shall utilize the Contract Documents, submittals, and layout drawings of the various trades to check and coordinate the Work so that no interferences or conflicts between trades will occur. This checking and coordination shall be performed and completed before construction is commenced in each affected area.
 - 6. Coordinate work to assure efficient and orderly sequence of installation of construction elements. Make provisions for accommodating items installed by the State or under separate contracts.
 - 7. Verify characteristics of interrelated operating equipment are compatible; coordinate work having interdependent responsibilities for installing, connection to, and placing such equipment in service.
- E. Coordination drawings:

1. Prepare coordination drawings where space is limited or if required to integrate products.
2. Coordination Digital Data Files: Same format as Drawings, operating in Microsoft Windows operating system.
3. BIM File Incorporation Develop and incorporate coordination drawing files into Building Information Model and perform three-dimensional component conflict analysis.
 - a. Digital data files of Drawings are available in Revit from the Architect.

1.02 LOCATIONS, ELEVATIONS, AND LAYOUT OF WORK

- A. Property lines, location ties, and elevations of components of the Project to be built under this Contract are shown on the Drawings. Grade elevations shown for various parts of the Work are taken from a benchmark shown on the Drawings, or if not shown, will be designated by the State. In case of conflict therein, notify the State in writing before starting work.
- B. Contractor shall lay out the Work and furnish surveys required for alignment and elevations of the Work and shall pay all costs therefor. Contractor shall furnish necessary lines, levels, locations, measurements and markers for all on the Work and be responsible for their accuracy.
- C. On building structures, Contractor shall lay out on forms, walls, floors, and columns, the exact location of partitions as guide to all trades.

1.03 SCHEDULES AND MEETINGS

- A. Planning and Scheduling: Refer to Section 01 32 16.
- B. Project Progress, Coordination, and Preinstallation Meetings: Contractor or his duly appointed representative shall attend project meetings at regular intervals as set by the State and shall attend preinstallation meetings as required by pertinent Specification Sections. Attendance shall be limited to the Contractor and his immediate subordinates, subcontractors where so specified, the State, and representatives of the Architect and Consultants, as requested. State, or State's duly appointed representative, will keep minutes of meetings; with copies sent to all who attend. Meetings shall be held via Microsoft Teams or at job site as needed at 744 P Street, Sacramento, CA.
- C. Project Construction Phases: Work of this Contract shall be executed in a phased manner to be proposed by the Contractor and agreed upon by the State in consideration of the needs of building operations and occupants.
- D. Project Closeout Conference: No later than 90 days prior to the scheduled date of Completion.

1.04 ALLOWABLE ENTRANCE

- A. Contractor, subcontractors, their employees, suppliers and delivery persons shall enter and exit property via designated entrance.

1.05 REQUESTS FOR INFORMATION (RFIs)

- A. RFI Forms: Software-generated form acceptable to Architect.

B. Architect's Action: Allow seven working days for Architect's response for each RFI.

C. RFI Log: Maintain a tabular log of RFIs. Submit log weekly.

END OF SECTION

SECTION 01 32 16

PROGRESS SCHEDULES AND REPORTS

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Work under this Section shall consist of furnishing computerized Time Scaled Cost Loaded Critical Path Method (CPM) Progress Schedule showing in detail how Contractor plans to execute and coordinate the Work; and submitting schedules, logs, updates and reports.

1.02 RELATED REQUIREMENTS

- A. Document 00 72 00: General Conditions of the Contract for Construction; Paragraph 3.10 and Article 7.
- B. Document 00 73 00: Supplementary Conditions; Contract time and liquidated damages.
- C. Section 01 31 00: Project Management and Coordination.
- D. Section 01 33 00: Submittal Procedures.

1.03 SCHEDULE DESCRIPTION

- A. Schedule shall be based on and incorporate Contract Milestone and Completion Dates specified in the Contract Documents. Schedule shall furnish or comply with the following requirements:
 - 1. Time scaled cost loaded CPM type schedule.
 - 2. No activity on schedule shall have duration longer than 21 calendar days, with exception of fabrication and procurement activities, unless otherwise approved by the State. Activity durations shall be total number of actual days required to perform that activity including consideration of weather impact on completion of that activity. The schedule shall include all construction activities and related activities, on and off site. All activities shall have "Earliest Start Date" and "Latest Start Date" and "Earliest Finish Date" and "Latest Finish Date". Specific activities shall be included, as indicated in this Section, and shall also include, but not be limited to Mobilization, Construction of Temporary Facilities and Start-Up and Testing Activities.
 - 3. Procurement of major equipment, through receipt and inspection at job site, identified as separate activity.
 - 4. State-furnished materials and equipment, if any, shall be identified as separate activities.
 - 5. Dependencies (or relationships) between activities.
 - 6. Processing/approval of submittals and shop drawings for major equipment. Activities dependent on submittal acceptance and/or material delivery shall not be scheduled to start earlier than expected acceptance or delivery dates.
 - 7. Total cost of performing each activity. Cost shall be total of labor, material, equipment, including overhead and profit. Sum of cost for activities shall equal total contract value.

8. Responsibility code for each activity corresponding to subcontractor responsibility for performing the Work.
 9. Allow 30 calendar days for developing punch list(s), completion of punch list items, and final inspection of Work, or designated portion thereof, by the State. No other activities shall be scheduled during this period.
 10. Interface with work of other contractors (or entities).
 11. Separate buildings and other independent project elements shall be individually identified in network.
- B. Overall time of completion and time of completion for each milestone shown on the Schedule shall adhere to the specified Contract time, unless an earlier (advanced) time of completion is requested by Contractor, agreed to by the State, and formalized by Change Order.
- C. Schedule shall be the basis for evaluating job progress, progress payments, and time extension requests. Contractor shall develop Schedule and monitor actual progress as compared to Schedule.
- D. Contractor shall use Microsoft Project 2010, Primavera Suretrak, Primavera P6 Professional Project Management software, or equal.

If Contractor chooses to use an equal to specified software, submit software data for approval and provide the State with licensed copy of latest revision of approved software registered to the State. Software shall be compatible with MS /Windows 7 operating system.

1.04 SUBMITTALS

- A. Schedule for First 90 Days: Within 10 calendar days after the Start Date stated in the Notice to Proceed, and prior to proceeding with any work on site, submit diskettes and 3 prints of detailed Schedule presenting orderly and realistic plan for completion of the Work for the first 90 days, in conformance with requirements of this Section.
1. Provide MS-Windows files containing Schedule files.
 2. The State will review submitted Schedule for conformance with requirements. Within 7 calendar days after receipt, the State will accept Schedule or will return it with comments. If proposed Schedule is not accepted, Contractor shall revise Schedule to incorporate comments and resubmit Schedule for acceptance within 7 calendar days after receiving it.
 3. Acceptance of Schedule by State, failure of Schedule to include an element of work, or inaccuracy in Schedule will not relieve Contractor from responsibility for accomplishing Work in accordance with the Contract.
- B. Procurement Log: Submit 1 copies of a Procurement log, cross-referenced to Schedule, including the following information for each type of material or equipment to be provided:
1. Material or equipment description.
 2. Technical specification reference.
 3. Duration in calendar days required for preparation and review of submittals.

4. Duration in calendar days required for fabrication and delivery.
 5. Cross reference to activities which will be affected by delivery date of material or equipment item.
 6. Scheduled delivery dates.
- C. Official Progress Schedule: Within 30 calendar days after the Start Date stated in the Notice to Proceed and prior to the first progress payment, submit diskettes and 3 prints of detailed Schedule presenting orderly and realistic plan from the start date to completion of the Work in conformance with requirements of this Section.
1. Provide MS-Windows files containing Schedule files.
 2. The State will review submitted Schedule for conformance with requirements. Within 14 calendar days after receipt, the State will accept Schedule or will return it with comments. If proposed Schedule is not accepted, Contractor shall revise Schedule to incorporate comments and resubmit Schedule for acceptance within 7 calendar days after receiving it. Accepted Schedule shall become the Official Progress Schedule.
 3. Acceptance of Schedule by State, failure of Schedule to include an element of work, or inaccuracy in Schedule will not relieve Contractor from responsibility for accomplishing Work in accordance with the Contract.
- D. Updates, Reports, and Revisions: Submit 1 copy of updates, reports, and revisions, as required under Articles 1.05, 1.06, and 1.07 of this Section.

1.05 SCHEDULE UPDATES

- A. Contractor shall submit to State an up-to-date status report of the Work, at uniform intervals, once each month, prior to progress payment. Status report shall include:
1. Contractor's estimated percentage complete for each activity not yet complete.
 2. Actual start/finish dates for activities as appropriate.
 3. Identification of processing errors, if any, on previous update reports.
 4. Revisions, if any, to assumed activity durations including revisions for weather impact for activities due to effect of previous update on schedule.
 5. Identification of activities which are affected by proposed Change Orders issued during update period. (See Network Window, Article 1.06 B).
 6. Resolution of conflict between actual work progress and schedule logic. When out of sequence activities develop in Schedule because of actual construction progress, Contractor shall submit revision to schedule logic to conform to current status and direction.
- B. The State will review updated information and meet with Contractor each month to determine status of the Work. If agreement cannot be reached on any issue, the State's determination will be used in processing of update by Contractor.
- C. Contractor shall incorporate the State's review comments and submit reports and number of copies as required under Article 1.04 of this Section.

D. Progress payments pursuant to Contract will be based on the update of the Schedule.

E. Partial payment for "mobilization" shall be made in percentages as follows (less retainage):

Contract Amount Completed	Payment for Mobilization
5 %	50% of amount bid for mobilization, or 5% of original Contract amount, whichever is lesser.
10%	75% of amount bid for mobilization, or 7.5% of original Contract amount, whichever is lesser.
20%	95% of amount bid for mobilization, or 9.5% of original Contract amount, whichever is lesser.
50%	100% of amount bid for mobilization, or 10% of original Contract amount, whichever is lesser.

Upon completion of all Work on the Project, payment of any amount bid for mobilization in excess of 10% of the original Contract amount will be paid.

1.06 SCHEDULE REVISIONS

- A. If sequence of construction differs significantly, as determined by the State, from Schedule, Contractor shall submit within 21 calendar days a revised Schedule to the State for review.
- B. When proposed Change Order is issued which has potential to impact specified completion dates, a Network Window shall be prepared by Contractor to reflect impact of such changes. After Network Window has been accepted and Contractor ordered to proceed with proposed Change Order, it shall be incorporated into Schedule. No additional cost beyond that provided in the General Conditions will be allowed for incorporation of approved proposed Change Orders into Schedule.
- C. Should Contractor, after acceptance of Schedule, intend to change their plan of construction, they shall submit their requested revisions to the State, along with written statement of revision, including description of logic for rescheduling the Work, methods of maintaining adherence to intermediate milestones and other specific dates and reasons for revisions. If requested changes are acceptable to the State, they will be incorporated into Schedule in next reporting period.
- D. Schedule revisions shall be submitted at least 7 calendar days prior to date of submission of update information; number of copies as specified in Article 1.04 of this Section.

1.07 SCHEDULE REPORTS

- A. Contractor shall submit the following reports for the Schedule, Schedule updates, Schedule revisions and recovery schedules:
 - 1. Schedule Logic Report listing activities, their early/late and actual start and finish dates, duration, float and logic relationship of activities sorted by early start.
 - 2. Cost Report listing each activity and its associated cost, percentage of Work accomplished, earned value to date, previous payments and amount earned for update period.
 - 3. Bar chart showing status of activities.

4. Narrative report with updated progress analysis, which shall include description of problem areas, current and anticipated delaying factors and their impact, explanation of corrective action taken and proposed revisions for recovery. Narrative report on submitted Schedule shall outline Contractor's overall plan, strategy, crew movement and utilization and other considerations in developing the Schedule.
 5. Network Plots presenting time scaled network diagram showing activities and their relationships.
 6. Cash Flow report calculated by early start, late start and indicating actual progress.
- B. In addition to the above reports, the State may request, from month-to-month, any of the following reports:
1. Total float from least to most.
 2. Activities by early start.
 3. Activities by late start.
 4. Activities grouped by subcontractors or selected trades.
 5. Activities with scheduled early start dates in a given time frame (i.e. 30- or 60-day outlook).
- C. Contractor shall submit number of copies of Schedule reports as specified in Article 1.04 of this Section.

1.08 TIME EXTENSIONS

- A. Contractor shall submit network window for claimed time extension requests, showing impact of claimed delay on Schedule.
- B. Float or Slack Time is the amount of time between earliest start date and late start date or between earliest finish date and latest finish date of activities of Schedule. No time extensions or delay costs will be allowed for delays caused by the State, on paths or activities containing float time, providing such delay does not exceed float time in latest updated version of Schedule.
- C. The State shall have no obligation to consider time extension request unless requirements of Contract Documents are complied with; the State shall not be responsible or liable to Contractor for constructive acceleration due to failure of the State to grant time extensions under the Contract Documents, should Contractor fail to comply with submission requirements and justification requirements of this Contract for time extension requests. Contractor's failure to perform in accordance with Schedule shall not be excused because Contractor has submitted time extension requests, until and unless such requests are approved by the State.

1.09 SHORT INTERVAL SCHEDULE

- A. Short Interval Scheduling (SIS) shall be used throughout onsite construction activity.
- B. Interval shall be a 3-week projection and shall include week submitted and two weeks thereafter.
- C. It shall contain sufficient detail to evaluate daily milestones and manpower/equipment loading and shall identify/tie into monthly updated Schedule.

D. Short Interval Schedule shall be submitted weekly.

E. A weekly meeting will be scheduled by the State to review and discuss Short Interval Schedules.

1.10 RECOVERY SCHEDULE

A. If Schedule falls 14 calendar days behind schedule on milestone dates or completion dates, Contractor shall prepare and submit Recovery Schedule, form and detail appropriate to the need, to explain and display how Contractor intends to reschedule those activities to regain compliance with Schedule during immediate subsequent pay period.

B. Recovery schedule, upon acceptance by the State, shall be incorporated into Schedule by Contractor.

1.11 DAILY REPORTS

A. Contractor shall submit Daily Activity Report to the State for each workday, including weekends and holidays, when worked.

B. Contractor may use Contractor's own report form, provided it contains same information included in standard form furnished by the State.

A.12 PAYMENTS WITHHELD

A. Progress Payments may be withheld in whole or in part should Contractor fail to comply with requirements of this Section.

B. Refer to Document 00 72 00, General Conditions of the Contract for Construction.

END OF SECTION

SECTION 01 32 33

CONSTRUCTION PHOTOGRAPHS

PART I - GENERAL

1.01 SECTION INCLUDES

- A. Photography.
- B. Digital Files.
- C. Prints.
- D. Submittals.

1.02 RELATED SECTIONS

- A. Document 00 72 00 - General Conditions of the Contract for Construction; Payment procedures.
- B. Section 01 11 00: Summary.
- C. Section 01 33 00: Submittal Procedures.
- D. Section 01 35 16: Alteration Project Procedures.
- E. Section 01 77 00 - Closeout Procedures: Project record documents.

1.03 PHOTOGRAPHY

- A. Provide full-color digital photography of site and construction throughout progress of Work produced by commercial photographer or other experienced photographer acceptable to the State.
- B. Provide non-aerial photographs from four cardinal views, minimum, at each specified event, for each building or construction activity area, until completion of Project. Provide additional oblique angles of view and/or close-ups as required to properly communicate stage of construction process being recorded.
- C. Provide factual presentation. Prints and/or digital files shall not be manipulated in any manner except as to correct for exposure/contrast and/or sharpness shortcomings.
- D. Provide images with optimal exposure, contrast, sharpness/resolution and maximum depth-of-field and minimum distortion.
- E. Take photographs not more than three calendar days prior to each scheduled application for payment, and as required to record the following events:
 - 1. Site clearing.
 - 2. Grading/Building pads.
 - 3. Excavations/Backfilling.
 - 4. Underground utility/infrastructure connections.
 - 4. Foundations.
 - 5. Structural framing.
 - 6. Enclosure of buildings (all faces).

CONSTRUCTION PHOTOGRAPHS

- 7. Interior progress (room-by-room; area-by-area for larger spaces).
- 8. Final completion.

F. Provide digital photos and digital video of existing conditions. Refer to Section 01 35 16 for additional requirements. Contractor shall pay particular attention to any historic elements.

1.04 DIGITAL FILES

- A. Digital capture shall be utilized.
- B. Digital files shall have date (month/day/year) and time imprinted/recorded by camera at time of exposure.
- C. Submitted digital files shall be in JPEG or TIFF format.
- D. Digital files shall be a minimum of 640x480 pixels.

1.05 SUBMITTALS

- A. Deliver digital files to State within 10 calendar days after exposing photographs of each event with transmittal letter as specified under Section 01 33 00.
- B. Maintain one set of digital files, identical to those submitted to the State, at the Project site.
- C. Deliver digital files to State on accordingly labeled CD-R or flash drive. Catalog and index files in chronological sequence.
- D. All digital files shall become the property of the State without restriction on their use.

END OF SECTION

SECTION 01 33 00

SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.01 DESCRIPTION

- A. To ensure that specified products are furnished and installed in accordance with Drawings and Specifications, transmittal procedures have been established for submittals for review by the State.
- B. Make all following submittals in strict accord with provisions of this Section and with requirements of the General Conditions of the Contract for Construction.
 - 1. Progress Schedule and Reports; including the Schedule of Values.
 - 2. Product Certification.
 - 3. Shop Drawings.
 - 4. Descriptive Data/Material Lists.
 - 5. Samples.
 - 6. Substitutions.
 - 7. Construction Waste Estimate.
 - 8. Certification of Recycled Content.
 - 9. Photography
 - 10. Alteration Project Procedures

1.02 RELATED REQUIREMENTS

- A. Document 00 72 00: General Conditions of the Contract for Construction.
- B. Section 01 32 16: Progress Schedules and Reports.
- C. Section 01 60 00: Product Requirements.
- D. Section 01 74 19: Construction Waste Management; submittal of Construction Waste Estimate.
- E. Section 01 74 20: Recycled Content Certification.
- F. Section 01 77 00: Closeout Procedures; Submittal of operating and maintenance manuals, record documents, guaranties/warranties, Construction Waste Management Report, State Agency Buy Recycled Campaign Procurement Summary, and other closeout documentation.
- G. Test Reports: Pertinent Specification Sections.

SUBMITTAL PROCEDURES

H. Individual Submittals Required: Pertinent Specification Sections.

PART 2 - PRODUCTS

2.01 PROGRESS SCHEDULE

- A. Prepare and submit Progress Schedule of operations as required by Section 01 32 16.
- B. Relate Progress Schedule to entire Project. Indicate dates for submission of required submittals.
- C. Submit Schedule of Values with Progress Schedule. Refer to General Conditions of the Contract for Construction, Paragraph 3.10, Contractor's Progress Schedule, and to Section 01 32 16, Progress Schedules and Reports, for additional cost breakdown requirements.

2.02 PRODUCT CERTIFICATIONS

- A. Where specifically indicated by pertinent Specification Sections, submit proper certification by recognized producer or association. Certifications shall attest to product's compliance with requirements of Contract Documents.

2.03 SHOP DRAWINGS

- A. Submittals shall include one reproducible transparency of each original and 6 prints of each transparency, name and location of project, name of Contractor, work order and contract numbers and cross references to contract documents. Number shop drawings consecutively. Make drawings legible and complete in every respect. Refer to General Conditions of the Contract for Construction, Paragraph 3.12.
- B. If Shop Drawings show variations from Contract requirements because of standard shop practice or other reason, make specific mention of such variations in letter of transmittal, as well as on drawings, in order that (if acceptable) suitable action may be taken for proper adjustment of Contract. Unless specific changes have been noted and accepted, no deviations from Contract Documents will be permitted.
- C. Transparencies will be returned to Contractor for Contractor's reproduction and use. State will make prints for its own use.

2.04 PRODUCT DATA/MATERIAL LISTS

- A. Manufacturer's Standard Schematic Drawings:
 - 1. Modify drawings to delete information which is not applicable to Project.
 - 2. Supplement standard information to provide additional information applicable to Project.
- B. Manufacturer's catalog sheets, brochures, diagrams, schedules, performance charts, illustrations and other standard descriptive data:
 - 1. Clearly mark each copy to identify pertinent materials, products or models.
 - 2. Show dimensions and clearances required.

SUBMITTAL PROCEDURES

3. Show performance characteristics and capacities.

4. Show wiring diagrams and controls.

5. Include calculations when applicable.

C. Material Safety Data Sheets (MSDS): Include for materials which require manufacturer's warnings and application instructions listed on MSDS provided by the product manufacturer.

2.05 SAMPLES

A. Physical examples to illustrate materials, equipment or workmanship, and to establish standards by which completed work is judged.

B. Where size of samples is not specified, office samples should be of sufficient size and quantity to clearly illustrate:

1. Functional characteristics of product or material, with integrally related parts and attachment devices.

2. After review, samples may be used in construction of Project.

C. Field Samples and Mockups:

1. Erect at Project site at location acceptable to State, unless otherwise approved.

2. Construct each sample or mockup complete, including work of all trades required in finished work.

2.06 SUBSTITUTIONS

A. State's Acceptance required:

1. Contract is based on materials, equipment and methods described in Contract Documents.

2. State will consider proposals for alternative materials, equipment and methods only when such proposals are accompanied by full and complete technical data and all other information required by State to evaluate proposed substitution.

3. Do not use alternative materials, equipment or methods unless such substitution has been specifically accepted for this work by the State.

4. Refer to General Conditions of the Contract for Construction, Subparagraph 3.12.10, Substitutions and Approved Equals, and Section 01 60 00, Product Requirements.

B. Coordination: Acceptance of substitution shall not relieve Contractor from responsibility for compliance with all requirements of the Drawings and Specifications, and Contractor shall be responsible at Contractor's own expense for changes in other parts of Contractor's work or work of others, including, but not limited to redesign costs of the Project which may be caused by acceptance of substitution.

C. Submit separate request for each product and support each request with:

SUBMITTAL PROCEDURES

1. Product identification.
2. Manufacturer's literature.
3. Samples, as applicable.
4. Comparison of proposed product with specified product.
5. Name and address of similar projects on which product has been used, and date of installation.

D. Submit data relating to changes in construction schedule, if any.

E. Substitute products shall not be ordered without written acceptance of the State.

F. The State will determine acceptability of proposed substitutions (alternatives) and reserves the right to reject proposals due to insufficient information.

2.07 CONSTRUCTION WASTE ESTIMATE

A. Submit Construction Waste Estimate form within 10 calendar days after the Start Date stated in the Notice to Proceed.

B. Refer to Section 01 74 19, Article 1.04 and Appendix 01 74 19.1, Construction Waste Estimate.

2.08 SUBMITTAL OF RECYCLED CONTENT CERTIFICATION

A. Product submittals from one or more of the eleven product categories as outlined in Section 01 74 20, Recycled Content Certification, shall be accompanied by a completed Recycled Content Certification Worksheet, Appendix 01 74 20.1.

B. An electronic copy of the form will be provided by the State at the Project start meeting, for Contractor's use.

C. Refer to Document 00 72 00, General Conditions of the Contract for Construction, Paragraph 3.21, Certification by Contractor of Recycled Content, and to Section 01 77 00, Closeout Procedures, for submittal of the State Agency Buy Recycled Campaign (SABRC) Procurement Report.

PART 3 - EXECUTION

3.01 SUBMISSION REQUIREMENTS

A. Schedule submissions at least three weeks before dates reviewed submittals will be needed and within the time periods specified in 3.01C. The State will review submittals within 21 calendar days unless the State notifies the Contractor in writing that a review of a specific submittal will take longer. Should the State review a submittal sooner, the Contractor shall not assume that a new timeline has been established.

B. The Contractor is herein made aware that deferred approval submittals, including but not limited to submittals requiring design review by the State's consultants and/or controlling agencies, such as the SFM, OSHPD, DSA, will have longer review periods. The Contractor shall contact these agencies at the onset of the start of construction to determine the length of time for review, back-checks and approval and appropriately include this time in their Progress Schedule to avoid delays.

SUBMITTAL PROCEDURES

- C. Except as otherwise specified for substitutions in Document 00 72 00, General Conditions of the Contract for Construction, Clause 3.12.10.1, and for certain other items in this Section 01 33 00, make submissions within the following number of days after the Start Date of the Work.
1. Items needed in initial stages of Work or requiring long lead-time for ordering: 30 calendar days.
 2. Deferred Approval submittals, for review and approval by agencies such as SFM, OSHPD, DSA: 30 calendar days.
 3. Electrical, mechanical and equipment items other than those covered by B.1. above: 60 calendar days.
 4. All other items: 90 calendar days.
- D. Identification: Identify submittals with names and location of Project, name of Contractor and work order and Contract numbers.
1. Submittals shall be accompanied by letter of transmittal addressed to State, to parties as identified in State's letter of instruction to be issued to Contractor at start of Project.
 2. Each submittal shall be consecutively numbered and shall contain list of items submitted, properly identified as to drawing numbers, Specifications Section or other identification.
 3. Submittals not adequately identified will be returned to Contractor for correction and resubmittal.
- E. State will review submittals for conformance with contract documents: Acceptance of submittals by State covers only such conformance. Effort will be made by State to discover errors, but responsibility for accuracy and correction and resubmittal shall be the Contractor's.
- F. Acceptance of submittals will be general and shall not relieve Contractor from responsibility for proper fitting and construction of Work, nor from furnishing materials and work required by Contract which may not be indicated on submittals.
- G. No portion of work requiring submittals shall be commenced until submittal has been accepted by State. All such portions of work shall be in accordance with accepted submittals.
- H. Number of copies required by State: Provide copies as follows; or greater quantity where so specified in individual Specification Sections. Add number of copies required by Contractor for Contractor's distribution to the following numbers:
1. Progress Schedule, including Schedule of Values: One reproducible and 2 copies. Include diskettes when CPM schedule is provided.
 2. Certification: 2 copies
 3. Shop Drawings: Reproducible transparencies - one transparency of each original drawing, and 2 prints of each transparency.
 4. Product Data/Material Lists: 2 copies

SUBMITTAL PROCEDURES

5. Samples: As specifically indicated in pertinent Specification Section.
 6. Samples for Color/Pattern Selection. One set of manufacturer's complete range for initial selection: and additional samples as requested of selected color/pattern for inclusion in final color schedule.
 7. Substitutions: 2 copies of required related data and information.
- I. Submittals shall include:
1. Date and revision dates.
 2. Project title and work order number.
 3. Names of Contractor, subcontractor, and supplier or manufacturer.
 4. Identification of product or material.
 5. Relation to adjacent structure or material.
 6. Field dimensions clearly identified as such.
 7. Specification Section number.
 8. Consecutive submittal number.
 9. Blank space for State's stamp.
 10. Contractor's stamp, initialed or signed, certifying to review of submittal, verification of field measurements and compliance with Contract Documents.

END OF SECTION

SECTION 01 35 16

ALTERATION PROJECT PROCEDURES

1.01 GENERAL

- A. Requirements hereunder apply to alteration work shown on Drawings and specified in Sections pertaining to crafts or trades involved.

1.02 ALTERATIONS

- A. Provide labor, materials, equipment and transportation as required to complete construction. Alteration work shall be performed by applicable crafts or trades involved.

1.03 REMOVAL WORK

- A. Perform removal work, including wrecking and cutting necessary to alteration work, changing or elimination of old features, installation of new work, or joining and keying of new work to existing work. Items removed temporarily for convenience of Contractor shall be removed and replaced by Contractor, as approved.

1.04 ADJACENT SURFACES OR FEATURES

- A. Replace, patch and finish in kind, adjacent surfaces or features displaced or disturbed in performance of alteration work. Broken and cut units shall be replaced with whole units.
- B. Except as otherwise shown or specified, join new work to existing work to match similar existing adjoining work. Prepare existing surfaces to receive new work.
- C. Prior to start of construction, in the presence of the State's Representative, Contractor shall provide digital CD/DVD w/audio and take digital photo documentation of existing conditions (Refer to Section 01 32 33 for additional requirements) and survey buildings and grounds affected by this Project and submit itemized list of defects, e.g. broken glass, window screens, salvage items, paving, walks, etc. Contractor shall make a copy of the video tape or CD/DVD and digital photos for Contractor's use and deliver the original to the State for use at Project close out. At completion of Project, defects not noted on that list or not verifiable on the CD/DVD or digital photos shall be corrected or replaced by Contractor at no cost to the State.

1.05 SALVAGED ITEMS

- A. When specifically indicated, salvable items removed in alteration work may be reused; otherwise new items shall be provided. Removed items and materials not of value to State and not reused in the Work shall be disposed of off premises at Contractor's expense.
- B. Salvaged items of value to State, and not reused in the Work, shall remain State property; store on site where directed.

1.06 LAYOUT OF WORK

- A. Establish exact layouts, locations, lines and elevations of work in relation to existing work. Obtain and verify measurements for new work in existing areas.
- B. Refer also to Section 01 31 00, Project Management and Coordination.

ALTERATION PROJECT PROCEDURES

1.07 PROTECTION OF EXISTING WORK AND NEW WORK

- A. Provide protection against weather and construction operations for existing equipment, finishes, floors and floor coverings, furniture, fixtures, hardware and other improvements in and about altered areas.

1.08 SHORING, BRACING, UNDERPINNING

- A. Provide temporary support for work as required by construction operations and to ensure safety.

1.09 INTERFERENCE

- A. Interference with or inconvenience to occupants shall be kept to a minimum.

1.10 NOISE

- A. Noisy motors, cutting, drilling, and fastening equipment shall be operated without disturbance to occupants of the building or adjacent buildings.

1.11 DUST AND RUBBISH

- A. Premises shall be kept clean and in a safe condition. Rubbish shall be removed as it accumulates.
- B. Temporary dust-retarding partitions and barricades shall be built around work areas as indicated on the Drawings.

1.12 INTERRUPTION OF SERVICES

- A. Interruption of electrical power for performance of work may be permitted only after consultation with the onsite State Representative. Temporary electrical power shall be provided to meet requirements of this Article. Added cost to Contractor due to necessity of complying with this Article shall be deemed to have been included in lump sum bid amount for Work of this Contract. Refer to requirements in Section 01 11 00 for interruption of services.
- B. Contractor shall provide his own temporary construction lighting and power as required in areas where work is being performed, when normal site power is disrupted.

1.13 ACCESS, DELIVERY, AND HAULING

- A. Materials and equipment shall be delivered and rubbish removed through passages designated by the State. Deliveries of materials and equipment to jobsite shall be made with a Contractor's representative present.
- B. Keep corridors and entrances, for use of occupants, and reasonable access thereto, clear of building materials, refuse, and the like.
- C. Refer to Section 01 60 00 for transportation, handling, and storage requirements.

1.14 CONSTRUCTION AREA

- A. Contractor's employees, equipment, and materials shall be restricted to immediate area of construction.

1.15 CONSTRUCTION OFFICES/STAGING/STORAGE SPACE

- A. Spaces used by Contractor and subcontractors for materials storage, staging and/or office space within building, shall be protected and restored before completion of Contract to prior existing or better than prior existing condition.

END OF SECTION

SECTION 01 41 00
QUALITY REQUIREMENTS

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Regulatory Requirements
- B. Inspection and Field Quality Control
- C. Field Samples.
- D. Manufacturers' Field Services and Reports.
- E. Delegated Design Performance Requirements

1.02 RELATED DOCUMENTS AND SECTIONS

- A. Document 00 72 00: General Conditions of the Contract for Construction.
- B. Section 01 33 00: Submittal Procedures; Submission of Manufacturers' Instructions and Certificates.
- C. Section 01 45 29: Testing Laboratory Services.
- D. Section 01 60 00: Product Requirements; Requirements for material and product quality.
- E. Pertinent Specification Sections.

1.03 REGULATORY REQUIREMENTS

- A. Refer to Document 00 72 00, General Conditions of the Contract for Construction.
- B. Refer to pertinent Specification Sections.

1.04 INSPECTION AND FIELD QUALITY CONTROL

- A. Refer to Document 00 72 00, General Conditions of the Contract for construction.
- B. Refer to pertinent Specification Sections.

1.05 FIELD SAMPLES

- A. When Field Sample is required, perform no installation or application until Field Sample is approved.
- B. Submit schedule for Field Sample construction; show date and relationship to Approved Contract Schedule.
- C. Construct Field Samples required by individual Specifications Sections in locations as approved by the State.
- D. The State will review Field Sample for conformance with Drawings and Specifications.
- E. Modify or replace Field Sample until Field Sample is approved.
- F. Approved Field Samples:
 - 1. Shall remain until remainder of work of Section requiring Field Sample is complete.

2. Will be used as the standard of acceptable quality for that work for remainder of Project.
3. May be incorporated into the Work at the discretion of the State.
4. Shall be removed at completion of the work of that Section when required by Section or when not incorporated into the Work.

1.06 MANUFACTURERS' FIELD SERVICES AND REPORTS

- A. Submit qualifications of manufacturer's representative to the State 30 days in advance of required observations by manufacturer's representative. Manufacturer's representative is subject to approval of the State.
- B. Manufacturer's representative shall report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.
- C. Submit report in duplicate within 30 days of observation to the State Representative for review.

1.07 DELEGATED DESIGN PERFORMANCE REQUIREMENTS

A. Qualifications

1. Engineer shall be a California licensed professional with current registration in the field and product requiring delegated design.
2. A minimum of five years of experience is required by the engineer responsible for the design, calculations, documentation, and engineering of the specification section requiring delegated design.

B. Submittals

1. All delegated design shall be stamped and signed by the California registered engineer responsible for the design, preparation and engineering of the fabrication and/or construction of the product or element requiring delegated design.

END OF SECTION

SECTION 01 45 29

TESTING LABORATORY SERVICES

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDED

- A. The State will employ and pay for services of an independent testing laboratory to perform specified testing for CCR Title 24.
 - 1. Contractor shall cooperate with laboratory to facilitate execution of its required services.
 - 2. Employment of laboratory shall in no way relieve Contractor's obligations to perform work of the Contract.
- B. Contractor shall employ and pay for services for testing, adjusting, and balancing of systems specified under Section 01 86 19.

1.02 RELATED REQUIREMENTS

- A. Document 00 72 00: General Conditions of the Contract for Construction, Paragraph 3.13, Tests and Inspections: Inspections and testing required by laws, ordinances, rules, regulations, orders or approvals of public authorities.
- B. Section 01 86 19: Testing, Adjusting and Balancing Procedures.
- C. Individual Sections: Certification of products, Qualifications of testing, organizations and specific services required.

1.03 REQUIRED TESTS AND INSPECTIONS

- A. By the State, CCR Title 24 Tests and Inspections: Except as noted otherwise, these tests and inspections shall be performed by State's testing laboratory in conformance with State of California Code of Regulations (CCR), Title 24 as noted herein.
 - 1. Earthwork (Chapter 18, Title 24)
 - a. Earth Fill compaction.
 - b. Inspection of footing excavations.
 - c. Placing of backfill.
 - 2. Concrete (Chapter 19, Title 24)
 - a. Materials:
 - (1) Portland Cement Tests.
 - (2) Concrete Aggregates.
 - (3) Reinforcing Bars.
 - (4) Batch Plant Inspection.
 - (5) Core tests, if necessary.
 - (6) Admixtures.
 - b. Concrete Quality:
 - (1) Proportions of Concrete.
 - (2) Strength Tests of Concrete.

- c. Concrete Inspection:
 - (1) Job Site Inspection.
 - (2) Batch Plant or Weighmaster Inspection.
 - (3) Curing.
 - (4) Construction Joints.
- 3. Masonry (Chapter 21, Title 24)
 - a. Materials:
 - (1) Masonry Units.
 - (2) Portland Cement.
 - (3) Mortar and Grout Aggregates.
 - b. Masonry Quality:
 - (1) Portland Cement.
 - (2) Mortar and Grout.
 - (3) Masonry Cores.
 - c. Masonry Inspection:
 - (1) Reinforced Masonry.
- 4. Structural Steel (Chapter 22, Title 24)
 - a. Materials:
 - (1) Material Identification.
 - (2) Structural Steel.
 - b. Tests and Inspection of Structural Steel:
 - (1) Tests of Structural and Cold Formed Steel.
 - (2) Shop Fabrication Inspection.
 - (3) Welding Inspection.
 - (4) Welding of Reinforcing Bars.
- B. By the Contractor, Testing, Adjusting, and Balancing of Systems: These services shall be provided by approved testing organization in conformance with requirements for services specified in individual sections pertaining to each system.

1.04 CONTRACTOR'S RESPONSIBILITIES

- A. Cooperate with laboratory personnel, provide access to work and to manufacturer's operations.
- B. Provide to laboratory adequate quantities of representational samples of materials proposed to be used and which require testing.
- C. Provide to laboratory preliminary design mix proposed to be used for concrete, and other material mixes which require control by testing laboratory.
- D. Furnish copies of products test reports as required.

E. Furnish incidental labor and facilities:

1. To provide access to work to be tested.
2. To obtain and handle samples at Project site or at source of product to be tested.
3. To facilitate inspections and tests.
4. For storage and curing of test samples.

F. Notify State's Inspector 48 hours in advance of operations to allow for laboratory assignment of personnel and scheduling of tests. When tests or inspections cannot be performed after such notice, reimburse the State for laboratory personnel and travel expenses incurred due to Contractor's negligence.

G. When additional testing services are needed for Contractor's convenience, employ and pay for services of separate, equally qualified independent testing laboratory; or make arrangements with State's laboratory and pay for additional samples and tests required for Contractor's convenience.

H. The State or its representative 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 State. If Contractor does not correct such rejected work within a reasonable time, fixed by written notice, the State may correct same and charge the expense to Contractor.

I. Should it be considered necessary or advisable by the State at any time before Acceptance of the Work to make examination of work already completed by removing or tearing out same, Contractor shall, on request, promptly furnish necessary facilities, labor and materials. If such work is found to be defective in any respect due to fault of Contractor or subcontractor, shall defray all expenses of such examinations and of satisfactory reconstruction. If, however, such work is found to meet requirements of the Contract, additional cost of labor and material necessarily involved in the examination and replacement will be allowed the Contractor.

END OF SECTION

SECTION 01 51 00

TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Furnish and install temporary facilities as hereunder specified, plus other unspecified temporary facilities, including labor, materials, services, utilities, and equipment, as may be required for proper performance of Contract, except as otherwise provided. Temporary facilities shall be approved by the State and other authorities having legal jurisdiction. Locate facilities where and as directed and maintain in safe and sanitary condition at all times until completion of Work.
- B. At completion of work, or sooner when no longer needed, remove all temporary facilities, except where certain facilities are specified to remain or to be relocated for use under future contracts.

1.02 RELATED REQUIREMENTS

- A. Document 00 72 00: General Conditions of the Contract for Construction.
- B. Section 01 31 00: Project Management and Coordination
- C. Section 01 74 19: Construction Waste Management.
- D. Section 01 74 23: Cleaning.
- E. Section 01 77 00: Closeout Procedures.

1.03 FIELD OFFICE

- A. Field Office for State: Not required.
- B. Contractor's Field Office: Contractor may provide field office facilities for Contractor's use as desired. Contractor's field office shall be neat and substantial, and expenses therefor shall be paid by Contractor.
- C. Telephone Service: The State will provide and pay for telephone service for its own use.
 - 1. Telephone service required by Contractor shall be provided and paid for by Contractor, if, and as needed in performance of the Work.

1.04 CONSTRUCTION EQUIPMENT

- A. Erect, equip, operate, and maintain construction equipment in strict accordance with applicable statutes, laws, ordinances, rules, and regulations of authorities having jurisdiction.
- B. Provide and maintain scaffolding, staging, runways, and similar equipment, as needed.

1.05 SAFETY PRECAUTIONS

- A. Provide and maintain barricades, fencing, shoring, pedestrian walkways including attached lights, other lights, and other safety precautions to properly guard against personal injury and property damage as prescribed by authority having jurisdiction. (See also General Conditions, Article 10.).
- B. Wood fences, barricades, walkways, and similar items shall be painted 2 coats; color as directed by the State.
- C. Barricades, fencing, shoring, pedestrian walkways, including attached lights, and other existing safety precautions provided under previous contracts, are required to be left in place.
- D. Contractor for Work of this Contract shall assume responsibility for maintaining such items for duration of Work of this Contract, and shall repair, replace, and relocate them as necessary for safe protection.
- E. In addition, Contractor for Work of this Contract shall provide such additional safety precautions as may be prescribed by authorities having jurisdiction. (See also General Conditions, Articles 10.).
- F. Attention is directed to Safety Orders issued by State of California, Division of Industrial Safety. Contractor shall obtain copies of Safety Orders applicable to type of work to be performed, and shall be governed by requirements thereof in construction operations.
- G. Fully inform each subcontractor and material supplier as to requirements of applicable Safety Orders. (See General Conditions, Article 10.).
- H. Submit fire-safety program and dust- and HVAC-control plan.

1.06 ROADS AND ACCESSWAYS

- A. Entrance to Work Site: Contractor and Contractor's employees and subcontractors shall use certain access roads or entrance ways as indicated on the Drawings or as directed by State.
 - 1. Maintain these roads in satisfactory condition during Contract time, and repair damages attributable to Work of this Project at intervals as needed. At completion of Contract, roads and entrance ways shall be left in condition at least equal to that existing at start of Contract, except as may be otherwise required by Contract documents.

1.07 USE OF STATE PROPERTY

- A. On Site Storage and Work Areas: The State will allocate available on site storage and work areas to Contractor, subject to change as may be necessary by job progress, such as site development or other intervening work.
- B. State Property: Operations shall be confined to State property to greatest possible extent, and shall not encroach on areas other than those designated or approved for such use by State. (See General Conditions, Paragraph 3.14.)
 - 1. Ascertain, observe, and comply with rules and regulations in effect at occupied State facilities, including, but not restricted to, parking and traffic regulations, security restrictions, hours of allowable in-gress and egress as to main arteries, occupied buildings, and the like.
- C. Use of Sidewalks and Streets: Contractor shall make arrangements with City authorities for temporary use of streets and sidewalks for offices, shops, storage, etc., and shall abide by City rules, regulations, and ordinances, obtain permits, and pay fees therefore.

- D. **Parking and Traffic Regulations:** Persons involved in construction operations shall comply with parking and traffic regulations for use of City streets, as enforced by City authorities, except for other arrangements as may be agreed to between Contractor and City authorities.
- E. **Existing Improvements in Sidewalks and Streets:** Existing street signs, electroliers, traffic signals, fire hydrants, underground valves and meter boxes, manholes, trees and other items occurring in sidewalk areas or in streets adjacent to the site shall be left undisturbed, unobstructed, and easily accessible at all times during construction, except as otherwise indicated or agreed to between Contractor and City authorities.
- F. **Covering, moving, trimming, or altering** which may become necessary shall be done only with consent of and in cooperation with City authorities having jurisdiction. Contractor shall pay costs which may be incurred.
- G. **Contractor shall make detailed examination of such City property at start of work and conditions shall be noted by him and confirmed by State.**
1. City streets, sidewalks and curbs, and other existing improvements therein adjacent to site, if damaged by this work, shall be repaired by Contractor at intervals as needed. At completion of project, all such items not included in Contract shall be left in condition at least equal to that at start of operations.
 2. Repair work shall conform to requirements of public authorities having jurisdiction. This includes, but is not restricted to, temporary walks for pedestrians, cleaning of mud and debris, air pollution control, and traffic control.
- H. **Protection of State-Owned Trees and Shrubs:** Existing State-owned trees and shrubs to remain shall not be injured during the course of this work. (See "Site Clearing", Section 31 10 00).
1. Irrigate trees and shrubs, which are to remain within work area as directed by State; also, construct suitable earth berms around such trees and shrubs as necessary to hold irrigation
 2. If any tree or shrub during the course of, or as a result of construction operations is injured to extent of causing its permanent disfigurement or death, Contractor shall pay cost of damages to the State for each tree or shrub so injured, amount to be agreed upon by the State and Contractor.
 3. If any tree or shrub during the course of, or as a result of construction operations is injured to extent of causing its permanent disfigurement or death within the one year guarantee period, it is agreed by the parties to this Contract that actual damage to the State will be impossible to determine, and in lieu thereof, Contractor shall pay to State as fixed, agreed, and Liquidated Damages, the sum called for in Section 01 11 00 for each tree and each shrub so injured.
- I. **Protection of Existing Utilities:** Utility service lines found entering site and not indicated to remain or to be incorporated in new work, shall be plugged, capped, or otherwise abandoned by Contractor in manner satisfactory to Utility Companies whose services are involved, except as otherwise required. (See also General Conditions, Paragraphs 3.1 and 10.1, and "Site Clearing", Section 31 10 00).
- J. **Protection of Existing Utilities:** Protect from damage, existing utility lines not specified to be altered by work of this Contract; any such features damaged shall be repaired or replaced to condition equal to that existing prior to commencing work of this Contract. (See also General Conditions, Paragraphs 3.1 and 10.1, and "Site Clearing", Section 31 10 00).

1.08 SIGNS

- A. Other Signs or Advertising: Not permitted, except that Contractor's name may be placed on Contractor's field office.

1.09 CLEAN UP OF WORK AND DISPOSAL OF TRASH

- A. Attention of Contractor is directed to General Conditions, Paragraph 3.16, and Specification Sections 01 74 23 and 01 77 00. Keep work and storage areas clean and free of rubbish and perform protective and clean-up work within one day of being so notified by State.
- B. Dispose of trash resulting from work, off State property, as it accumulates. Pay fees required for use of public dumps. Burning on State property is prohibited.

1.10 NOISE AND DUST ABATEMENT

- A. Accomplish noisy operations with least inconvenience to building occupants.
- B. Control dust resulting from indoor construction operations by localizing it to greatest practicable extent using temporary partitions, curtains, or other means which will prevent spread of dust beyond immediate work area. Duct opening and other opening communicating with other portions of building shall have effective temporary closures.

1.11 SANITARY FACILITIES

- A. Toilet Facilities: Existing toilet facilities are available at site. Maintain in clean, sanitary condition and comply with restrictions as may be prescribed by the State.
- B. Drinking Water Facilities: Provide clean, sanitary and adequate drinking water.

1.12 TEMPORARY WATER

- A. Make arrangements for water required for construction purposes; furnish and install temporary piping or hose to carry water to every part of construction.

1.14 TEMPORARY HEAT

- A. Provide and pay all costs for temporary heat, including equipment, fuel, and operators which may be required during Contract time to provide adequate temperatures for storage, application, and drying of installed materials.

1.15 TEMPORARY ELECTRICAL FACILITIES

- A. Contractor may use Building's existing electrical power but must supply any necessary temporary power cords or lighting needed in order to complete the work.
- B. Construction Requirements: Construct and maintain temporary electrical facilities in accordance with California Code of Regulations, Title 24, Part 3, Basic Electrical Regulations, State Building Standards Electrical Code, Public Utilities Commission "Rules for Overhead Line Construction" (G.O.95), and requirements of utility company providing service. Materials, devices, and equipment used for these facilities shall be in good and safe condition, but need not be new.

- C. Contractor-Installed Construction Power Facilities: Temporary electrical materials and equipment furnished and installed by Contractor for required facilities hereunder shall be removed after serving their purpose.
 - 1. If State should desire to retain portion of Contractor-Installed construction power system, it will be acquired as Change in Work per General Conditions, Article 6.

1.16 DEWATERING FACILITIES

- A. Provide and maintain dewatering and pumping facilities to keep site reasonably dry, and to protect materials and installed work from water damage until dewatering is no longer required.
 - 1. Dewatering facilities provided by contractor for work of previous contract, will be used by that contractor until completion of that Contract. At such time, that contractor will remove portable dewatering facilities from site, and Contractor for Work of this Contract shall assume responsibility for keeping site dewatered. Coordinate changeover to prevent lapse of protection.
 - 2. Remove dewatering facilities from site when no longer needed.

1.17 USE OF BUILDING ELEVATORS

- A. Existing Elevators:
 - 1. Temporary Protection and Use: Protect all portions of elevator(s) from damage by construction use; properly maintain elevator(s) during period of use. At completion of project, return elevator(s) to State in as good condition as at start of construction use.

1.18 SECURITY

- A. Contractor is responsible for security of building and grounds involved in this Project, during entire time of Contract. Make good all damages to work and loss of materials due to vandalism or theft, within this responsibility.

END OF SECTION

SECTION 01 60 00

PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDED

- A. This Section describes basic requirements governing products including:
 - 1. Workmanship.
 - 2. Manufacturers' instructions.
 - 3. Transportation and handling.
 - 4. Storage and protection.
 - 5. Substitutions

1.02 RELATED REQUIREMENTS

- A. Document 00 72 00: General Conditions of the Contract for Construction.
- B. Section 01 33 00: Submittal Procedures.
- C. Section 01 77 00 - Closeout Procedures: Operation and maintenance data; warranties and bonds.

1.03 PRODUCTS

- A. Products include material, equipment, and systems.
- B. Comply with specifications and referenced standards as minimum requirements.
- C. Components required to be supplied in quantity within a Specification Section shall be the same and shall be interchangeable.
- D. Reference to materials or methods of construction by name and catalog number is done to establish standards of quality, design, utility, suitability, and cost, and shall not be construed as limiting competition.
- E. Where the words "or equal" are used following trade names, patented products, or proprietary products or methods, they shall be deemed to read "or equal in quality, design, utility and suitability"; as solely determined by the State. Where such trade names, products, or methods are without the use of the words "or equal", they shall be deemed to be followed by the words "or equal in quality, design, utility and suitability" as solely determined by the State.
- F. Materials and methods of equal standards will be accepted for use if first deemed equal and approved by the State.

1.04 QUALITY ASSURANCE

- A. Comply with industry standards except when more restrictive tolerances or requirements indicate more rigid standards or greater quality.
- B. Perform work by persons qualified to produce specified quality.
- C. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, and racking.

1.05 MANUFACTURERS' INSTRUCTIONS

- A. When work is specified to comply with manufacturers' instructions, submit copies as specified in Section 01 33 00, distribute copies to persons involved, and maintain one set in field office.
- B. Perform work in accordance with details of instructions and specified requirements. Should conflict exist between Specifications and instructions, consult with Project Director.

1.06 TRANSPORTATION AND HANDLING

- A. Transport products by methods to avoid product damage, deliver in undamaged condition in manufacturer's unopened containers or packaging.
- B. Provide equipment and personnel to handle products by methods to prevent soiling or damage.
- C. Promptly inspect shipments to ensure that products comply with requirements, quantities are correct, and products are undamaged.

1.07 STORAGE AND PROTECTION

- A. Store products in accordance with manufacturer's instructions, with seals and labels intact and legible. Store sensitive products in weathertight enclosures; maintain within temperature and humidity ranges required by manufacturer's instructions.
- B. For exterior storage of fabricated products, place on sloped supports above ground. Cover products subject to deterioration with impervious sheet covering, provide ventilation to avoid condensation.
- C. Store loose granular materials on solid surfaces in well-drained area; prevent mixing with foreign matter.
- D. Arrange storage to provide access for inspection. Periodically inspect to assure products are undamaged and maintained under required conditions.
- E. After installation, provide coverings to protect products from damage from traffic and construction operations, remove when no longer needed.

1.08 SUBSTITUTIONS (ALTERNATIVES)

- A. Refer to Document 00 72 00, General Conditions of the Contract for Construction, Subparagraph 3.12.10, and Section 01 33 00, Submittal Procedures.

END OF SECTION

SECTION 01 73 29

CUTTING AND PATCHING

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. General requirements for cutting, fitting and patching of the work to:
 - 1. Make the several parts fit properly.
 - 2. Uncover work to provide for installation, inspection, or both, of ill-timed work.
 - 3. Remove and replace work not conforming to requirements of the Contract Documents.
 - 4. Remove and replace defective work.
 - 5. Reworking and patching to match existing surfaces at removed or demolished items.

1.02 RELATED REQUIREMENTS

- A. Document 00 72 00: General Conditions of the Contract for Construction; Paragraph 3.15, Cutting and Patching.

1.03 QUALITY ASSURANCE

- A. Patching shall achieve security, strength, and weather protection, and shall preserve continuity of existing fire ratings.
- B. Patching shall successfully duplicate undisturbed adjacent finishes, colors, textures, and profiles. Where there is dispute as to whether duplication is successful or has been achieved to a reasonable degree, the State's judgment shall be final.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. For replacement of work removed, use only materials which comply with pertinent Sections of these Specifications.

2.02 PAYMENT FOR COSTS

- A. Perform cutting and patching required to comply with the Contract Documents at no additional cost to the State.

PART 3 - EXECUTION

3.01 INSPECTION

- A. Inspect existing conditions, including elements subject to movement or damage during cutting, excavating, backfilling, and patching.
- B. After uncovering the work, inspect conditions affecting installation of new work.

3.02 INSTALLATION

- A. Perform cutting and patching in a manner to prevent damage to other work and to provide proper surfaces for the installation of materials, equipment, and repairs.
- B. Do not cut nor alter structural members without prior approval of the State.
- C. Adjust and fit products to provide a neat installation.
- D. Finish or refinish, as required, cut and patched surfaces to match adjacent finishes. Paint over complete surface plane, unless otherwise indicated. Over patched wall or ceiling surfaces, paint to nearest cut-off line for entire surface, such as intersection with adjacent wall or ceiling, beam, pilasters, or to nearest opening frame, unless otherwise indicated. Painted surfaces shall not present a spotty, touched-up appearance.

END OF SECTION

CONSTRUCTION WASTE MANAGEMENT

PART 1 – GENERAL

1.01 WORK INCLUDED

A. Waste Management Objective for the Project:

1. The State has established that this Project shall minimize the generation of construction and demolition waste at the site. Factors that contribute to waste, such as over-packaging, improper storage, ordering error, poor planning, breakage, mishandling, and contamination shall be minimized.
2. Of the inevitable waste that is generated, as many of the waste materials as economically feasible shall be reused or recycled. Waste disposal in landfills shall be minimized.

B. Diversion from Landfill: Waste categories appropriate for diversion from landfill shall include, but not be limited to, the following:

1. Land clearing debris
2. Soil
3. Wood: Clean dimensional wood, palette wood
4. Sheet Wood: Plywood, OSB and particle board
5. Concrete
6. Bricks
7. Concrete Masonry Units (CMU)
8. Asphalt Concrete
9. Paper
 - a. Bond
 - b. Newsprint
 - c. Cardboard and paper packaging materials
10. Cement Fiber Products: Shingles, panels, and siding
11. Metals
 - a. Ferrous
 - b. Non-ferrous
12. Paint
13. Rigid Foam
14. Glass
15. Plastics
16. Carpet and pad
17. Beverage containers
18. Insulation
19. Gypsum Board
20. Porcelain Plumbing Fixtures
21. Fluorescent Light Tubes (per Department of Toxic Substances Control regulations)

1.02 RELATED REQUIREMENTS

- A. Appendix 01 74 19.1: Construction Waste Estimate.
- B. Appendix 01 74 19.2: Waste Management Report.
- C. Section 01 33 00: Submittal Procedures.
- D. Section 01 74 23: Cleaning.
- E. Section 01 77 00: Closeout Procedures.

1.03 REFERENCES

- A. The California Department of Resources Recycling and Recovery (CalRecycle); Telephone (916) 341-6300; <https://www.calrecycle.ca.gov/ConDemo>.
- B. Local Integrated Waste Management Programs and Re-Use Programs in the Project area.
- C. The Department of Toxic Substances Control (DTSC)

1.04 CONSTRUCTION WASTE ESTIMATE

- A. Within 10 calendar days after Start Date of the Work, or prior to any waste removal, whichever occurs sooner, the Contractor shall submit to the State a Construction Waste Estimate, using the Construction Waste Estimate form included as Appendix 01 74 19.1; containing the following information:
 - 1. Estimate of total job site wastes to be generated, including material types and quantities.
 - 2. Estimate of percentages of waste categories to landfill, to be reused, and to be recycled.
- B. The State will provide an electronic copy of Appendix 01 74 19.1 for Contractor's use.
- C. Submit Construction Waste Estimate under provisions of Section 01 33 00.

1.05 WASTE MANAGEMENT

- A. Manager: Contractor shall designate on-site party (or parties) responsible for instructing workers and subcontractors, and overseeing and documenting results of Waste Management for the Project.
- B. Distribution: Contractor shall distribute copies of the Construction Waste Estimate and Waste Management Report forms to the Job Site Foreman, each Subcontractor, and the State's Representative.
- C. Meetings: Contractor shall conduct Waste Management meetings with subcontractors who generate construction waste. Contractor shall present current status of the Waste Management Report at regular job-site meetings.
- D. Materials Handling Procedures: Provide means by which waste materials will be protected from contamination, and means to be employed in reuse or recycling of waste material consistent with requirements for acceptance by receiving facilities.

1. Separation Facilities: Contractor shall lay out and label a specific area to facilitate separation of materials for reuse and recycling. Recycling and waste bin areas shall be kept neat and clean and clearly marked in order to avoid contamination of materials.
2. Hazardous Wastes: Hazardous wastes shall be separated, stored, and disposed of according to local regulations, and in accordance with specifications for such work as may be included in this Project.
3. Instruction: Contractor shall provide on-site instruction of appropriate separation, handling, and recycling, salvage, reuse, and return methods to be used by all parties at appropriate stages of the Project.

1.06 WASTE MANAGEMENT REPORT

- A. Upon completion of Work, including final cleanup, provide a final Waste Management Report containing the information required on Appendix 01 74 19.2, Waste Management Report forms.
 1. The total quantity of each waste material generated; and the date(s) removed from the job-site.
 2. The percent of the total quantity generated of each material sent to landfill, the identity of the landfill (receiving facility), handling costs, transport costs, tipping fees paid at the landfill, and total landfill costs. Attach copies of manifests, weight tickets, receipts, and invoices.
 3. For each material reused or recycled from the Project, include the percent of the total quantity generated, the identity of the receiving facility, the total costs of handling and transportation, and income. Attach manifests, weight tickets, receipts, and/or invoices.
 4. Contractor shall edit and use forms included in Appendix 01 74 19.2, Waste Management Report, or use them as a basis for Contractor's forms.
 5. The State will provide electronic copies of Appendix 01 74 19.2 for Contractors' use.
- B. Submit Waste Management Report under provisions of Section 01 77 00.

END OF SECTION

CONSTRUCTION WASTE ESTIMATE

Date: _____

Waste Material (Edit to Suit)	Unit	Estimated Quantity Generated	Percent to Landfill	Percent Reused	Percent Recycled
Land Clearing Debris	CY				
Soil	CY				
Wood	CY				
Sheet Wood	CY				
Concrete	CY				
Bricks	CY				
Concrete Masonry Units	CY				
Asphalt Concrete	CY				
Paper	CY				
Cement Fiber Products	CY				
Metal (ferrous)	TON				
Metals (non-ferrous)	LBS				
Paint	GAL				
Rigid Foam	CF				
Glass	CF				
Plastics	CF				
Carpet and Pad	SY				
Beverage Containers	LBS				
Insulation	CF				
Gypsum Board	CF				
Porcelain Plumbing Fixtures	EA				
Fluorescent Light Tubes	EA				

CONSTRUCTION WASTE ESTIMATE

WASTE MANAGEMENT REPORT QUANTITIES

Waste Material (Edit to Suit)	Unit	Date Removed	Total Quantity Generated	Percent to Landfill	Percent Reused	Percent Recycled
Land Clearing Debris	CY					
Soil	CY					
Wood	CY					
Sheet Wood	CY					
Concrete	CY					
Bricks	CY					
Concrete Masonry Units	CY					
Asphalt Concrete	CY					
Paper	CY					
Cement Fiber Products	CY					
Metal (ferrous)	TON					
Metals (non-ferrous)	LBS					
Paint	GAL					
Rigid Foam	CF					
Glass	CF					
Plastics	CF					
Carpet and Pad	SY					
Beverage Containers	LBS					
Insulation	CF					
Gypsum Board	CF					
Porcelain Plumbing Fixtures	EA					
Fluorescent Light Tubes	EA					

WASTE MANAGEMENT REPORT

COST / INCOME

Waste Material (Edit to Suit)	Unit	Receiving Facility	Landfill Cost			Reused		Recycled	
			Handling	Transport	Fee	Cost	Income	Cost	Income
Land Clearing Debris	CY								
Soil	CY								
Wood	CY								
Sheet Wood	CY								
Concrete	CY								
Bricks	CY								
Concrete Masonry Units	CY								
Asphalt Concrete	CY								
Paper	CY								
Cement Fiber Products	CY								
Metal (ferrous)	TON								
Metals (non-ferrous)	LBS								
Paint	GAL								
Rigid Foam	CF								
Glass	CF								
Plastics	CF								
Carpet and Pad	SY								
Beverage Containers	LBS								
Insulation	CF								
Gypsum Board	CF								
Porcelain Plumbing Fixtures	EA								
Fluorescent Light Tubes	EA								
TOTALS:									

SECTION 01 74 20

RECYCLED CONTENT CERTIFICATION

PART 1 – GENERAL

1.01 WORK INCLUDED

A. Recycled Content Reporting for the Project:

1. The State has established that all Projects shall document and report the percentage of recycled content in materials, products, equipment and furnishings actually installed and provided for this Project.
2. The State Agency Buy Recycled Campaign (SABRC) is a joint effort between the Department of General Services and the California Department of Resources Recycling and Recovery (CalRecycle) to implement State law. Public Contract Code (PCC) sections 12200–12320 require State agencies to purchase recycled-content products (RCP) instead of non-recycled-content products (non-RCP) in eleven (11) product categories, to ensure that a minimum percentage of purchases in those categories have recycled content, and report these purchases annually to CalRecycle. The certification and reporting will be utilized to comply with those requirements.
3. All products that can be classified as being in one of the eleven (11) categories must be included in the reporting, whether the product is a RCP or non-RCP. Only products that can be classified in one of the categories shall be reported.

B. Recycled Content Categories: Categories identified for purchasing and reporting of products:

1. Paper products.
2. Printing and writing papers.
3. Mulch, compost, and cocompost products.
4. Glass products.
5. Lubricating oils.
6. Plastic products.
7. Paint.
8. Antifreeze.
9. Tires.
10. Tire-derived products.
11. Metal.

1.02 RELATED REQUIREMENTS

A. Section 00 72 00: General Conditions of the Contract for Construction

B. Section 01 33 00: Submittal Procedures.

C. Section 01 77 00: Closeout Procedures.

1.03 REFERENCES

A. CalRecycle:

1. State Agency Buy Recycled Campaign: [CalRecycle Publications Catalog Search](#). Access this website for information on the Buy Recycled Campaign.
2. [Construction and Demolition Debris Recycling](#). Access this website for information on the Construction Waste/Demolition.

RECYCLED CONTENT CERTIFICATION

1.04 DEFINITIONS

- A. Recycled Content Product (RCP): All materials, goods, and supplies that are from one of the eleven (11) Product Categories that contains the minimum percentages of secondary and postconsumer materials stipulated in the Recycled Content Certification Worksheet footnotes.
- B. Non-Recycled Content Product (non-RCP): All materials, goods, and supplies that are from one of the eleven (11) Product Categories having no recycled content or less than the minimum percentages of secondary and postconsumer materials stipulated in the Recycled Content Certification Worksheet footnotes.

1.05 RECYCLED PRODUCT CERTIFICATION

- A. With each product submittal from one of the eleven (11) Product Categories, submit a Recycled Content Certification Worksheet, Appendix 01 74 20.1, containing the following information:
 - 1. Product Description, with applicable specification section of product.
 - 2. Estimated material dollar value including any taxes and delivery cost.
 - 3. Designate the Product Category for each product listed.
 - 4. Estimate of percentage of material content.
 - 5. Designate whether or not product is a Recycled Content Product.
 - 6. Attach a copy of the manufacturer's or vendor's data sheet showing recycled content percentages if product is reported as a Recycled Content Product.
- B. An example of a completed Recycled Content Certification Worksheet is attached as Appendix 01 74 20.1 for Contractor's reference. An electronic version of this Worksheet for Contractor's use will be provided by the State at the Project start meeting.

1.06 CLASSIFICATION OF PRODUCTS

- A. RCP's and non-RCP's that are made from multiple material types should be reported in the product category of the material type representing most of the product.

1.07 STATE AGENCY BUY RECYCLED CAMPAIGN PROCUREMENT SUMMARY

- A. Manager: Contractor shall designate an individual responsible for instructing suppliers and subcontractors, and overseeing and documenting results of Recycled Content Certification for the Project. Manager shall document results of submitted Recycled Content Certification Worksheets on the SABRC Procurement Summary, Appendix 01 74 20.2, in total for each product category. Only reportable products from one of the eleven (11) categories should be recorded.
- B. An example of a completed SABRC Procurement Summary is attached as Appendix 01 74 20.2 for Contractor's reference. An electronic version of this Worksheet for Contractor's use will be provided by the State after Award of contract.
- C. Distribution: Manager shall provide copies of the SABRC Procurement Summary at intervals agreed to by the State's Representative for monitoring of the program. At the conclusion of the construction submittals and prior to final payment, Manager shall provide a copy of the final SABRC Procurement Summary under provisions of Section 01 77 00.

END OF SECTION

Recycled-Content Certification Worksheet

This form must be completed by contractor. The contractor must submit worksheet with each product submittal to the State agency, with a row completed for each product supplied to the State. Attach additional sheets if necessary. Information must be included, even if the product does not contain recycled-content material but it is within one of the 11 categories. Refer to footnotes following this form.

CONTRACTOR'S / VENDOR'S NAME: XYZ CONTRACTORSDATE: FEBRUARY 5, 2019ADDRESS: 4300 PLEASANT VALLEY DR., LINCOLN LOGS, CA 95000PROJECT DIRECTOR: (AS NAMED)PHONE: (XXX) XXX-XXXXFAX: (XXX) XXX-XXXX

Product Description/ Specification Section	Quantity	Estimated Dollars	Product Category ¹	RCP Y/N?	Virgin Content (Percent) ²	Postconsumer Material (Percent) ³	Secondary Material (Percent) ⁴	Total Percent ⁵
High Impact Resistant Gypsum Board, 09260	N/A	\$2,500	Paper	Y	50	10	40	100%
Cellulose Building Insulation, 07213	N/A	\$10,000	Paper	Y	20	10	70	100%
Underslab Vapor Barrier, 03300	N/A	\$1,500	Plastic	Y	20	20	60	100%
Electrical Cover Plates, 16010	N/A	\$2,500	Plastic	N	90	0	10	100%
Interior and Exterior Paint, 09900	300gal	\$8,000	Paint	N	100	0	0	100%
Recessed Entrance Mats, 10420	N/A	\$1,800	Tire Derived	Y	40	20	40	100%
Ceramic Tile, 09310	N/A	\$5,000	Glass	Y	35	10	55	100%
Exterior and Interior Windows, 08800	N/A	\$30,000	Glass	N	70	10	20	100%
Metal Studs, 09206	N/A	\$6,000	Metal	Y	65	15	10	100%

Public Contract Code sections 10233, 10308.5, and 10354 require all vendors and contractors to certify in writing, under penalty of perjury, the minimum, if not the exact, percentage of postconsumer and secondary material in the products, materials, goods, or supplies provided or used.

Public Contract Code section 12205 (a) requires all State agencies to require all contractors to certify in writing, under penalty of perjury, the minimum, if not the exact percentage, of postconsumer and secondary material in the products, materials, goods, or supplies provided or used.

Printed name of person completing form

Title

Signature of person completing form

Footnotes

You must submit copies of this form and/or other documentation for each product that is reportable.

1. Product category refers to one of the product categories into which the reportable product purchase falls. For products made from multiple materials, choose the category that comprises most of the product, either by a weight or volume criteria. The product categories and corresponding content requirements are defined as follows:
 1. Paper products
 2. Printing and writing papers
 3. Mulch, compost and cocompost.
 4. Glass products
 5. Lubricating oils
 6. Plastic products
 7. Paint
 8. Antifreeze
 9. Tires
 10. Tire-derived products
 11. Metal

Recycled-content printing and writing papers (PWP) include copy paper and xerographic papers of all colors, and higher-grade papers such as watermarked and cotton fiber papers. High-speed copier paper, offset paper, forms bond, computer printout paper, carbonless paper, ruled tablets, calendars, posters, manila file folders, index cards, white wove envelopes, and other uncoated printing and writing paper such as writing and office paper, book paper, cotton-fiber paper (**containing 25–75 percent cotton fiber**), and cover stock are all included in the PWP category.

Recycled metal product means flat rolled metal products with **at least 25 percent** of the total weight consisting of secondary and postconsumer material, with **not less than 10 percent** postconsumer material. Products made with flat rolled metal meeting these content percentages may include automobiles, cans, appliances, and office furniture and supplies.

Recycled-content product (RCP) for paper products, plastic products, glass products, tires, tire-derived products, compost and cocompost, lubricating oil, paints, solvents, is defined in PCC section 12200 (SB 1915, 1994) as containing **at least 50 percent** of the total weight of which consists of secondary and postconsumer material with **not less than 10 percent** of its total weight consisting of postconsumer material. This definition applies to all product categories that do not have specific statutory definitions.

2. Virgin material content is that portion of the product made from non-recycled material, that is, the material is neither secondary nor postconsumer material.
3. Postconsumer material is defined as “a finished material which would have been disposed of as a solid waste, having completed its life cycle as a consumer item, and does not include manufacturing wastes.” This is material such as newspaper that you read and was recycled and then made into recycled-content newsprint or some other recycled product. Postconsumer material is generally any product that was bought by the consumer, used, and then recycled into another product.
4. Secondary material is defined as “fragments of finished products or finished products of a manufacturing process, which has converted a resource into a commodity of real economic value, and includes postconsumer material, but does not include excess virgin resources of the manufacturing process.” This is material such as newsprint that is trimmed from a roll in the paper plant that is returned to the beginning of the process to make recycled-content newsprint. The material (product) did not get to the consumer before being recycled.

For example, if a printing and writing paper contained 20 percent postconsumer material, you would indicate 20 percent in the postconsumer column and 80 percent in the virgin column. If the product had 40 percent secondary material and 20 percent postconsumer material, you would

indicate 40 percent in the secondary column, 20 percent in the postconsumer column, and 40 percent in the virgin column. To meet the 50/10 content requirement of another product category, the product would contain 50 percent recycled-content (40 percent secondary and 10 percent postconsumer material) and 50 percent virgin material.

5. The sum of the virgin column, the postconsumer column, and the secondary column must equal 100 percent.

Note: Products that are made from multiple material types should be reported in the product category of the material type representing most of the product. The amount of material used in the product can be measured by weight or volume. If, for instance, a chair is made from steel, aluminum, and plastic and most of the material, either by weight or volume, is plastic, report it as a plastic product. If, however, most of the product, either by weight or volume, is metal, report the purchase as a metal product.

SAMPLE

State Agency Buy Recycled Campaign Procurement Summary

Attach copies of the recycled-content certification form(s) and/or other documentation for each product that contains any amount of recycled material.

CONTRACTOR'S / VENDOR'S NAME: XYZ CONTRACTORSDATE: FEBRUARY 5, 2019ADDRESS: 4300 PLEASANT VALLEY DR., LINCOLN LOGS, CA 95000PROJECT DIRECTOR: (AS NAMED)PHONE: (XXX) XXX-XXXXFAX: (XXX) XXX-XXXX

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7
Product Category ¹	All Reportable Purchases (QUANTITY) ²	All Reportable Purchases (DOLLARS) ³	RCP Purchases (QUANTITY) ⁴	RCP Purchases (DOLLARS) ⁵	Percent of RCP (QUANTITY) ⁶	Percent of RCP (DOLLARS) ⁷
Paper products		\$ 18,000.00		\$ 12,500.00		70%
Printing and writing paper		\$ 0.00		\$0.00		0%
Mulch, compost and cocompost	0(cu yd)	\$ 0.00	0(cu yd)	\$ 0.00	0%	0%
Glass products		\$ 35,000.00		\$ 5,000		14%
Lubricating oils	0(gal)	\$ 0.00	0(gal)	\$ 0.00	0%	0%
Plastic products		\$ 4,000.00		\$ 1,500.00		38%
Paint	300(gal)	\$ 8,000.00	300(gal)	\$ 0.00	0%	0%
Antifreeze	0(gal)	\$ 0.00	0(gal)	\$ 0.00	0%	0%
Tires	0	\$ 0.00	0	\$ 0.00	0%	0%
Tire-derived products		\$ 2,000.00		\$ 2,000.00		100%
Metal		\$ 11,000.00		\$ 6,000.00		54%
		Total⁸: \$ 78,000		Total⁹: \$ 27,000		Total¹⁰: 34.6%

(See footnotes on the back of this page.)

Footnotes

Attach copies of the recycled-content certification forms and/or other documentation for each product.

Note: All purchases within these product categories, regardless of the source of the product or the type of contract used to purchase them, should be included in your report. Include **all** product purchases — RCPs and non-RCPs.

1. Include **all** purchases (RCPs and non-RCPs) within the 11 product categories. RCPs outside of the 11 product categories **cannot** be counted toward attaining the procurement goals, and are not reportable.
2. Indicate the quantity (units) of **all** purchases (RCPs and non-RCPs) in each product category during the course of the project. Quantities do not need to be reported for the product categories with shading.
3. Indicate the total dollars spent on **all** purchases (RCPs and non-RCPs) in each product category purchased during the course of the project.
4. Indicate the total quantity (units) of RCPs purchased during the course of the project. Quantities do not need to be reported for the product categories with shading.
5. Indicate the total dollars spent on RCPs during the course of the project for each category.
6. Indicate the percentage of RCPs purchased. The percent recycled is calculated by dividing the figure in column 4 by the figure in column 2 and multiplying by 100. Percentages do not need to be calculated for the product categories with shading.
7. Indicate the percentage of total dollars spent on RCPs in each category. The percent recycled is calculated by dividing the figure in column 5 by the figure in column 3 and multiplying by 100.
8. The total of column 3 should be equivalent to the total estimated dollars spent on **all** products (RCPs and non-RCPs) during the course of the project.
9. The total of column 5 should be equivalent to the estimated total dollars spent on reportable RCPs during the course of the project.
10. Column 7 is calculated by dividing the figure in column 5 by the figure in column 3 and multiplying by 100.

SECTION 01 74 23

CLEANING

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Perform cleaning and disposal work as specified, complete. This Section forms a part of all other Sections of the specifications and shall be coordinated with such additional cleaning and disposal requirements as may be specified in other Sections.

1.02 RELATED REQUIREMENTS

- A. Document 00 72 00: General Conditions of the Contract for Construction; Paragraph 3.16, Cleaning Up.
- B. Section 01 74 19: Construction Waste Management.
- C. Pertinent Specification Sections: Specific requirements for cleaning.

1.03 CLEANING IN GENERAL

- A. Contractor shall at all times keep premises free from accumulations of waste material or rubbish caused by Contractor's employees or work, or employees or work of subcontractors, and shall remove rubbish from and about areas of Work and Contractor's and subcontractors' tools, scaffolding and surplus materials and shall leave the Work "broom clean", or its equivalent, except as hereinafter specified. In case of dispute between Contractor and other contractors employed on or about the work areas, as to responsibility for removal of rubbish, etc., or in case debris is not promptly removed as herein required, the State may remove rubbish, etc., and backcharge the Contractor.
- B. At all times, Project working area and site shall be kept clean and orderly. Dirt, debris, waste, rubbish and disused implements and equipment shall be removed frequently and not allowed to accumulate more than 24 hours. Flammable and toxic materials shall not be stored in structures.

1.04 FINAL CLEANING

- A. Within Contract limits, clean interior and exterior surfaces exposed to view; remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces, vacuum carpeted and soft surfaces.
 - 1. Clean equipment and fixtures to sanitary condition, clean or replace filters of mechanical equipment.
 - 2. Clean roofs, gutters, downspouts and drainage systems.
 - 3. Glass: Clean all glass, interior and exterior, affected by Work of this Project; including removal of foreign material from glass.
- B. Clean site: Sweep paved areas, rake clean other surfaces.
- C. Remove waste and surplus materials, rubbish and construction facilities from Project and from site.

- D. Dust, dirt, stains, hand marks, paint spots, and like defects shall be completely removed from surfaces. Metal surfaces shall be cleaned, using only non-corrosive and non-abrasive materials.
- E. Final Inspection: Deficient cleaning operations, as determined by the State, shall be immediately corrected as directed.

1.05 DISPOSAL

- A. Under no circumstances shall rubbish or waste material be disposed of in site fills or backfills. Debris, rubbish, and waste or surplus material shall be removed from the State property daily and legally disposed of.

END OF SECTION

SECTION 01 75 00
STARTING AND ADJUSTING

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Procedures for starting of systems, including the following:
 - 1. Heating, Ventilating, and Air Conditioning
 - 2. Detection and Alarm.

1.02 RELATED SECTIONS

- A. Section 01 33 00: Submittal Procedures.
- B. Section 01 79 00: Demonstration and Training.
- C. Section 01 86 19: Testing, Adjusting, and Balancing Procedures.
- D. Section 28 31 00: Detection and Alarm
- E. Section 23 80 00: Heating, Ventilating, and Air Conditioning Equipment.

1.03 QUALITY CONTROL

- A. When so specified in individual Sections, require manufacturer to provide authorized representative to be present at Project site to inspect, check, and approve equipment installation prior to start-up; to supervise placing of equipment in operation; and to provide written report that equipment has been properly installed and lubricated, is in accurate alignment, is free from any undue stress imposed by connecting lines or anchor bolts, and has been satisfactorily operated under full load conditions.

1.04 SUBMITTALS

- A. Sequencing Schedule: Submit preliminary schedule listing times and dates for start-up of each item of equipment, in sequence, two weeks prior to proposed dates. Approved Schedule shall be the sequencing schedule.
- B. Reports: Submit manufacturer representative's reports within one week after start-up, listing start-up dates.

1.05 PROJECT CONDITIONS

- A. Ensure building is enclosed and weathertight.
- B. Ensure excess packing and shipping bolts are removed.
- C. Ensure interdependent systems have been checked and are operational.

1.06 INSPECTION

- A. Verify that Project conditions comply with specified and manufacturer's requirements.
- B. Verify that status of work meets requirements for start-up of equipment and systems.

1.07 PREPARATION

- A. Coordinate sequence of start-up for various items of equipment.
- B. Notify the State Inspector 7 days prior to start-up of each item of equipment.
- C. Have Contract Documents, shop drawings, product data, and operation and maintenance data at hand during entire start-up process.
- D. Verify that each piece of equipment has been checked for proper lubrication, drive rotation, belt tension, control sequence and other conditions which may cause damage.
- E. Verify control systems are fully operational in automatic mode.
- F. Verify that tests, meter readings, and specific electrical characteristics agree with those specified by electrical equipment manufacturer.
- G. Verify wiring to motors and controls, required by mechanical work for operational smoke and fire protection demonstrations, is complete.
- H. Bearings: Inspect for cleanliness; clean and remove foreign matter. Verify alignment and take corrective measures, if required.
- I. Drives: Inspect for tension on belt drives, adjustment of varipitch sheaves and drives, alignment, proper equipment speed and cleanliness. Take corrective measures, if required.
- J. Motors: Verify that motor amperage agrees with nameplate value. Inspect for conditions which produce excessive current flow and which exist due to equipment malfunction. Take corrective measures, if required.

1.08 STARTING SYSTEMS

- A. Execute start-up under supervision of Contractor's personnel; or manufacturer's representative when so specified.
- B. Place equipment for operation in proper sequence, in accordance with approved sequencing schedule.

END OF SECTION

SECTION 01 77 00
CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDED

- A. Closeout Procedures.
- B. Project Record Documents.
- C. Operation and Maintenance Data.
- D. Guaranties, Warranties and Bonds.
- E. Spare Parts and Maintenance Materials.
- F. Certification of Recycled Content.
- G. Waste Management Report.
- H. Certification of Small Business/Disabled Veteran Business Enterprise Participation

1.02 RELATED REQUIREMENTS

- A. Documents 00 72 00 and 00 73 00: General Conditions of the Contract for Construction, and Supplementary Conditions: Fiscal provisions, legal submittals and other administrative requirements.
- B. Section 01 11 00: Summary.
- C. Section 01 32 33: Construction Photographs; submittal of digital files and video with Project Record Documents.
- D. Section 01 33 00: Submittal Procedures.
- E. Section 01 51 00: Temporary Facilities and Controls.
- F. Section 01 74 19: Construction Waste Management and Appendix 01 74 19.2, Waste Management Report.
- G. Section 01 74 20: Recycled Content Certification.
- H. Section 01 74 23: Cleaning.

1.03 CLOSEOUT PROCEDURES

- A. Comply with procedures stated in General Conditions of the Contract for Construction, Document 00 72 00, Article 8, for final inspection, Completion of the Work and Acceptance of the Work, payment and retention procedures.

CLOSEOUT PROCEDURES

- B. Contractor shall start developing and completing punch list items a minimum of 30 calendar days prior to the end of the Contract Time as specified in Section 01 32 16, Article 1.03.
- C. When Contractor considers the Work complete, the Contractor shall request, in writing, a final inspection to be conducted by the State. The State Representative shall conduct a final inspection within 14 days of receipt of the written request. Prior to requesting a final inspection, the Contractor shall have the entire Work completed in accordance with all Contract Requirements, including, but not limited to, all punch list items, and submittal of all documents and products listed in this section and other sections of the Project Manual. It is recommended that the Contractor request the final inspection as early as possible, and prior to the end of Contract Time, to allow for completion of punch list items discovered to be incomplete during the final inspection and for a final re-inspection, to avoid assessment of liquidated damages.
- D. The date of Completion of the Work and Acceptance of the Work will be determined as specified in Document 00 72 00, Article 8.6.
- E. Final cleaning shall be completed prior to occupancy or requesting a final inspection, whichever comes first. Refer to Section 01 74 23, Cleaning.

1.04 PROJECT RECORD DOCUMENTS ("AS-BUILTS")

- A. Maintain, on current basis, record drawings showing "as-built" conditions of project; subject to monthly review by State Inspector. The State will furnish reproducible prints to Contractor, who shall transfer installed locations to reproducible prints and submit prints for review by the State. Monthly pay estimates will not be processed without review and approval of record drawings by State Inspector. Final inspection will not be scheduled until reproducible record drawings are turned over to State Inspector.
- B. Store Project record documents separate from those used for construction.
- C. At time of installation, installed locations of work relating to aboveground and underground utilities, architectural, structural, heating, ventilation, air conditioning, plumbing, electrical, and other scopes of work as may be required, shall be recorded on prints by Contractor, and reviewed with State Inspector. Do not conceal work until required information is recorded.
 - 1. Information entered on reproducible prints shall be neat, legible, and emphasized by drawing "balloons" around changed items.
 - 2. Symbols and designations used in preparing record drawings shall match those used in Contract Drawings.
 - 3. Locate and dimension work, including stubs for future connections, with reference to permanent landmarks or buildings and indicate approximate depth below finish grade.
- D. Prior to requesting a final inspection, submit Project record documents with transmittal letter containing date, Project title, Contractor's name and address, list of documents and signature of Contractor.

1.05 OPERATION AND MAINTENANCE DATA

- A. Provide data for Sections as required by the Contract Documents; including:
 - 1. Mechanical Equipment and Controls - Division 23.

CLOSEOUT PROCEDURES

2. Electrical Equipment and Controls - Division 26.

- B. Submit 5 sets of operating/maintenance manuals prior to requesting a final inspection, bound in 8-1/2 x 11 inch three ringside binders with durable plastic covers; with identification on, or readable through, front cover stating general nature of manual.
- C. Provide separate volume for each system, with table of contents and index tabs for each volume; all material neatly typewritten; each volume containing:
 - 1. Part 1: Directory, listing names, addresses and telephone numbers of Project Director, State Inspector and Contractor; and index furnishing complete information as to location in manual of emergency data regarding installation.
 - 2. Part 2: Operation and maintenance instructions, arranged by system. For each system, give names, addresses and telephone numbers of subcontractors and suppliers; and include the following:
 - a. Appropriate design criteria.
 - b. List of equipment.
 - c. Parts list; including complete nomenclature, current costs, and names and address of nearest vendor of parts.
 - d. Detailed operating instructions.
 - e. Maintenance instructions, equipment, including routine maintenance cards with time frequency of routine maintenance noted.
 - f. Maintenance instructions, finishes.
 - g. Shop drawings and product data, including changes made during construction.
 - h. Copies of Guaranties/Warranties.
- D. Extraneous Data: Where contents of manuals include manufacturers' catalog pages, clearly indicate precise items included in this installation and delete, or otherwise clearly indicate, manufacturer's data with which this installation is not concerned.
- E. Final inspection will not be scheduled until operation/maintenance manuals are delivered to the State Inspector.

1.06 GUARANTIES, WARRANTIES AND BONDS

- A. Standard Guaranty: Guarantee Work executed under this Contract to be free of defects of workmanship and materials for a period of one year after the date of Completion of the Work. Refer to General Conditions of the Contract for Construction, Document 00 72 00, Article 3.5. Submittal is not required for standard one year guaranty for Work of this project.
- B. Additional Guaranties/Warranties: Provide additional guaranties/warranties (in excess of one year) where specifically required by pertinent Specification Sections. The start date of the Guaranty will commence on the date of Completion of the Work as established by the State Representative.
 - 1. Provide duplicate, notarized copies. Execute Contractor's submittals and assemble documents executed by subcontractors, suppliers and manufacturers. Provide table of contents and assemble in binder with durable plastic cover.
 - 2. Submit guaranties/warranties prior to requesting a final inspection.

1.07 SPARE PARTS AND MAINTENANCE MATERIALS

CLOSEOUT PROCEDURES

- A. Provide products, spare parts, and maintenance materials in quantities specified in each Section, in addition to that used for construction of work. Coordinate with State Inspector; deliver to Project site, and obtain a receipt.

1.08 CERTIFICATION OF RECYCLED CONTENT

- A. Refer to General Conditions of the Contract for Construction, Document 00 72 00, Article 3.21, Certification by Contractor of Recycled Content and to Section 01 74 20, Recycled Content Certification, for final submittal of the State Agency Buy Recycled Campaign (SABRC) Procurement Report.
- B. Final Submittal: Upon completion of all construction submittals, and prior to requesting a final inspection, submit the form provided by the State. The summary shall show totals for all purchases of material, goods, or supplies offered or products used in the performance of Work of this Contract; that are from one of the eleven (11) product categories defined in Section 01 74 20. Attach supporting documentation for materials, goods, supplies, or products that contain any amount of recycled materials.
- C. Final inspection will not be scheduled until the completed final SABRC Procurement Summary with supporting documentation is submitted by Contractor and received by the State.

1.09 WASTE MANAGEMENT REPORT

- A. Upon completion of Work, and prior to requesting a final inspection, submit an itemized Waste Management Report summarizing the waste generated, sent to landfill, reused, and recycled which is attributed to Work of this Project.
- B. Refer to Section 01 74 19, Construction Waste Management, and Appendix 01 74 19.2, Waste Management Report.
- C. Final inspection will not be scheduled until completed Waste Management Report is submitted by Contractor and received by the State.

1.10 CONTRACTOR'S CERTIFICATION OF DISABLED VETERAN BUSINESS ENTERPRISE (DVBE) PARTICIPATION

- A. Upon Completion of the Work, together with a Final Payment Application, the Contractor shall submit complete and accurate Form STD 817 "Prime Contractor's Certification – DVBE Subcontracting Report". The State shall review the Form STD 817, and if it is determined to be complete and accurate, the payment will be authorized.
- B. If the Form STD 817 is late or determined to be incomplete or inaccurate, the State shall withhold ten thousand dollars (\$10,000) from the final payment, or the full final payment if less than ten thousand dollars (\$10,000), and provide the Contractor with a notice allowing at least 15 days, but not more than 30 days to cure the defect.
 - 1. If the Contractor does not comply by the deadline identified in the Cure Notice, the State shall permanently deduct the ten thousand dollars (\$10,000) from the final payment, or the full final payment if less than ten thousand dollars (\$10,000).

1.11 CONTRACTOR'S CERTIFICATION OF SMALL BUSINESS (SB) PARTICIPATION

CLOSEOUT PROCEDURES

- A. If final payment has been made to Small Business, upon Completion of the Work, Contractor shall submit the two-page certification, "Contractor's Certification of SB Participation" located in Section 01 77 00, Appendix A.
- B. If retention has been withheld and final payment to Small Business subcontractors will not be made until the Contractor has received Final Payment from the State, Contractor shall:
 - 1. Upon completion of the Work submit the two-page certification, "Contractor's Certification of SB Participation" located in Section 01 77 00, Appendix A, and mark the box entitled "PRELIMINARY REPORT".
 - 2. Within 30 days of receipt of Final Payment submit an updated report and mark the box entitled "FINAL REPORT".
- C. When completing the Certification, the Contractor shall include all Small Businesses even if the firms were not listed at bid time when completing percentage calculations. If SB utilization was different than that approved in original agreement, provide comments. The second page of the Certification may be copied as needed to list all firms.

END OF SECTION

CONTRACTOR'S CERTIFICATION OF SB PARTICIPATION

TO: Real Estate Services Division (Construction Services Area Office Address)	Date:
	Project Number:
	Contract Number:

FROM:

PROJECT
TITLE:

THIS IS TO CERTIFY THAT I,

(Print Name)

AS AN AUTHORIZED OFFICIAL OF

(Firm or Corporation)

WORKING IN THE CAPACITY OF

(Title)

AND HAVE BEEN PROPERLY AUTHORIZED BY SAID FIRM OR CORPORATION TO SIGN THE
FOLLOWING STATEMENT PERTAINING TO SUBJECT CONTRACT.

Pursuant to Section 14841 of the Government Code,

I, the undersigned, hereby certify that to the best of my knowledge, the Small Business participation
information listed on the attached report for the above contract is complete and correct.

SIGNED:

DATE:

CONTRACTOR'S CERTIFICATION OF SB PARTICIPATION

CONTRACT NUMBER		PROJECT NUMBER		CONTRACT COMPLETION DATE		CONTRACT ACCEPTANCE DATE	
PRIME CONTRACTOR			ORIGINAL CONTRACT AMOUNT		FINAL CONTRACT AMOUNT		
DESCRIPTION OF WORK PERFORMED AND MATERIALS PROVIDED	SB BUSINESS NAME AND ADDRESS	SB CERT. NO.	SB CONTRACT PAYMENTS				
			PAYMENT AMOUNT	DATE WORK COMPLETED	DATE OF FINAL PAYMENT	COMMENTS	
TOTAL \$							

ORIGINAL SMALL BUSINESS COMMITMENT: _____%

ACTUAL SMALL BUSINESS ACHIEVED: _____%

SECTION 01 78 23

OPERATION AND MAINTENANCE DATA

PART 1 GENERAL

1.01 SUMMARY

- A. Operation and maintenance manuals.

1.02 PRODUCTS

- A. Format:
 - 1. PDF electronic files with composite electronic index on digital media acceptable to Architect. Include a complete electronically linked operation and maintenance directory.
 - 2. Heavy-duty, three-ring, vinyl-covered, loose-leaf binders, one set(s) of copies.
- B. Emergency Manuals: Types of emergencies, emergency instructions, and emergency procedures.
- C. Operation Manuals: System, subsystem, and equipment descriptions, operating procedures, wiring diagrams, control diagrams and sequence of operation, and piped system diagrams.
- D. Product Maintenance Manuals: Source information, product information, maintenance procedures, repair materials and sources, and warranties and bonds.
- E. Systems and Equipment Maintenance Manuals: Source information, manufacturers' maintenance documentation, maintenance procedures, maintenance and service schedules, spare parts list and source information, maintenance service contracts, and warranties and bonds.

END OF SECTION

SECTION 01 78 39

PROJECT RECORD DOCUMENTS

PART 1 GENERAL

1.01 PRODUCTS

A. Record Drawings:

1. One set(s) of marked-up record prints.

a. Initial Submittal:

1) PDF electronic files of scanned record prints and one set(s) of file prints.

2) Record digital data files and one set(s) of plots.

b. Final Submittal:

1) Three paper-copy set(s) of marked-up record prints.

2) PDF electronic files of scanned record prints and three

B. Record Specifications: Annotated PDF electronic files.

C. Record Product Data: Annotated PDF electronic files and directories.

D. Miscellaneous Record Submittals: Annotated PDF electronic files and directories.

E. Record Prints: One set of paper copies of Contract Documents and Shop Drawings, marked to show actual installation.

F. Record Digital Data Files: Corrected digital data files of the Contract Drawings, as follows:

1. Format: Same as the original Contract Drawings.

END OF SECTION

SECTION 01 79 00
DEMONSTRATION AND TRAINING

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Procedures for demonstration of equipment and systems operation and instruction of up to 15 State personnel.

1.02 RELATED SECTIONS

- A. Section 01 11 00 - Summary: Work sequencing.
- B. Section 01 32 16: Progress Schedule and Reports.
- C. Section 01 75 00: Starting and Adjusting.
- D. Section 01 77 00 - Closeout Procedures: Operation and maintenance data.
- E. Section 01 91 00: Commissioning.
- F. Section 01 86 19: Testing, Adjusting, and Balancing Procedures.
- G. Individual Sections: Specific requirements for demonstrating equipment and systems.

1.03 QUALITY ASSURANCE

- A. When so specified in individual Sections, provide demonstration and instruction to State personnel, performed by a representative approved by the equipment or system manufacturer.
- B. Demonstration and instruction shall be specific to each type of equipment or system supplied by the manufacturer. At a minimum, demonstration and instruction shall include: operational theory; maintenance; trouble shooting/repair; and calibration.
- C. State will provide list of personnel to receive instructions and will coordinate their attendance at agreed upon times.

1.04 SUBMITTALS

- A. Submit preliminary schedule for State's approval, listing times and dates for demonstration and instruction of each item of equipment and each system, 3 weeks prior to proposed dates.
- B. Submit proposed training materials and a detailed outline of each demonstration and instruction at least 30 days in advance of training.
- C. Submit reports within one week after completion of demonstrations indicating that demonstrations and instructions have been satisfactorily completed. List time and date of each demonstration and hours devoted to demonstration and instruction, and list names of persons present.
- D. Submit digital CD/DVD recording with audio of demonstrations and instructions with each report.

1.05 PREPARATION

- A. Verify equipment and systems have been inspected and put into operation in accordance with Section 01 75 00 or 01 91 00; testing, adjusting and balancing has been performed in accordance with Section 01 79 00, and equipment and systems are fully operational.
- B. Furnish training materials, books, etc. to each student attending the training classes and have copies of completed operation and maintenance manuals at hand for use in demonstrations and instructions.

1.06 DEMONSTRATION AND INSTRUCTIONS

- A. Prior to acceptance of equipment or systems, demonstrate operation and maintenance of equipment and systems to State's personnel as scheduled.
- B. Use operation and maintenance manuals as basis of instruction. Review contents of manual with personnel in detail to explain all aspects of operation and maintenance.
- C. Demonstrate start-up, operation, control, adjustment, trouble-shooting, servicing, maintenance and shutdown of each item of equipment or system at agreed upon times, at equipment or system location.
- D. Prepare and insert additional data in operations and maintenance manuals when need for additional data becomes apparent during instructions.
- E. Provide digital recording with audio of demonstrations and instructions in digital CD/DVD format. Recording shall clearly show equipment or systems as they are being described. Audio portion of recording shall include entire session narrative, including questions and answers.
- F. All demonstrations and training described in this section and all other sections shall take place and be completed prior to the Contractor requesting a final inspection.

1.07 TIME ALLOCATED FOR INSTRUCTIONS

- A. Amount of time required for instruction on each item of equipment and system shall be as specified in individual Sections.

END OF SECTION

TESTING, ADJUSTING, AND BALANCING PROCEDURES

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Provide testing organization services under provisions specified in Section 01 45 29; for testing, adjusting, and balancing specified for systems in individual Sections, including the following:
 - 1. Heating, Ventilating, and Air Conditioning.

1.02 RELATED REQUIREMENTS

- A. Document 00 72 00: General Conditions of the Contract for Construction, General requirements for inspections, tests and approvals.
- B. Document 00 73 00, Supplementary Conditions: Withholding of payment pending final completion of services through one full range of seasons.
- C. Section 01 33 00: Submittal Procedures
- D. Section 01 45 29: Testing Laboratory Services: Employment of testing agency(ies) and payment for services.
- E. Section 01 75 00: Starting and Adjusting.

1.03 SUBMITTALS

- A. Prior to start of work, submit name of organization or personnel proposed to perform services. Designate managerial responsibilities for coordination of entire testing, adjusting, and balancing.
- B. Submit documentation to confirm organization or personnel qualifications.
- C. Submit 3 preliminary specimen copies of each report form proposed for use.
- D. Prior to requesting a final inspection, submit 3 copies of final reports of testing, adjusting, and balancing performed to date. Submit reports of testing, adjusting, and balancing which is postponed due to seasonal, climatic, occupancy, or other reasons beyond Contractor's control, promptly after execution of those services.

1.04 PREPARATION

- A. Provide instruments required for testing, adjusting, and balancing operations. Make instruments available to the State Inspector to facilitate spot checks during testing. Retain possession of instruments and remove upon completion of services.
- B. Verify installation of system to be tested is complete and in continuous operation.
- C. Verify ambient conditions and related facilities required to conduct testing, adjusting, and balancing are in full operation.

1.05 GENERAL PROCEDURES

- A. Comply with procedural standards of certifying association under whose standards service will be performed.
- B. Notify the State Inspector 3 days prior to beginning operations.
- C. Accurately record data for each step.
- D. Report to State Inspector defects or deficiencies noted during performance of services.

1.06 FINAL REPORTS

- A. Organization having managerial responsibility shall make reports.
- B. Each form shall bear signature of recorder and supervisor of reporting organization.
- C. Identify each instrument used, and latest date of calibration of each.

1.07 CONTRACTOR RESPONSIBILITIES

- A. Prepare each system for testing and balancing.
- B. Cooperate with testing organization and provide access to equipment and systems. Operate systems at designated times, and under conditions required for proper testing, adjusting, and balancing.
- C. Notify testing organization 7 days prior to time the system will be ready for testing, adjusting, and balancing.

END OF SECTION

SECTION 01 91 00

COMMISSIONING

PART 1 – GENERAL

1.01 SECTION INCLUDES

- A. Procedures for commissioning building systems.

1.02 RELATED SECTIONS

- A. Section 01 33 00: Submittal Procedures.
- B. Section 01 75 00: Starting and Adjusting
- C. Section 01 79 00: Demonstration and Training
- D. Section 26 05 02: Commissioning of Electrical Systems
- E. Division 23: Mechanical
- F. Division 26 & 28: Electrical

1.03 DEFINITIONS

- A. Commissioning Plan: A document that outlines the organization, schedule, allocation of resources, and documentation requirements of the commissioning process.
- B. CxA: Commissioning Authority.

1.04 COMMISSIONING PROCESS

- A. Commissioning is a comprehensive and systematic process to verify that the building systems perform as designed to meet the State's requirements. Commissioning during the construction and warranty phases is intended to achieve the following specific objectives:
 - 1. Verify and document that energy related systems are installed, calibrated and perform according to the Owner's Project Requirements (OPR), Basis of Design (BOD) and Contract Documents.
 - 2. Verify and document that equipment is installed and started per manufacturer's recommendations and the technical specifications.
 - 3. Verify and document that equipment and systems receive complete operational checkout by installation Contractors.
 - 4. Verify and document equipment and system performance.
- B. The commissioning process shall meet the requirements of LEED-NC Version 2009, Prerequisite EA 1, Fundamental Commissioning of Building Energy Systems. The commissioning shall also meet the requirements as specified in the technical sections of this specification.

1.05 CONTRACTOR'S RESPONSIBILITIES

- A. Contractor shall assign representatives with expertise and authority to act on its behalf and shall schedule them to participate in and perform commissioning process activities including, but not limited to, the following:
1. Cooperate with the State in the scheduling of activities to be included in the commissioning plan.
 2. Cooperate with the State for resolution of issues recorded in the Commissioning Issues Log.
 3. Attend commissioning team meetings as requested by the State, but not limited to the following:
 - a. Cx Kick-off Meeting
 - b. Controls Coordination Meeting
 - c. Equipment Startup Sequencing/ Coordination Meeting
 - d. Testing and Air Balance (TAB) Coordination Meeting
 - e. Cx Progress Meetings
 - f. Pre-Training Meeting
 - g. Warranty Review Meeting
 3. Integrate and coordinate commissioning process activities with construction schedule.
 4. Review and use the Pre-Functional Checklists as specified in the technical specifications. In consideration to any approved "Substitution Requests" in accordance with 00 72 00 General Conditions and Section 01 33 00 Submittal Procedures, the Contractor shall be responsible for revising and completing the Pre-Functional Checklists and submit to the State for approval during the "Request for Substitution" process.
 5. Complete the Pre-Functional Checklists as Work is completed and submit to the State when lists are completed.
 6. Review and use the commissioning process and comply with the pre-Functional Tests and Functional Test procedures and requirements as specified in the technical specifications. In consideration to any approved "Substitution Requests" in accordance with 00 72 00 General Conditions and Section 01 33 00 Submittal Procedures, the Contractor shall be responsible for revising and completing the Functional Performance Test procedures and requirements and submit to the State for approval during the "Request for Substitution" process.
 7. Complete the commissioning process and Functional Performance Test procedures and requirements.
 8. The commissioning process does not relieve the Contractor's responsibility to provide fully finished and fully functioning systems.

1.06 PROCEDURES FOR PRE-FUNCTIONAL TESTING

- A. In conjunction with the Pre-Functional Checklists as specified in the technical specifications, adjustments and tests shall be made by Contractor as specified herein and as required by governing codes, regulations, manufacturer's recommendations and appropriate construction standards, Contractor shall adjust, calibrate, and test equipment and devices installed under these Specifications. Except as otherwise specified, Contractor shall furnish labor, materials, tools, and instruments required to perform the work.

- B. The Contractor shall render all services and complete all work required to install each item of equipment, including auxiliaries, and wiring and in operating condition to the State's satisfaction. Individual systems and items of equipment shall be completed in a sequence that will permit systematic checkout and trial operation of each such component before it is incorporated in the initial operation. Contractor shall provide supervision and other workers required to make adjustments and correct deficiencies during initial equipment checking.
- C. Certain calibration and test procedures may involve personnel or work being furnished by other contractors. Contractor shall arrange working crews and schedule so that calibration will be performed in one operation.
- D. Work shall be performed as necessary to meet the Contract Document requirements and the approved construction schedule.
- E. Personnel performing adjustments and tests shall be qualified and experienced. Adjustments and tests shall be performed as many times as is necessary to assure proper operation of equipment and systems and quality of materials and workmanship.
- F. If tests reveal unsatisfactory materials or workmanship, such materials or installation shall be repaired or replaced by Contractor to the satisfaction of the State and shall meet all Contract Document requirements.
- G. Equipment and instrumentation furnished by Contractor (including gauges, switches, thermometers, and other devices which are part of major equipment assemblies furnished by Contractor) shall be assembled, tested, adjusted and calibrated as required for correct and reliable operation.
- H. Contractor shall confirm the inspection and test procedures, identified in the Pre-functional Checklists, for systems in which the equipment is installed and submit to the State for approval. Inspection and test procedures information shall include but not be limited to the following:
 - 1. Identification of material or article to be precommissioned.
 - 2. List of test equipment.
 - 3. Detailed sequential instructions and test objective.
 - 4. Measurement characteristics and required measuring equipment.
 - 5. Acceptance and rejection criteria.
 - 6. Allowable adjustment, repair or rework.
 - 7. Requirements for data recording and reporting.
- I. Pre-Functional tests and inspections shall be performed for all equipment, materials, and systems installed by Contractor, as specified herein and in accordance with equipment manufacturer's recommendations.
- J. Contractor shall submit Pre-Functional test and inspection reports for each item of equipment or system that verifies and documents tests and inspections performed. When manufacturer's service representative has been involved, report shall include verification by that representative that the equipment or system is ready for operation.

1.07 PROCEDURES FOR FUNCTIONAL TESTING

- A. Contractor shall provide labor, equipment, and services to place systems and equipment into service.
- B. Contractor shall provide, in advance, a minimum of five working days notice prior to the start of the functional tests. Contractor shall provide other workers required to make adjustments and correct deficiencies during equipment commissioning and initial operation. It is anticipated that commissioning will be in progress continuously over extended periods. Workers required of Contractor shall be on site as required by the State.
- C. Contractor shall furnish and apply oils, greases, refrigerants, fuels and other lubricants and materials required to place equipment in condition ready for operation. Contractor shall provide temporary gauging devices required during checkout and operation of equipment and systems. Contractor shall remedy any deficiencies and provide all labor, material, etc. to complete the Commissioning process in accordance with the Contract Documents and the approved construction schedule.
- D. After systems have been commissioned to satisfaction of the State, Architect/Engineer, Contractor, and equipment manufacturers, the systems will be considered commissioned and ready for operation.

1.08 SYSTEMS MANUAL

- A. The Contractor shall be responsible for providing necessary information for the CxA to develop the Systems Manual. The Systems Manual is repository of information and shall provide the information needed to understand, operate, and maintain the building's systems and assemblies.

The Systems manual shall contain all elements to meet the requirements of LEED-NC Version 2009, all codes and sustainability programs.

END OF SECTION

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SECTION 011000 - SUMMARY

1.1 PROJECT INFORMATION

- A. Project Identification: : OB 8 & 9 Fire Alarm Replacement.
 - 1. Project Location .
- B. Owner: State of California.
 - 1. Owner's Representative: Jason Sy.
- C. Architect: Dewberry Architects, Inc.
- D. Architect's Consultants: The Architect has retained the following design professionals who have prepared designated portions of the Contract Documents:
 - 1. Mechanical Engineer: Capital Engineers.
 - 2. Electrical Engineers: ECOM
- E. Contractor: To be Detrmined.
- F. Project Web Site: Administered by Contractor.

1.2 WORK COVERED BY CONTRACT DOCUMENTS

- A. The Work of Project: Fire Alarm Upgrades to both Building 8 & 9 to comply with current codes with a UL listed system, which includes replacing and adding Smoke/Fire Dampers throughout both buildings..
- B. Type of Contract: Single prime contracts.
 - 1. Owner occupancy and use by public allowed.
- C. Owner's Occupancy Requirements: Full Owner occupancy.
 - 1. Owner occupancy of completed areas of construction.
- D. Work Restrictions: .
- E. Miscellaneous Provisions: .

END OF SECTION 011000

SECTION 012500 - SUBSTITUTION PROCEDURES

1.1 ACTION SUBMITTALS

- A. Substitution Request Form: CSI Form 13.1A.
- B. Documentation:
 - 1. Justification.
 - 2. Coordination information.
 - 3. Detailed comparison.
 - 4. Product Data.
 - 5. Samples.
 - 6. Certificates and qualification data.
 - 7. List of similar installations.
 - 8. Material test reports.
 - 9. Research reports.
 - 10. Detailed comparison of Contractor's construction schedule.
 - 11. Cost information.
 - 12. Contractor's certification.
 - 13. Contractor's waiver of rights to additional payment or time.
- C. Architect's Action: If necessary, Architect will request additional information within seven days of receipt of a request for substitution. Architect will notify Contractor of acceptance or rejection within 15 days of receipt, or days of receipt of additional information.

1.2 SUBSTITUTIONS

- A. Substitutions for Cause: Not later than 15 days prior to time required for preparation and review of submittals.
- B. Substitutions for Convenience: Not allowed.

END OF SECTION 012500

SECTION 012900 - PAYMENT PROCEDURES

1.1 SUMMARY

A. Schedule of Values:

1. Format: Line items based on Project Manual table of contents and consistent with format of AIA Document G703.
2. Provide multiple line items for principal subcontract amounts in excess of five percent of the Contract Sum.

B. Applications for Payment:

1. Payment Application Times: Indicated in the Agreement.
2. Payment Application Forms: AIA Document G702 and AIA Document G703 Waiver of Mechanic's Lien: Submitted from subcontractors, sub-subcontractors, and suppliers for construction period covered by previous application.

END OF SECTION 012900

SECTION 013100 - PROJECT MANAGEMENT AND COORDINATION

1.1 COORDINATION DRAWINGS

- A. Prepare coordination drawings where space is limited or if required to integrate products.
- B. Coordination Digital Data Files: Same format as Drawings, operating in Microsoft Windows operating system.
- C. BIM File Incorporation Develop and incorporate coordination drawing files into Building Information Model and perform three-dimensional component conflict analysis.
 - 1. Digital data files of Drawings are available in Revit from the Architect.

1.2 REQUESTS FOR INFORMATION (RFIs)

- A. RFI Forms: Software-generated form acceptable to Architect.
- B. Architect's Action: Allow seven working days for Architect's response for each RFI.
- C. RFI Log: Maintain a tabular log of RFIs. Submit log weekly. Use software log that is part of Project Web site.

1.3 PROJECT WEB SITE

- A. Provide, administer, and use Project Web site for project communication and documentation.
- B. Provide up to seven Project Web site user licenses for use of Owner, Architect, and Architect's consultants. Provide eight hours of software training at Architect's office for Project Web site users.
- C. Provide one of the following Project Web site software packages:
 - 1. Autodesk, Buzzsaw.
 - 2. Autodesk, Constructware.
 - 3. Meridian Systems, Prolog.

1.4 PROJECT MEETINGS

- A. Schedule and conduct meetings.
- B. Preconstruction conference.
- C. Preinstallation Conferences: Before each construction activity that requires coordination.
- D. Project Closeout Conference: No later than 90 days prior to the scheduled date of Substantial Completion.
- E. Progress Meetings: At biweekly intervals, coordinated with preparation of payment requests.

SECTION 013100 - PROJECT MANAGEMENT AND COORDINATION

- F. Coordination Meetings: At biweekly intervals, in addition to specific meetings held for other purposes.

END OF SECTION 013100

SECTION 013200 - CONSTRUCTION PROGRESS DOCUMENTATION

1.1 INFORMATIONAL SUBMITTALS

- A. Format for Submittals: PDF electronic file.
- B. Startup construction schedule.
- C. Startup network diagram.
- D. Contractor's construction schedule.
 - 1. Submit a working electronic copy of schedule.
- E. CPM reports.
- F. Daily Construction Reports: Submit at weekly intervals.
- G. Material Location Reports: Submit at monthly intervals.
- H. Site Condition Reports: Submit at time of discovery of differing conditions.
- I. Special Reports: Submit at time of unusual event.

1.2 QUALITY ASSURANCE

- A. Scheduling Consultant: Experienced specialist in CPM scheduling and reporting.

1.3 CONTRACTOR'S CONSTRUCTION SCHEDULE

- A. Activity Duration: No longer than 20 days.
- B. Constraints:
 - 1. Phasing.
 - 2. Work under more than one contract.
 - 3. Work by Owner.
 - 4. Products ordered in advance.
 - 5. Owner-furnished products.
 - 6. Work restrictions.
 - 7. Work stages.
 - 8. Construction areas.
 - 9. Other Constraints: .
- C. Milestones: Notice to Proceed, Insert interim milestones, Substantial Completion, and final completion.
- D. Software: Microsoft Project, Primavera, Prolog Scheduling component of Project Web site software, for Windows XP operating system.

SECTION 013200 - CONSTRUCTION PROGRESS DOCUMENTATION

- E. Schedule Type, Cost- and resource-loaded CPM.
- F. Updating: At monthly intervals, issued one week before each progress meeting.

END OF SECTION 013200

SECTION 013233 - PHOTOGRAPHIC DOCUMENTATION

1.1 PRODUCTS

- A. Digital Photographs: 8 megapixels.
- B. Web-Based Photographic Documentation: Submit time-lapse sequence video recordings by posting to Project Web site.
- C. Preconstruction Photographs:
 - 1. Each Building every floor photographs showing existing conditions of ceilings and walls adjacent to work areas before starting the Work.
- D. Periodic Construction Photographs: 20 photographs monthly.
- E. Final Completion Construction Photographs: 20 color photographs.
- F. Web-Based Construction Photographic Documentation:
 - 1. Web-accessible image of current site image from viewer-controlled location camera(s), updated at 15 minute intervals.

END OF SECTION 013233

SECTION 013300 - SUBMITTAL PROCEDURES

1.1 DEFINITIONS

- A. Action Submittals: Information that requires Architect's responsive action.
- B. Informational Submittals: Information that does not require Architect's approval. Submittals may be rejected for not complying with requirements.

1.2 PROCEDURES

- A. Electronic copies of digital data files of the Contract Drawings will be provided by Architect for Contractor's use.
- B. Processing Time:
 - 1. Initial Review: 15 days.
 - 2. Resubmittal Review: 15 days.
 - 3. Sequential Review: 21 days.
 - 4. Concurrent Consultant Review: 15 days.
- C. Transmittal Form: CSI Form 12.1A.
- D. Submittal Procedures:
 - 1. Post as PDF files directly to Project Web site.
 - 2. Submit via email as PDF files.
 - 3. BIM File Incorporation: By Contractor.
 - 4. Action Submittals: Submit three paper copies.
 - 5. Informational Submittals: Submit two paper copies.
 - 6. Certificates and Certifications Submittals: Includes signature of entity responsible for preparing certification. Provide a digital signature on electronically submitted certificates and certifications where indicated.
- E. Delegated-Design Services Certification: In addition to other required submittals, submit digitally signed PDF electronic file and three paper copies of certificate, signed and sealed by the responsible design professional.
 - 1. BIM File Incorporation: By Contractor.
- F. Contractor's Review:
 - 1. Submittals: Marked with approval stamp before submitting to Architect.
- G. Architect's Action:
 - 1. Action Submittals: Stamped with an action stamp and returned.
 - a. Insert description of each action indicated on Architect's stamp.

SECTION 013300 - SUBMITTAL PROCEDURES

2. Informational Submittals: Reviewed but not returned, or rejected if they do not comply with requirements.
3. Incomplete submittals will be returned without review.
4. Submittals Not Required: May not be reviewed and may be discarded.

END OF SECTION 013300

SECTION 014000 - QUALITY REQUIREMENTS

1.1 DEFINITIONS

- A. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.
- B. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements.

1.2 QUALITY ASSURANCE

- A. Qualifications:
 - 1. Contractor's quality control personnel.
 - 2. Manufacturer.
 - 3. Fabricator.
 - 4. Installer.
 - 5. Professional engineer.
 - 6. Specialists.
 - 7. Testing agency.
 - 8. Manufacturer's technical representative.
 - 9. Factory-authorized service representative.
- B. Preconstruction testing.
- C. Mockups: For each form of construction and finish required, using materials indicated for the completed Work.
 - 1. Demonstrate the proposed range of aesthetic effects and workmanship.
 - 2. Maintain mockups as a standard for judging the completed Work.
 - 3. Demolish and remove mockups when directed unless otherwise indicated.

1.3 QUALITY CONTROL

- A. Owner Responsibilities: Where indicated as Owner's responsibility, Owner will engage a qualified testing agency to perform these services.
 - 1. Payment will be made from testing and inspecting allowances.
- B. Contractor Responsibilities: Tests and inspections not explicitly assigned to Owner are Contractor's responsibility.
- C. Manufacturer's field services.
- D. Retesting/Reinspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that replaced Work that failed to comply with the Contract Documents.

SECTION 014000 - QUALITY REQUIREMENTS

- E. Associated Services: Access to the Work, taking and storing samples, and delivery of samples to testing agency.
- F. Special Tests and Inspections: Owner will engage a qualified testing agency and special inspector to conduct special tests and inspections required by authorities having jurisdiction as the responsibility of Owner.
- G. Special Tests and Inspections: Conducted by a qualified testing agency as required by authorities having jurisdiction, as indicated in individual Specification Sections.
- H. Test and inspection log.
- I. Repair and Protection: Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION 014000

SECTION 014200 - REFERENCES

1.1 DEFINITIONS

- A. Approved.
- B. Directed.
- C. Indicated.
- D. Regulations.
- E. Furnish.
- F. Install.
- G. Provide.
- H. Project site.

1.2 INDUSTRY STANDARDS

- A. Publication Dates: In effect as of the date of the Contract Documents unless otherwise indicated.

1.3 ABBREVIATIONS AND ACRONYMS

- A. Industry Organizations: Contractor referred to Thomson Gale's "Encyclopedia of Associations" or Columbia Books' "National Trade & Professional Associations of the U.S.
- B. Code Agencies: List included in this Section.
- C. Federal Government Agencies: List included in this Section.
- D. Standards and Regulations: List included in this Section.
- E. State Government Agencies: List included in this Section.

END OF SECTION 014200

SECTION 015000 - TEMPORARY FACILITIES AND CONTROLS

1.1 USE CHARGES

- A. Sewer, Water, and Electric Power Service: Use charges are specified in Division 01 Section "Multiple Contract Summary."

1.2 INFORMATIONAL SUBMITTALS

- A. Fire-safety program.
- B. Dust- and HVAC-control plan.

1.3 MATERIALS

- A. Portable chain-link fencing.
- B. Wood enclosure fence.

1.4 TEMPORARY FACILITIES

- A. Common-Use Field Office: Prefabricated or mobile units, including conference room.
- B. Storage and fabrication sheds.

1.5 EQUIPMENT

- A. Fire extinguishers.
- B. HVAC Equipment: Unless Owner authorizes use of permanent HVAC system, provide vented, self-contained heaters with individual space thermostatic control.
 - 1. Permanent HVAC System: If Owner authorizes use of HVAC system, provide filter with MERV of 8 at each return-air grille and clean HVAC system.
- C. Air-Filtration Units: HEPA-filter-equipped portable units. Configure to run continuously.

1.6 TEMPORARY UTILITY INSTALLATION

- A. Sanitary Facilities: Provide temporary toilets, wash facilities, and drinking water.
 - 1. Toilets: Use of existing facilities will be permitted, as long as facilities are cleaned and maintained in a condition acceptable to Owner.
- B. Isolation of work areas in occupied facilities.
- C. Ventilation and humidity control.

SECTION 015000 - TEMPORARY FACILITIES AND CONTROLS

- D. Lighting: Provide temporary lighting.
- E. Telephone Service: Provide temporary telephone service in common-use facilities.
- F. Electronic Communication Service: Provide a desktop computer in the primary field office adequate for use by Architect and Owner to access Project electronic documents and maintain electronic communications.

1.7 SUPPORT FACILITIES INSTALLATION

- A. Parking: Use designated areas of Owner's existing parking areas.
- B. Dewatering Facilities and Drains: Maintain Project site, excavations, and construction free of water.
- C. Project Signs: Provide Project signs as indicated. Unauthorized signs are not permitted.
- D. Temporary Elevator Use: See Division 14 Sections.
- E. Existing Elevator Use: Use of existing elevators will be permitted, provided elevators are cleaned and maintained in a condition acceptable to Owner.

1.8 SECURITY AND PROTECTION FACILITIES INSTALLATION

- A. Covered Walkway: Erect protective, covered walkway for passage of individuals through or adjacent to Project site.
- B. Temporary Partitions: Provide floor-to-ceiling dustproof partitions to separate areas occupied by Owner from fumes and noise.

END OF SECTION 015000

SECTION 016000 - PRODUCT REQUIREMENTS

1.1 ACTION SUBMITTALS

- A. Comparable Product Requests: Architect will notify Contractor of approval, returned with comments or rejection within 15 days of receipt of request, or seven days of receipt of additional information.

1.2 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Use means and methods that will prevent damage, deterioration, and loss, including theft.
- B. Store products to allow for inspection and measurement or counting of units.
- C. Provide for storage of materials and equipment by Owner.

1.3 PRODUCT WARRANTIES

- A. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.
- B. Special Warranties: Prepare a written document that contains appropriate terms and identification, ready for execution.

1.4 PRODUCT SELECTION PROCEDURES

- A. Product Selection Procedures:
 - 1. Product: Product named that complies with requirements.
 - 2. Manufacturer/Source: Product by manufacturer or from source named that complies with requirements.
 - 3. Products: One of the products listed that complies with requirements. Comparable products will be considered if submitted with Substitution Request provided reasons are valid.
 - 4. Manufacturers: Product by one of the manufacturers listed that complies with requirements. Comparable products will be considered unless otherwise indicated.
 - 5. Basis-of-Design Product: Either the specified product or a comparable product by one of the other named manufacturers.
 - 6. Visual Matching Specification: Product that matches Architect's sample. Architect's decision will be final.
 - 7. Visual Selection Specification: Product (and manufacturer) that complies with other specified requirements. Architect will select color, gloss, pattern, density, or texture from manufacturer's product line that includes both standard and premium items.

1.5 COMPARABLE PRODUCTS

- A. Conditions for Consideration:

SECTION 016000 - PRODUCT REQUIREMENTS

1. Product does not require revisions to the Contract Documents, is consistent with the Contract Documents and will produce the indicated results, and is compatible with other portions of the Work.
2. Comparison of proposed product with those named in the Specifications.
3. Product provides specified warranty.
4. Similar installations, if requested.
5. Samples, if requested.

END OF SECTION 016000

SECTION 017300 - EXECUTION

1.1 INFORMATIONAL SUBMITTALS

- A. Qualification data.
- B. Cutting and patching plan.
- C. Final property survey.

1.2 EXECUTION

- A. Existing Conditions: Existence and location of site improvements, utilities, and other construction affecting the Work must be investigated and verified.
- B. Review of the Contract Documents and field conditions.
- C. Installation: Comply with manufacturer's written instructions.

1.3 CUTTING AND PATCHING

- A. Provide temporary support.
- B. Protect in-place construction.
- C. Protect adjacent occupied areas.
- D. Existing Utility Services and Mechanical/Electrical Systems: Minimize interruption to occupied areas.
- E. Cutting: In general, use hand or small power tools. Cut holes and slots neatly to minimum size required. Temporarily cover openings when not in use. No demolition of structural elements is permitted without study and approval.
- F. Patching: Patch with durable seams that are as invisible as practicable. Restore exposed finishes.

1.4 OWNER-INSTALLED PRODUCTS

- A. Provide access to Project site for Owner's personnel.
- B. Inform Owner of Contractor's preferred construction schedule for Owner's portion of the Work. Adjust construction schedule based on a mutually agreeable timetable.
- C. Include Owner's personnel at preinstallation conferences.

SECTION 017300 - EXECUTION

1.5 PROGRESS CLEANING

- A. Clean Project site and work areas daily. Dispose of materials lawfully.
- B. Keep installed work clean.
- C. Remove debris from concealed spaces.

1.6 STARTING AND ADJUSTING

- A. Start equipment and operating components to confirm proper operation.
- B. Adjust equipment for proper operation.

1.7 PROTECTION OF INSTALLED CONSTRUCTION

- A. Provide final protection and maintain conditions that ensure Work is without damage.

1.8 CORRECTION OF THE WORK

- A. Repair or remove and replace defective construction. Restore damaged substrates and finishes.
- B. Restore permanent facilities used during construction to their specified condition.
- C. Remove and replace damaged surfaces if not repaired without visible evidence of repair.

END OF SECTION 017300

SECTION 017419 - CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

1.1 SUMMARY

- A. Salvaging nonhazardous demolition and construction waste.
- B. Disposing of nonhazardous demolition and construction waste.

1.2 PLAN IMPLEMENTATION

- A. Engage a waste management coordinator.
- B. Train workers, subcontractors, and suppliers on proper waste management procedures.

END OF SECTION 017419

SECTION 017700 - CLOSEOUT PROCEDURES

1.1 SUBSTANTIAL COMPLETION

- A. Preliminary Procedures: Before requesting inspection, complete the following.
1. Contractor's list of incomplete items (punch list) prepared on CSI Form 14.1A.
 - a. Submit MS Excel electronic file.
 - b. Submit PDF electronic file.
 - c. Submit paper copies.
 2. Owner advised of pending insurance changeover.
 3. Warranties, maintenance service agreements, and similar documents submitted.
 4. Releases, occupancy permits, and operating certificates submitted.
 5. Project Record Documents submitted.
 6. Tools, spare parts, and extra materials delivered.
 7. Final changeover of locks performed.
 8. Startup testing completed.
 9. Test/adjust/balance records submitted.
 10. Temporary facilities removed.
 11. Owner advised of heat and utility changeover.
 12. Changeover information for use, operation, and maintenance submitted.
 13. Owner's personnel instructed in operation, adjustment, and maintenance of equipment and systems, including demonstration and training videotapes submitted.
 14. Final cleaning performed.
 15. Touchup performed.

1.2 FINAL COMPLETION

- A. Preliminary Procedures: Before requesting final inspection, complete the following:
1. Final Application for Payment submitted.
 2. List of incomplete items (punch list) endorsed by Architect as completed or otherwise resolved for acceptance.
 3. Evidence of continuing insurance coverage submitted.
 4. Final pest-control inspection report and warranty submitted.

1.3 SUBMITTAL OF PROJECT WARRANTIES

- A. Partial Occupancy: Submit warranties within 15 days of completion of designated portions of the Work that are occupied or used by Owner.
- B. Organize warranty documents based on Project Manual and bind in heavy-duty, three-ring, vinyl-covered, loose-leaf binders.
- C. Scan warranties and bonds into a single indexed electronic PDF file.

SECTION 017700 - CLOSEOUT PROCEDURES

1.4 FINAL CLEANING

- A. Cleaning Agents: Comply with Green Seal's GS-37 and California Code of Regulations maximum allowable VOC levels.
- B. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program.
- C. Replace disposable air filters and clean permanent air filters.
- D. Clean ducts, blowers, and coils if units were operated without filters during construction.
- E. Clean HVAC system in compliance with NADCA Standard 1992-01.

1.5 REPAIR OF THE WORK

- A. Repair or remove and replace defective construction. Where damaged or worn items cannot be repaired or restored, provide replacements. Restore damaged construction and permanent facilities used during construction to specified condition.

END OF SECTION 017700

SECTION 017823 - OPERATION AND MAINTENANCE DATA

1.1 SUMMARY

- A. Operation and maintenance manuals.

1.2 PRODUCTS

- A. Format:
 - 1. PDF electronic files with composite electronic index on digital media acceptable to Architect. Include a complete electronically linked operation and maintenance directory.
 - 2. Heavy-duty, three-ring, vinyl-covered, loose-leaf binders, one set(s) of copies.
- B. Emergency Manuals: Types of emergencies, emergency instructions, and emergency procedures.
- C. Operation Manuals: System, subsystem, and equipment descriptions, operating procedures, wiring diagrams, control diagrams and sequence of operation, and piped system diagrams.
- D. Product Maintenance Manuals: Source information, product information, maintenance procedures, repair materials and sources, and warranties and bonds.
- E. Systems and Equipment Maintenance Manuals: Source information, manufacturers' maintenance documentation, maintenance procedures, maintenance and service schedules, spare parts list and source information, maintenance service contracts, and warranties and bonds.

END OF SECTION 017823

SECTION 017839 - PROJECT RECORD DOCUMENTS

1.1 PRODUCTS

A. Record Drawings:

1. One set(s) of marked-up record prints.
 - a. Initial Submittal:
 - 1) PDF electronic files of scanned record prints and one set(s) of file prints.
 - 2) Record digital data files and one set(s) of plots.
 - b. Final Submittal:
 - 1) Three paper-copy set(s) of marked-up record prints.
 - 2) PDF electronic files of scanned record prints and three

B. Record Specifications: Annotated PDF electronic files.

C. Record Product Data: Annotated PDF electronic files and directories.

D. Miscellaneous Record Submittals: Annotated PDF electronic files and directories.

1.2 PRODUCTS

A. Record Prints: One set of paper copies of Contract Documents and Shop Drawings, marked to show actual installation.

B. Record Digital Data Files: Corrected digital data files of the Contract Drawings, as follows:

1. Format: Same as the original Contract Drawings.
2. Format: Annotated PDF electronic file.

END OF SECTION 017839

SECTION 017900 - DEMONSTRATION AND TRAINING

1.1 INSTRUCTION PROGRAM

- A. Program Structure: Training modules for each system and for equipment not part of a system, including the following:
 - 1. Basis of system design, operational requirements, and criteria.
 - 2. Documentation.
 - 3. Emergencies.
 - 4. Operations.
 - 5. Adjustments.
 - 6. Troubleshooting.
 - 7. Maintenance.
 - 8. Repairs.
- B. Facilitator to prepare instruction program and training modules and to coordinate instructors.
- C. Evaluation Written and Demonstration performance-based test.

1.2 DEMONSTRATION AND TRAINING VIDEO RECORDINGS

- A. Commercial videographer to record demonstration and training video recordings.
- B. Narration: Describe scenes on video recording and provide a transcript of the narration.
- C. Provide video recordings used as a component of training modules.

END OF SECTION 017900

SECTION 024119 - SELECTIVE STRUCTURE DEMOLITION

1.1 PROJECT CONDITIONS

- A. Owner will occupy portions of building immediately adjacent to selective demolition area.
- B. Hazardous Materials: Unknown.
 - 1. Remediation: By Owner before start of Work.
 - 2. Landfill records for hazardous wastes.
- C. Historic removal or dismantling required.

1.2 EXECUTION

- A. Professional engineer engaged to survey condition of building.
 - 1. Recorded by use of preconstruction photographs.
- B. Utility Services and Mechanical/Electrical Systems: Maintained to occupied facilities.
 - 1. Shut Off: By Owner or Contractor.
- C. Site Access and Temporary Controls: Minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities
- D. Temporary Facilities:
 - 1. Temporary barricades to prevent injury to people.
 - 2. Temporary weather protection.
 - 3. Protection of existing finish work to remain.
 - 4. Protection of furnishings and equipment.
- E. Temporary shoring.
- F. Reuse of Building Elements:
- G. Removed and Salvaged Items: Cleaned, crated, stored, and transported to Owner's off-site storage area.
- H. Removed and Reinstalled Items: Cleaned, repaired, crated, stored, and reinstalled.
- I. Existing Items to Remain: Existing construction protected against damage.
- J. Disposal of Demolished Items:
 - 1. Burning: Not permitted.
 - 2. Disposal: Off Owner's property.

END OF SECTION 024119

SECTION 02 41 26

SELECTIVE ELECTRICAL DEMOLITION

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Removal of existing electrical equipment, wiring, and conduit in areas to be remodeled; removal of designated construction; dismantling, cutting and alterations for completion of the Work.
 - 2. Disposal of materials.
 - 3. Storage of removed materials.
 - 4. Identification of utilities.
 - 5. Salvaged items.
 - 6. Protection of items to remain as indicated on Drawings.
 - 7. Relocate existing equipment to accommodate construction.

1.2 SCHEDULING

- A. Schedule work to coincide with new construction.
- B. Cease operations immediately when structure appears to be in danger and notify Architect/Engineer. Do not resume operations until directed.

1.3 COORDINATION

- A. Conduct demolition to minimize interference with adjacent and occupied building areas.
- B. Coordinate demolition work with Owner.
- C. Coordinate and sequence demolition so as not to cause shutdown of operation of surrounding areas.
- D. Shut-down Periods:
 - 1. Arrange timing of shut-down periods of in-service panels with Owner. Do not shut down any utility without prior written approval.
 - 2. Keep shut-down period to minimum or use intermittent period as directed by Owner. Maintain life-safety systems in full operation in occupied facilities or provide notice minimum 3 days in advance.
- E. Identify salvage items in cooperation with Owner.

PART 2 PRODUCTS
Not Used

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify existing conditions before starting work.
- B. Verify wiring and equipment indicated to be demolished serve only abandoned facilities.
- C. Verify termination points for demolished services.

3.2 PREPARATION

- A. Erect, and maintain temporary safeguards, including warning signs and lights, barricades, and similar measures, for protection of the public, Owner, Contractor's employees, and existing improvements to remain.
- B. Provide temporary egress signage and emergency lighting
- C. Existing Fire Alarm System: Maintain existing system in service. Disable system only to make switchovers and connections. Make temporary connections to maintain service in areas adjacent to work area.
- D. Existing Telephone System: Maintain existing system in service.
- E. Existing Public Address System: Maintain existing system in service. Disable system only to make switchovers and connections. Make temporary connections to maintain service in areas adjacent to work area.

3.3 DEMOLITION

- A. Demolition Drawings are based on field observation [and existing record documents]. Report discrepancies to Architect before disturbing existing installation.
- B. Remove abandoned conduit, cabling and associated supports, including abandoned conduit and cables above accessible ceiling finishes. Cut conduit flush with walls and floors, and patch surfaces to match existing.
- C. Remove conduit, wire, boxes, and fastening devices to avoid any interference with new installation.
- D. Disconnect electrical systems in walls, floors, and ceilings scheduled for removal.
- E. Remaining Circuits and Equipment: Reinstall existing electrical installations disturbed. Certain existing electrical installations may be located in walls, ceilings or floors that are to be removed and are essential for the operation of other remaining installations. Where this condition occurs provide a new extension of original circuits, raceways, equipment and outlets to retain service continuity. Installations shall be concealed in finished areas.
- F. Reconnect equipment being disturbed by renovation work and required for continuous service.
- G. Disconnect or shut off service to areas where electrical work is to be removed. Remove electrical fixtures, equipment, and related switches, outlets, conduit and wiring which are not part of final project.

- H. Install temporary wiring and connections to maintain existing systems in service during construction.
- I. Remove, relocate, and extend existing installations to accommodate new construction.
- J. Repair adjacent construction and finishes damaged during demolition and extension work.
- K. Remove exposed abandoned grounding and bonding components, fasteners and supports, and electrical identification components, including abandoned components above accessible ceiling finishes. Cut embedded support elements flush with walls and floors.
- L. Clean and repair existing equipment to remain or to be reinstalled.
- M. Protect and retain power to existing active equipment remaining.
- N. Cap abandoned empty conduit at both ends.

3.4 EXISTING PANELBOARDS

- A. Ring out circuits in existing panel affected by the Work. Where additional circuits are needed, reuse circuits available for reuse. Install new breakers.
- B. Tag unused circuits as spare.
- C. Where existing circuits are indicated to be reused, use sensing measuring devices to verify circuits feeding Project area or are not in use.
- D. Remove existing wire no longer in use from panel to equipment.
- E. Provide new updated directories where circuits have been modified or rewired.

3.5 SALVAGE ITEMS

- A. Remove and protect items indicated on Drawings to be salvaged and turn over to Owner.
- B. Items of salvageable value may be removed as work progresses. Transport salvaged items from site as they are removed.

3.6 REUSABLE ELECTRICAL EQUIPMENT

- A. Carefully remove equipment, materials, or fixtures which are to be reused.
- B. Disconnect, remove, or relocate existing electrical material and equipment interfering with new installation.

3.7 CLEANING

- A. Remove demolished materials as work progresses. Legally dispose.
- B. Keep workplace neat.
- C. Clean and repair existing materials and equipment which remain or are to be reused.

- D. Panelboards: Clean exposed surfaces and check tightness of electrical connections. Replace damaged circuit breakers and provide closure plates for vacant positions. Provide typed circuit directory showing revised circuiting arrangement.

3.8 RECYCLABLE AND REUSABLE MATERIAL AND EQUIPMENT:

- A. Contractor shall be responsible for recycling of all removed materials and equipment as part of this work. Materials shall be collected by a recognized and approved reuse and recycling center.
- B. Recyclable and reusable material and equipment shall include but not limited to the following:
 - 1. Plastic lighting diffusers
 - 2. Ferrous metals
 - 3. Non-ferrous metals

3.9 PROTECTION OF FINISHED WORK

- A. Do not permit traffic over unprotected floor surface.

END OF SECTION

SECTION 079200 - JOINT SEALANTS

1.1 PRECONSTRUCTION TESTING

- A. Preconstruction compatibility and adhesion testing.
- B. Preconstruction field-adhesion testing.

1.2 WARRANTY

- A. Installer Warranty: Two years.
- B. Special Manufacturer's Warranty: 5 years.

1.3 MATERIALS

- A. VOC Content of Interior Sealants:
 - 1. Architectural Sealants: 250 g/L.
 - 2. Sealant Primers for Nonporous Substrates: 250 g/L.
 - 3. Sealant Primers for Porous Substrates: 775 g/L.
- B. Stain Test: ASTM C 1248.
- C. Suitability for Contact with Food: Comply with 21 CFR 177.2600, where applicable.

1.4 JOINT SEALANTS

- A. Mildew-Resistant, Neutral-Curing Silicone Joint Sealant:
 - 1. Type: Single component or multicomponent.
 - 2. Grade: nonsag.
 - 3. Class: 100/50.
 - 4. Uses Related to Exposure: Nontraffic.
- B. Silicone-based Firestop Silicone Sealant:
 - 1. Type: Single component or multicomponent.
 - 2. Grade: nonsag.
 - 3. Class: 100/50
 - 4. Uses Related to Exposure nontraffic.
- C. Latex Joint Sealant: Acrylic latex or siliconized acrylic latex.
- D. Solvent-Release-Curing Joint Sealant: Acrylic.
- E. Preformed Joint Sealant: Preformed silicone.

SECTION 079200 - JOINT SEALANTS

- F. Acoustical Joint Sealant: Nonsag, paintable, nonstaining latex.
- G. Joint-Sealant Backing: Cylindrical.

1.5 FIELD QUALITY CONTROL

- A. Field-adhesion testing.

END OF SECTION 079200

SECTION 099123 - INTERIOR PAINTING

1.1 QUALITY ASSURANCE

- A. Mockups for each color and finish.

1.2 PAINT, GENERAL

- A. Products MPI listed.
- B. Low-Emitting Materials: Complying with LEED for Schools Credit EQ 4.

1.3 SOURCE QUALITY CONTROL

- A. Testing: By Owner-engaged agency.

1.4 INTERIOR PAINTING SCHEDULE

- A. Concrete Substrates, Nontraffic Surfaces:
 - 1. Latex system.
 - 2. Latex over latex aggregate system.
 - 3. Institutional low-odor/VOC latex system.
 - 4. High-performance architectural latex system.
 - 5. Water based light industrial coating system.
 - 6. Alkyd system.
- B. CMU Substrates:
 - 1. Latex system.
 - 2. Institutional low-odor/VOC latex system.
 - 3. High-performance architectural latex system.
 - 4. Water-based light industrial coating system.
 - 5. Alkyd system.
- C. Steel Substrates:
 - 1. Latex over alkyd primer system.
 - 2. Water-based dry-fall system.
 - 3. Institutional low-odor/VOC latex system.
 - 4. High-performance architectural latex system.
 - 5. Water-based light industrial coating system.
 - 6. Alkyd system.
 - 7. Quick-drying enamel system.
 - 8. Alkyd dry-fall system.
 - 9. Aluminum paint system.
- D. Galvanized-Metal Substrates:

SECTION 099123 - INTERIOR PAINTING

1. Latex over waterborne primer system.
2. Water-based dry-fall system.
3. Institutional low-odor/VOC latex system.
4. High-performance architectural latex system.
5. Water-based light industrial coating over waterborne primer system.
6. Aluminum paint system.

E. Aluminum Substrates:

1. Latex system.
2. Institutional low-odor/VOC latex system.
3. High-performance architectural latex system.
4. Water-based light industrial coating system.
5. Alkyd system.
6. Aluminum paint system.

F. Gypsum Board Substrates:

1. Latex system.
2. Institutional low-odor/VOC latex system.
3. High-performance architectural latex system.
4. Water-based light industrial coating system.
5. Alkyd over latex primer system.

END OF SECTION 099123

SECTION 23 00 50 - BASIC HVAC MATERIALS AND METHODS

PART 1 - GENERAL

1.1 RELATED REQUIREMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.
- B. This Section is a part of each Division 23 Section.

1.2 ADDITIONAL REQUIREMENTS

- A. Furnish and install incidental work not shown or specified necessary to provide a complete and workable system.

1.3 REFERENCES AND STANDARDS

- A. Where material or equipment is specified to conform to referenced standards, it shall be assumed that the most recent edition of the standard in effect at the time of bid shall be used.
 - 1. AABC - Associated Air Balance Council
 - 2. AFBMA - Anti Friction Bearing Manufacturer's Association
 - 3. AMCA - Air Moving and Control Association Inc.
 - a. Standard 210 - Laboratory Methods of Testing Fans
 - 4. ANSI - American National Standards Institute
 - 5. ARI - Air-Conditioning and Refrigeration Institute
 - 6. ASHRAE - American Society of Heating, Refrigerating and Air Conditioning Engineers
 - 7. ASME - American Society of Mechanical Engineers
 - 8. ASTM - American Society for Testing and Materials
 - 9. CCR - California Code of Regulations
 - a. Title 8 - Division of Industrial Safety, Subchapter 7; General Industry Safety Orders, Articles 31 through 36
 - 10. CSA – Canadian Standards Association International
 - 11. CSFM - California State Fire Marshal
 - 12. NCPWB - National Certified Pipe Welding Bureau
 - 13. NIST - National Institute of Standards and Technology
 - 14. NEMA - National Electrical Manufacturers' Association
 - 15. NFPA - National Fire Protection Association
 - 16. OSHA - Occupational Safety and Health Act
 - 17. SMACNA - Duct Manuals
 - 18. UL - Underwriters' Laboratories, Inc.
- B. Requirements of Regulatory Agencies:
 - 1. The publications listed below form part of this specification; comply with provisions of these publications except as otherwise shown or specified.

- a. California Building Code, 2022.
 - b. California Electrical Code, 2022.
 - c. California Energy Code, 2022.
 - d. California Fire Code, 2022.
 - e. California Green Building Standards Code, 2022.
 - f. California Mechanical Code, 2022.
 - g. California Plumbing Code, 2022.
 - h. California Code of Regulations, Title 24.
 - i. California Health and Safety Code.
 - j. CAL-OSHA.
 - k. California State Fire Marshal, Title 19 CCR.
 - l. National Fire Protection Association.
 - m. Occupational Safety and Health Administration.
 - n. Other applicable state laws.
2. Nothing in Drawings or specifications shall be construed to permit work not conforming to these codes, or to requirements of authorities having jurisdiction. It is not the intent of Drawings or specifications to repeat requirements of codes except where necessary for clarity.

1.4 DRAWINGS

- A. Examine Drawings prior to bidding of work and report discrepancies in writing to Architect.
- B. Drawings showing location of equipment and materials are diagrammatic and job conditions will not always permit installation in location shown. The HVAC Drawings show general arrangement of equipment and materials, etc., and shall be followed as closely as existing conditions, actual building construction, and work of other trades permit.
 1. Architectural and Structural Drawings shall be considered part of the Work. These Drawings furnish Contractor with information relating to design and construction of the Project. Architectural Drawings take precedence over HVAC Drawings.
 2. Because of the small scale of HVAC Drawings, not all offsets, fittings, and accessories required are shown. Investigate structural and finish conditions affecting the Work and arrange Work accordingly. Provide offsets, fittings, and accessories required to meet conditions. Inform Architect immediately when job conditions do not permit installation of equipment and materials in the locations shown. Obtain the Architects approval prior to relocation of equipment and materials.
 3. Relocate equipment and materials installed without prior approval of the Architect. Remove and relocate equipment and materials at Contractors' expense upon Architects' direction.
 4. Minor changes in locations of equipment, piping, ducts, etc., from locations shown shall be made when directed by the Architect at no additional cost to the Owner providing such change is ordered before such items of work, or work directly connected to same are installed and providing no additional material is required.
- C. Execute work mentioned in the Specifications and not shown on the Drawings, or vice versa, the same as if specifically mentioned or shown in both.

1.5 FEES AND PERMITS

- A. Obtain and pay for permits and service required in installation of the Work. Arrange for required inspections and secure approvals from authorities having jurisdiction. Comply with requirements of Division 01.
- B. Arrange for utility connections and pay charges incurred, including excess service charges.
- C. Coordination:
 - 1. General:
 - a. Coordinate HVAC Work with trades covered in other Specifications Sections to provide a complete, operable and sanitary installation of the highest quality workmanship.
 - 2. Have fire damper and fire smoke damper installation instructions available at Project site during construction for use by Project Inspector.
 - 3. Electrical Coordination:
 - a. Refer to the Electrical Drawings and Specifications, Division 26, for service voltage and power feed wiring for equipment specified under this section. Contractor has full responsibility for the following items of work:
 - 1) Review the Electrical Drawings and Division 26 Specifications to verify that electrical services provided are adequate and compatible with equipment requirements.
 - 2) If additional electrical services are required above that indicated on Electrical Drawings and in Division 26, such as more control interlock conductors, larger feeder, or separate 120 volt control power source, include cost to furnish and install additional electrical services as part of the bid.
 - 3) Prior to proceeding with installation of additional electrical work, submit detailed drawings indicating exact scope of additional electrical work.
 - 4. Mechanical Coordination:
 - a. Arrange for pipe spaces, chases, slots and openings in building structure during progress of construction, to accommodate mechanical system installation.
 - b. Coordinate installation of supporting devices. Set sleeves in poured-in-place concrete and other structural components during construction.
 - c. Coordinate requirements for access panels and doors for mechanical items requiring access where concealed behind finished surfaces. Access panels and doors are specified in Division 08 Section “Access Doors and Frames.”
 - d. Coordinate with other trades equipment locations, pipe, duct and conduit runs, electrical outlets and fixtures, air inlets and outlets, and structural and architectural features. Provide information on location of piping and seismic bracing to other trades as required for a completely coordinated project.

1.6 SUBMITTALS - GENERAL

- A. Refer to Division 01 Submittals Section(s) for additional requirements.

- B. Submittal packages may be submitted via email as PDF electronic files, or as printed packages. PDFs shall be legible at actual size (100 percent). Provide seven copies of printed submittal packages.
- C. Provide submittal of materials proposed for use as part of this Project. Product names in Specifications and on Drawings are used as standards of quality. Furnish standard items on specified equipment at no extra cost to the Contract regardless of disposition of submittal data. Other materials or methods shall not be used unless approved in writing by Architect. Architect's review will be required even though "or equal" or synonymous terms are used.
 - 1. Partial or incomplete submittals will not be considered.
 - 2. Quantities are Contractor's responsibility and will not be reviewed.
 - 3. Provide materials of the same brand or manufacturer for each class of equipment or material.
 - 4. Identify each item by manufacturer, brand, trade name, number, size, rating, or other data necessary to properly identify and review materials and equipment. Words "as specified" are not sufficient identification.
 - 5. Identify each submittal item by reference to items' Specification Section number and paragraph, by Drawing and detail number, and by unit tag number.
 - 6. Organize submittals in same sequence as in Specification Sections.
 - 7. Show physical arrangement, construction details, finishes, materials used in fabrications, provisions for piping entrance, access requirements for installation and maintenance, physical size, mechanical characteristics, foundation and support details, and weight.
 - a. Submit Shop Drawings, performance curves, and other pertinent data, showing size and capacity of proposed materials.
 - b. Specifically indicate, by drawn detail or note, that equipment complies with each specifically stated requirement of Contract Documents.
 - c. Drawings shall be drawn to scale and dimensioned (except schematic diagrams). Drawings may be prepared by vendor but must be submitted as instruments of Contractor, thoroughly checked and signed by Contractor before submission to Architect for review.
 - d. Catalog cuts and published material may be included with supplemental scaled drawings.
- D. Review of submittals will be only for general conformance with design concept and general compliance with information given in Contract Documents. Review will not include quantities, dimensions, weights or gauges, fabrication processes, construction methods, coordination with work of other trades, or construction safety precautions, which are sole responsibility of Contractor. Review of a component of an assembly does not indicate acceptance of an assembly. Deviations from Contract Documents not clearly identified by Contractor are Contractor's responsibility and will not be reviewed by Architect.
- E. Within reasonable time after award of contract and in ample time to avoid delay of construction, submit to Architect shop drawings or submittals on all items of equipment and materials provided. Provide submittal as a complete package.
 - 1. Shop drawings and submittals shall include Specification Section, Paragraph number, and Drawing unit symbol or detail number for reference. Organize submittals into booklets for each Specification section and submit in loose-leaf binders with index. Deviations from the

Contract Documents shall be prominently displayed in the front of the submittal package and referenced to the applicable Contract requirement.

- F. Furnish to the Project Inspector complete installation instructions on material and equipment before starting installation.

1.7 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data:

- 1. Furnish Operation and Maintenance Manual in searchable PDF format. Provide Table of Contents. Provide index tabs for each piece of equipment in binder and disc. Begin compiling data upon approval of submittals.
 - a. Sets shall incorporate the following:
 - 1) Product Data.
 - 2) Service telephone number, address and contact person for each category of equipment or system.
 - 3) Complete operating instructions for each item of heating, ventilating and air conditioning equipment.
 - 4) Copies of guarantees/warranties for each item of equipment or systems.
 - 5) Test data and system balancing reports.
 - 6) Maintenance instructions for each item of equipment listing lubricants to be used, frequency of lubrication, inspections required, adjustment, etc.
 - 7) Manufacturers' bulletins with parts numbers, instructions, etc., for each item
- 2. Post service telephone numbers and addresses in an appropriate place designated by Architect.

1.8 SUBSTITUTIONS

- A. Refer to Division 01 for complete instructions. Requirements given below are in addition to or are intended to amplify Division 01 requirements. In case of conflict between requirements given herein and those of Division 01, Division 01 requirements shall apply.
- B. It is the responsibility of Contractor to assume costs incurred because of additional work and or changes required to incorporate proposed substitute into the Project. Refer to Division 01 for complete instructions.
- C. Substitutions will be interpreted to be manufacturers other than those specifically listed in the Contract Documents by brand name, model, or catalog number.
- D. Only one request for substitution will be considered for each item of equipment or material.
- E. Substitution requests shall include the following:
 - 1. Reason for substitution request.
 - 2. Complete submittal information as described herein; see "Submittals."

3. Coordinated scale layout drawings depicting position of substituted equipment in relation to other work, with required clearances for operation, maintenance and replacement.
 4. List optional features required for substituted equipment to meet functional requirements of the system as indicated in Contract Documents.
 5. Explanation of impact on connected utilities.
 6. Explanation of impact on structural supports.
- F. Installation of reviewed substitution is Contractors' responsibility. Any mechanical, electrical, structural, or other changes required for installation of substituted equipment or material must be made by Contractor without additional cost to Owner. Review by Architect of substituted equipment or material, will not waive these requirements.
- G. Contractor may be required to compensate Architect for costs related to substituted equipment or material.

1.9 QUALITY ASSURANCE

- A. Manufacturer's Qualifications: Firms regularly engaged in manufacture of HVAC systems products, of types, materials, and sizes required, whose products have been in satisfactory use in similar service for not less than 5 years.
- B. Contractor's Qualifications: Firm with at least 5 years of successful installation experience on projects with HVAC systems work similar to that required for this Project.
- C. Comply with applicable portions of California Mechanical Code pertaining to selection and installation of HVAC materials and products.
- D. All materials and products shall be new.

1.10 DELIVERY, STORAGE, AND HANDLING

- A. Protect equipment and materials delivered to Project site from weather, humidity and temperature variations, dirt, dust and other contaminants.

1.11 FIELD CONDITIONS

- A. Contractor shall visit Project site and examine existing conditions in order to become familiar with Project scope. Verify dimensions shown on Drawings at Project site. Bring discrepancies to the attention of Architect. Failure to examine Project site shall not constitute basis for claims for additional work because of lack of knowledge or location of hidden conditions that affect Project scope.
- B. Information on Drawings relative to existing conditions is approximate. Deviations from Drawings necessary during progress of construction to conform to actual conditions shall be approved by the Architect and shall be made without additional cost to the Owner. The Contractor shall be held responsible for damage caused to existing services. Promptly notify the Architect if services are found which are not shown on Drawings.

1.12 WARRANTY

Office Building 8 & 9 – Fire Life Safety Upgrade

- A. Refer to Division 01 for warranty requirements, and duration and effective date of Contractor's Standard Guarantee.
- B. Repair or replace defective work, material, or part that appears within the warranty period, including damage caused by leaks.
- C. On failure to comply with warranty requirements within a reasonable length of time after notification is given, Architect/Owner shall have repairs made at Contractor's expense.

PART 2 - PRODUCTS

2.1 GENERAL

- A. Materials or equipment of the same type shall be of the same brand wherever possible. All materials shall be new and in first class condition.

2.2 MATERIALS

- A. No material installed as part of this Work shall contain asbestos.
- B. California Green Building Code Compliance:
 - 1. HVAC and refrigeration equipment shall not contain CFCs.
 - 2. HVAC and refrigeration equipment shall not contain Halons.

PART 3 - EXECUTION

3.1 EXISTING MATERIALS:

- A. Remove existing equipment, piping, wiring, construction, etc., which interferes with Work of this Contract. Promptly return to service upon completion of work in the area. Replace items damaged by Contractor with new material to match existing.
- B. Removed materials which will not be re-installed and which are not claimed by Owner shall become the property of Contractor and shall be removed from the Project site. Consult Owner before removing any material from the Project site. Carefully remove materials claimed by Owner to prevent damage and deliver to Owner-designated storage location.
- C. Existing piping and wiring not reused and are concealed in building construction may be abandoned in place and all ends shall be capped or plugged. Remove unused piping and wiring exposed in Equipment Rooms or occupied spaces. Material shall be removed from the premises. Disconnect power, water, gas, pump or any other active energy source from piping or electrical service prior to abandoning in place.

3.2 FRAMING, CUTTING, AND PATCHING

- A. Special framing, recesses, chases and backing for Work of this Section, unless otherwise specified, are covered under other Specification Sections.

- B. Contractor is responsible for placement of pipe sleeves, hangers, inserts, supports, and location of openings for the Work.
- C. Cutting, patching, and repairing of existing construction to permit installation of equipment, and materials is the responsibility of Contractor. Repair or replace damage to existing work with skilled mechanics for each trade.
- D. Cut existing concrete construction with a concrete saw. Do not utilize pneumatic devices.
- E. Core openings through existing construction for passage of new piping and conduits. Cut holes of minimum diameter to suit size of pipe and associated insulation installed. Coordinate with building structure, and obtain Structural Engineer's approval prior to coring through existing construction.

3.3 MECHANICAL DEMOLITION

- A. Refer to Division 01 Sections “Cutting and Patching” and “Selective Demolition” for general demolition requirements and procedures.
- B. Disconnect, dismantle and remove mechanical systems, equipment, and components indicated to be removed. Coordinate with all other trades.
 - 1. Piping to Be Removed: Remove portion of piping indicated to be removed and cap or plug remaining piping with same or compatible piping material.
 - 2. Piping to Be Abandoned in Place: Drain piping and cap or plug piping to remain with same or compatible piping material. Refrigerant system must be evacuated per EPA requirements.
 - 3. Ducts to Be Removed: Remove portion of ducts indicated to be removed and cap remaining ducts with same or compatible ductwork material.
 - 4. Ducts to Be Abandoned in Place: Cap or plug ducts with same or compatible ductwork material.
 - 5. Equipment to Be Removed: Drain down and cap remaining services and remove equipment.
 - 6. Equipment to Be Removed and Reinstalled: Disconnect and cap services and remove, clean, and store equipment; when appropriate, reinstall, reconnect, and make equipment operational.
 - 7. Equipment to Be Removed and Salvaged: Disconnect and cap services and remove equipment and deliver to Owner.
- C. If pipe, insulation, or equipment to remain is damaged in appearance or is unserviceable, remove damaged or unserviceable portions and replace with new products of equal capacity and quality.

3.4 ELECTRICAL REQUIREMENTS

- A. Provide adequate working space around electrical equipment in compliance with the California Electrical Code. Coordinate the Mechanical Work with the Electrical Work to comply.
- B. Furnish necessary control diagrams and instructions for the controls. Before permitting operation of any equipment which is furnished, installed, or modified under this Section, review all associated electrical work, including overload protection devices, and assume complete responsibility for the correctness of the electrical connections and protective devices. Motors and

control equipment shall conform to the Standards of the National Electrical Manufacturers' Association. All equipment and connections exposed to the weather shall be NEMA IIIIR with factory-wired strip heaters in each starter enclosure and temperature control panel where required to inhibit condensation.

- C. All line voltage and low voltage wiring and conduit associated with the Temperature Control System are included in this Section. Wiring and conduit shall comply with Division 26.

3.5 DEMONSTRATION AND TRAINING

- A. Train Owner-designated personnel in maintenance and adjustment of equipment. The representative may be an employee of the equipment manufacturer, or a manufacturer-certified contractor. Submit written certification from the manufacturer stating that the representative is qualified to perform the Owner training for the equipment installed.

END OF SECTION 23 00 50

SECTION 23 80 00 – HEATING, VENTILATING AND AIR CONDITIONING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Dampers.

1.2 RELATED REQUIREMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.
- B. Section 23 00 50, Basic HVAC Materials and Methods.

1.3 ACTION SUBMITTALS

- A. For additional requirements, refer to Section 23 00 50, Basic HVAC Materials and Methods.
- B. Product Data: Submit manufacturer's technical product data, including rated capacities of selected model clearly indicated, dimensions, weight, corner or mounting point weights, furnished specialties and accessories; and installation and start-up instructions. Product data shall include applicable product listings and standards. Refer to Section 23 00 50, Basic HVAC Material and Methods for additional requirements.
 - 1. Upon approval of submittal, provide manufacturer's installation and operating instructions to the Project inspector for the following:
 - a. Fire dampers, smoke dampers, and combination smoke-fire dampers.

1.4 QUALITY ASSURANCE

- A. Design Criteria:
 - 1. All equipment and accessories to be the product of a manufacturer regularly engaged in its manufacture. All gas-fired equipment shall be UL, ETL or CSA listed.
 - 2. Supply all equipment and accessories in accordance with requirements of applicable national, state and local codes.
 - 3. All items of a given type shall be products of the same manufacturer.

1.5 FIELD CONDITIONS

- A. Interruption of Existing Services: Do not interrupt services to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary services according to requirements indicated:
 - 1. Notify Architect no fewer than two days in advance of proposed interruption of services.
 - 2. Do not interrupt services without Architect's written permission.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Insulation products, including insulation, insulation facings, jackets, adhesives, sealants and coatings shall not contain polybrominated diphenyl ethers (PBDEs) in penta, octa, or deca formulations in amounts greater than 0.1 percent (by mass).

2.2 DAMPERS

- A. Fire Dampers and Combination Fire/Smoke Dampers:
 - 1. Fire dampers and combination fire/smoke dampers shall be listed and approved by the California State Fire Marshal. Installation shall conform to the manufacturer's UL approved installation instructions.
 - a. Fire dampers shall be UL 555 classified and labeled as dynamic fire dampers approved for wall and floor installation. They shall ship from the manufacturer as an assembly with a minimum 20-gauge factory installed sleeve. Sleeve length shall suit the requirements of the wall construction. Each dynamic fire damper/sleeve assembly shall ship complete with factory "roll formed" one-piece angles with pre-punched holes for easy installation. Dynamic fire dampers for vertical installation must consist of a single section on sizes up to 33" x 36" and a single section on sizes up to 24" x 24" for horizontal installation. 1-1/2 hour dynamic fire dampers shall be Ruskin DIBD20, Pottorff, or equal. 3 hour dynamic fire dampers shall be Ruskin DIBD230, Pottorff, or equal.
 - b. Fire dampers for high pressure/velocity systems where velocities exceed 2000 fpm and/or 4" w.g. pressure fire damper shall be Ruskin FD60, Pottorff, or equal.
 - c. Fire dampers for ceiling installation shall be UL 555C classified and labeled as ceiling dampers. They shall be provided with a thermal insulating blanket to fit the inlet or outlet condition if required by the application. Ceiling dampers shall be Ruskin CFD 2, 3, 4 or 5. Ceiling dampers for ceilings constructed of wood shall have UL tested in design L501 and shall be Ruskin CFD7, Pottorff, or equal.
 - d. Combination fire/smoke dampers. Dampers shall be UL classified and labeled as Leakage Class I Smoke Dampers in accordance with the latest version of UL 555S. Dampers shall be warranted to be free from defects in material and workmanship for a period of 5 years after date of shipment. Damper/actuator assembly shall be tested to full open and full close at minimum 2000 fpm 250° F heated air and 4" w.g. with airflow in both directions. (Specified select: 250° / 350°, 2000 fpm/3000 fpm). Each damper shall be equipped with "controlled closure" quick detect heat actuated release device to prevent duct and HVAC component damage resulting from

- instantaneous damper closure. Release device shall be EFL type and shall allow reset from outside the sleeve after moderate temperature exposure. (Replacement type fusible links not acceptable.)
- e. Two position combination fire smoke dampers shall be equipped with one or more factory installed, direct coupled, 120 volt, single phase, electric actuator for energize open – fail close operation. Dampers with multiple actuators shall be factory wired with single point connection at the EFL heat release device for connection to power. Damper actuator shall include minimum one-year energized hold open (no cycles) and spring return (fail) close reliability. Damper/actuator shall include minimum 20,000 full open-full close cycle performances.
 - f. Modulating combination fire smoke dampers shall be equipped with one or more factory installed contact for modulating signal connection. Damper/actuator shall include minimum 100,000 full open-full close cycle performances with spring return (fail) close on loss of power.
 - g. Round combination fire smoke dampers up to 24” diameter shall be true round type with minimum 20 gauge galvanized steel designed for lowest pressure drop and noise performance. Bearings shall be stainless steel sleeve turning in an extruded hole in the frame. Blade seals shall be silicone edge designed to withstand 450° F and galvanized steel mechanically locked in to the blade edge (adhesive type seals are not acceptable). Each damper shall be equipped with a factory-installed sleeve of 17 inches minimum length and factory “roll formed” one-piece angles with pre-punched holes. Dampers shall be Ruskin FSDR25, Pottorff, or equal.
 - h. Round (larger than 24” diameter) or rectangular combination fire smoke dampers shall include roll-formed structural hat channel frame, reinforced at the corners, formed from a single piece of minimum 16 gauge equivalent thickness formed from single piece galvanized steel. Bearings shall be stainless steel turning in an extruded hole in the frame. Blade edge seals shall be silicone rubber designed to withstand 450° F and galvanized steel mechanically locked in to the blade edge (adhesive type seals are not acceptable). Each damper shall be equipped with a factory-installed sleeve of 17” minimum length and factory “roll formed” one-piece angles with pre-punched holes for easy installation. Dampers shall be Ruskin FSD60, Pottorff, or equal.
 - i. 3-hour rated combination fire smoke dampers shall be Ruskin model FSD60-3, Pottorff, or equal.
 - j. All FSD60 type dampers shall be AMCA licensed and shall bear the AMCA Seal for Air Performance. AMCA certified testing shall verify pressure drop does not exceed .03” w.g. at a face velocity of 1,000 fpm on a 24” x 24” damper.
 - k. Wall type fire/smoke damper:
 - 1) Combination fire/smoke dampers for use in the wall of exit corridors shall be classified and labeled as Leakage Class II Smoke Dampers in accordance with the latest version of UL 555S. Dampers shall meet the requirements for combination fire/smoke dampers in paragraph 3 above except AMCA certified testing shall verify pressure drop does not exceed .07” w.g. at a face velocity of 1,000 fpm on a 24” x 24” damper and blades shall be single skin galvanized steel 10 gauge minimum with 3 longitudinal grooves for reinforcement. Dampers shall be Ruskin FSD36, Pottorff, or equal.
 - 2) Front access combination fire/smoke dampers shall meet all the requirements for combination fire/smoke dampers in paragraph 3 above except pressure drop requirement. In addition the dampers shall be constructed so that actuators and all accessories are accessible from the grille side. Actuators and

accessories shall be housed within an integral cabinet on the side of the damper frame and shall not be installed in the air stream in front of the damper. The damper sleeve shall be minimum 14” and flanged to accept a steel framed grille. The sleeve shall be covered with fire resistant material. Dampers shall be Ruskin FSD60FA, Pottorff, or equal.

- l. Ceiling type fire/smoke damper for tunnel type corridor construction: Combination fire/smoke dampers for use in the corridor ceiling of tunnel type corridor construction shall be UL classified and labeled as Corridor Damper. Dampers shall meet the requirements of paragraph 4a above except pressure drop testing does not require AMCA certification. Dampers shall be Ruskin FSD36C, Pottorff, or equal.
- m. Fusible links shall have temperature rating approximately 50° F above normal maximum operating temperature of the heat producing appliance.
 - 1) If project requires re-openable fire/smoke dampers, provide Ruskin 165 ° F / 350° F TS150, NCA or equal. The TS150 firestat replaces the EFL and allows the damper to be re-opened from remote location up to 350 ° F. TS150 shall include full open and full closed damper position contacts for interface with remote position indication panel.
 - 2) Each fire/smoke damper shall be equipped with “controlled closure” quick detect heat actuated release device to prevent duct and HVAC component damage. Release device shall allow easy reset after moderate temperature rise outside the sleeve. Heat release device shall be the Ruskin EFL, NCA or equal.
 - 3) Unless the system is using a validation control system, each fire/smoke damper shall be equipped with a control panel including blade position indicator lights and a key operated switch. The panel cover shall be oversized for flush mount into the wall or ceiling and shall have a brushed look. Control panel shall be Ruskin MCP2, Pottorff, or equal.
2. All actuators used for smoke dampers or combination fire/smoke dampers shall have a cycle time requirement of not more than every twelve months and shall be rated for continuous "On" duty and shall be provided with internal spring return. Actuators shall be equipped with pilot light, remote key test switch, end switch and circuitry to activate pilot light on remote key (test) switch located in corridor ceiling adjacent to damper. Electric motors shall be Invensys MA-250, MA-253, Honeywell H2000, or equal.
- B. Where required to suit the size of damper required, provide manufacturers standard UL Classified mullions, arranged to support multiple dampers. Assembly shall be of minimum 16 gauge galvanized steel, complete with all accessory caps and framing members required for installation.

PART 3 - EXECUTION

3.1 DAMPER INSTALLATION

- A. Install fusible link fire dampers full size of duct at points where shown or required.

- B. Provide 18 inch x 12 inch minimum hinged access doors in ductwork and furring for easy access to each fire damper; insulated access doors in insulated ducts. Label access doors with 1/2 inch high red letters.
 - 1. Provide Ventlok Series 100, Durodyne, or equal access doors with hardware for convenient access to all automatic dampers and other components of the system, insulated type in insulated ducts. Provide Ventlok #202 for light duty up to 2 inch thick doors, #260 heavy-duty up to 2 inch thick doors and #310 heavy-duty for greater than 2 inch thick doors. Provide #260 hinges on all hinged and personnel access doors; include gasketing.

3.2 CLEANING AND PROTECTION

- A. Temporary Closure: At ends of ducts that are not connected to equipment or air distribution devices at time of ductwork installation, provide temporary closure of polyethylene film or other covering that will prevent entrance of dust and debris until connections are to be completed.

END OF SECTION 23 80 00

SECTION 26 05 00

ELECTRICAL WORK – GENERAL REQUIREMENTS

PART 1 - GENERAL

1.1 CONDITIONS:

- A. The Requirements of General Conditions and Special Conditions apply to Work of this Section as if fully repeated herein.
- B. Drawings and specifications take precedence when they call for materials or construction methods of better quality or larger size than required by codes laws, rules, or regulations.
- C. The Requirements of this Section apply to all Work of Division 26.

1.2 WORK INCLUDED:

- A. Provide a complete working installation with all material and equipment as shown and specified. The Contract Documents do not undertake to show or specify every item to be provided. When an item not shown or specified is necessary for proper operation of equipment shown or specified, provide the item, which will allow the system to function properly, at no increase in Contract Price.
- B. Make electrical connections for equipment furnished as part of Work of other Sections.
- C. Perform necessary equipment seismic anchorage in compliance with the California Building Code Title 24, and requirements of any local agency having jurisdiction.
- D. The drawings indicate the arrangements of electrical equipment. Review architectural drawings and details for door swings, cabinets, counters, and built-in equipment; conditions indicated on architectural plans shall govern. Coordinate installation of electrical equipment with structural system and mechanical equipment and access thereto. Coordinate installation of recessed electrical equipment with concealed ductwork and piping, and wall thickness.
- E. Equipment layout is based on one manufacturer's product or from composite dimensions from multiple manufacturers. Where equipment selected for use on the job differs from layout, coordinate space requirements and connection arrangements with Engineer. Equipment which exceeds specified maximum dimensions, or which reduces required clearances shall not be accepted.

1.3 QUALITY ASSURANCE:

- A. Requirements of Regulatory Agencies:
 - 1. As specified in Division 1 - General Requirements.
 - 2. Nothing in the Contract Documents shall be construed to permit Work not conforming to applicable laws, ordinances, rules or regulations.
 - 3. When the Contract Documents exceed requirements of applicable laws,

- ordinances, rules or regulations, Contract Documents shall take precedence.
4. It is not the intent of the Contract Documents to repeat requirements of Codes except where necessary for completeness or clarity.
 5. All installed or connected equipment shall be labeled or certified for its use by a nationally recognized testing laboratory. Where equipment is not furnished with a factory installed label or certification, it shall be the responsibility of the contractor to obtain and pay for the necessary tests and approvals.

1.4 SUBMITTALS:

A. General:

1. Submit Shop Drawings and supplemental data for all materials and equipment specified in all Sections of this Division, in accordance with the Requirements of Division 1, and as specified hereinafter.
2. Submittals shall have materials proposed for the project identified. Catalog cuts containing unidentified materials or superfluous information will not be accepted.
3. All submittals shall be reviewed by the Contractor and stamped with his approval prior to submitting to the Architect. Contractor shall indicate in writing any deviation in submittals from requirement of Contract Documents.
4. Forward all submittals to the Architect, together, at one (1) time. Individual or incomplete submittals will not be acceptable. Only one (1) request for substitution will be considered on each item of materials or equipment.
5. Wherever catalog numbers and specific brands or trade names, not preceded by the designation "equal to", or followed by the designations "or equal", "or accepted equal", or "or approved equal", are mentioned in these Specifications or Drawings, no substitutions will be accepted.
6. Identify each item by manufacturer, brand, trade name, number, size, rating, or whatever other data is necessary to properly identify and check materials and equipment. The words "as specified" will not be sufficient identification.
7. Identify each submittal item by reference to Specification Section paragraph in which the item is specified, or Drawing and Detail number.
8. Organize submittals in the same sequence as they appear in Specification Sections, article or paragraphs.
9. Shop Drawings shall show physical arrangement, construction details, finishes, materials used in fabrication, provisions for conduit entrance, access requirements for installation and maintenance, physical size, electrical characteristics, foundation and support details, and weight. Reuse of the Contract Drawings as Shop Drawings will not be acceptable.
 - a. Specifically show, by drawn detail or note, that equipment complies with each specified requirements of the Contract Documents.
 - b. Drawings shall be to scale and dimensioned (except wiring diagrams need not be to scale), and may be prepared by a vendor but shall be submitted as instruments of Contractor, thoroughly checked and stamped by Contractor before submission to Architect for review.
 - c. Catalog cuts and published material may be included to supplement scale drawings.
10. Internal wiring diagrams of equipment shall show wiring as actually furnished for this project, with all optional items clearly identified as included or excluded.

- Clearly identify external wiring connections. Identify and obliterate superfluous material.
11. External system wiring diagrams shall show wiring as actually installed, connected and identified for this project. Include identification of cables, cable conductors, terminals in terminal cabinets, and connections to the identified external wiring connection points on equipment. Prepare Drawings on twenty-four inches (24") by thirty-six inches (36") minimum sheets bearing title block of equipment manufacturer, manufacturer's local engineering distributor, or Contractor, prepared to accepted drafting standards and bearing Contractor's approved stamp.
 12. Acceptance of a substitute is not to be considered a release from the Specifications. Correct any deficiencies in an item, even though approved, at Contractor's expense.
 13. Be responsible for installation of approved substitution. Make any changes required for installation of approved substituted equipment at no increase in Contract Sum.
- B. Operating and Maintenance Instructions and Materials:
1. Subsequent to final completion and testing operations, part of the Work of this Division shall be responsibility for instructing the Owner's authorized representatives in operation, adjustment and maintenance of electrical plant. Submit three (3) copies of certificate, signed by Owner's representatives, attesting to their having been instructed.
 2. Before Owner's personnel assume operation of systems, submit three (3) bound sets of Operating and Maintenance Instructions, Manuals, and Parts Lists on the electrical plant and its component parts, including all major equipment and that which requires or for which manufacturer recommends maintenance in a specified manner. Provide names, addresses and telephone numbers of source of supply for parts.

1.5 PROJECT RECORD DOCUMENTS:

- A. Upon completion of Work, furnish Architect with complete sets of reproducible plans upon which shall be shown all Work installed under Contract. Drawings shall include actual locations of outlets, conduit and wire sizing as well as routing and revised panelboard schedules.
- B. All symbols and designations used in preparing Record Drawings shall match those used in Contract Drawings.
- C. Maintain an up to date set of electrical drawings during the course of construction.

1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING:

- A. Identify materials and equipment delivered to site to permit check against materials list and Shop Drawings.
- B. Protect from loss or damage. Replace lost or damaged materials and equipment with new at no increase in Contract Sum.

1.7 PROJECT EXAMINATION AND CONDITIONS:

- A. Examine project; verify dimensions and locations against Drawings and become informed of all conditions under which Work is to be done before submitting proposals.
- B. Information shown relative to services is based upon available records and data but shall be regarded as approximate only. Make deviations found necessary to conform with actual locations and conditions with no increase in Contract Sum. Verify locations and elevation of utilities prior to commencement of excavation for new underground installations.
- C. Exercise extreme care in excavating near existing utilities to avoid any damage thereto; be responsible for any damage caused by such operations.

1.8 DRAWINGS AND COORDINATION WITH OTHER WORK:

- A. Drawings:
 - 1. For purposes of clarity and legibility, Drawings are essentially diagrammatic to the extent that many offsets, bends, special fittings, and the exact locations of items are not shown, unless specifically dimensioned.
 - 2. Exact routing of wiring and locations of outlets, panels, and other items, shall be governed by structural conditions, and materials and equipment already in place. Use data in the Contract Documents. In addition, the Architect reserves the right, at no increase in Contract Sum, to make any reasonable change in locations of exposed electrical items, to group them into orderly relationships and/or increase their utility. Verify the Architect's requirements in this regard prior to roughing-in.
 - 3. Dimensions, locations of doors, partitions and similar physical features shall be taken from Architectural Drawings, and verified at the site as part of the Work of this Division. Consult the Architectural Drawings for exact location of outlets to center with architectural features, panels, and similar items, at the approximate locations shown on the Electrical Drawings.
 - 4. Drawings indicate, generally, routes of all branch circuits. All runs to panels are indicated as starting from nearest outlet, pointing to direction of panel. Continue all such circuits, conduits to panel as though routes were indicated in their entirety.
- B. Coordination:
 - 1. Work out all "tight" conditions involving Work of this Division and Work of other Divisions in advance of installation. Provide additional Work necessary to overcome "tight" conditions, at no increase in Contract Sum.
 - 2. Differences of disputes concerning coordination, interference or extent of Work between Divisions shall be decided by General Contractor. His decision, if consistent with Contract Document requirements, shall be final.
 - 3. Provide adequate working space around electrical equipment in compliance with all applicable codes.
 - 4. Provide templates, information and instructions for Work of other Divisions to properly locate holes and openings to be cut or provided for Electrical Work.
 - 5. Size all feeders (conduit and wiring), motor starters, overload protection and

circuit breakers to suit horsepower of motors or wattages of equipment furnished as part of the Work of the various Sections of the Specifications. In no case shall feeders and branch circuits (conduit and wiring) and circuit breakers be of smaller capacities or sizes than those shown or specified.

6. Schedule of Work - Refer to Section on Work Sequence.
7. Make every effort to keep existing electrical circuits, including telephone, public address, fire alarm, power, and other electrical services, in operation. Where power outages are unavoidable, schedule such outages with the Owner to occur at such times as to cause the least disruption of normal facility functions.

C. Equipment Rough-In:

1. Rough-in locations shown on Electrical Drawings for equipment furnished by the Owner and for equipment furnished under other Divisions are approximate only. Obtain exact rough-in locations from the following sources:
 - a. From Shop Drawings for Contractor-furnished and installed equipment.
 - b. From the Architect for Owner-furnished, Contractor-installed equipment.
 - c. From the Architect for existing equipment where such equipment is relocated as part of the Work of this Contract.
2. Verify electrical characteristics of equipment before starting rough-in.
3. Unless otherwise shown or specified, equipment which requires electrical connection shall be installed as part of the Work of the Division in which specified. Internal components shall be wired to a single point with wiring in raceway direct connection (hardwired) to building electrical system or internal wiring and connections with cord and plug for receptacle connection to building wiring.
4. Unless otherwise shown or specified, provide direct raceway and conductor connections from building wiring system to equipment terminals for direct connected equipment which is Contractor-furnished and Contractor-installed, Owner-furnished and Contractor-installed, and for existing equipment relocated by the Contractor.
5. Insert plug in receptacle for cord-connected equipment which is Contractor-furnished and Contractor-installed, Owner-furnished and Contractor-installed and for existing equipment relocated by the Contractor. Provide new cord and plug if required on Owner-furnished and Contractor-installed equipment.
6. Disconnect existing equipment from building electrical system, including internal wiring required for relocation and reconnection at new location.

1.9 GUARANTEE:

- A. Provide guarantee in accordance with and in form required under Division 1. Repair or replace as may be necessary any defective work, material or part with no increase in Contract Sum including repair or replacement of other Work, furnishing, equipment or premises caused by such repair or replacement of defective work.
 1. Where other guarantee periods or requirements are called for in other sections of the contract documents, they shall take precedence over the requirements of Division 1.

PART 2 - PRODUCTS

2.1 MATERIALS:

- A. Identify materials and equipment by manufacturer's name and nameplate data. Remove unidentified materials and equipment from site.
- B. Equipment specified by manufacturer's number shall include all accessories, controls and other components, listed in catalog as standard with equipment. Furnish optional or additional accessories as specified. All materials shall be UL labeled and in accordance with NEMA Standards.
- C. Where no specific make of material or equipment is mentioned, any high quality product of a reputable manufacturer may be used, provided it conforms to requirements of system and meets with Architect's acceptance.
- D. Conflicts between Plans and Specifications, exclusive of the General Conditions of the Contract, the most stringent and higher quality requirement shall govern.
- E. If the Contract Documents are not complete as to any detail such as accessories or hardware, of a required construction system or with regard to manner of installing of parts, materials, or equipment, but there exists an accepted trade standard for good and workmanlike construction, such detail or accessories shall be deemed to have been implicitly required by the Contract Documents in accordance with such standard.
- F. Equipment and material damaged during transportation, installation, or operation will be considered as totally damaged. Replace with new. Variance from this will be permitted only with written acceptance.
- G. Provide an authorized representative to constantly supervise the Work of this Division and to check all materials prior to installation for conformance with the Contract Documents.
- H. Do not use equipment exceeding dimensions indicated for equipment, or arrangements that reduce required clearances, or exceed specified maximum dimensions.

2.2 FLASH PROTECTION

- A. Electrical equipment including switchboards, panelboards, disconnect switches, etc. which are likely to require examination, adjustment or servicing while energized shall be field marked to warn of potential electric arch flash hazards per CEC Article 110.16.. Marking shall be a pre-printed label which references NFPA 70E.

PART 3 - EXECUTION

3.1 INSTALLATION:

- A. Manufacturer's Directions: Follow manufacturer's directions where manufacturers of articles used furnish directions covering points not specified or shown.
- B. Equipment: Accurately set and level, neatly place support and anchor properly.

- C. Assemble together all equipment which requires assembling including Contractor-supplied bussing, internal wire connections where required; connect all incoming conduit, cable and wires properly; and adjust and make ready for service electrical equipment and material required by this Contract.
- D. All Work shall be done in orderly, workmanlike manner in accordance with NECA Standard of Installation and present neat appearing installation when completed.
- E. Provide concrete foundations or pads for floor mounted electrical equipment where indicated on the drawings.
 - 1. Install minimum 4" high concrete pads or as indicated. Other pad dimensions shall be as required to accommodate the equipment installed.
 - 2. Use 3,000 PSI concrete.
 - 3. Reinforce with 6" x 6" 10GA wire mesh with short dowels into floor at 12" on center around perimeter.
 - 4. Chamfer top edges 3/4".
 - 5. Make all faces smooth.
 - 6. Set anchor bolts for equipment.
 - 7. Coordinate the size of all pads, the location of all anchor bolts, and the location of all vibration isolators.

3.2 NORMAL CONTINGENCIES:

- A. Protection: In performance of Work, protect existing facility and protect Work of other Sections as well as Work of this Section from damage.
 - 1. Existing conduits which are required to be extended, altered, or reconnected shall be accomplished as shown or as directed. Existence of any wires, conduits, or other facilities are shown in a general way only. Determine existence, location, and condition on site.
 - 2. Where existing conduits which are shown to be revised or which will be essential to functioning of particular system are cut or exposed due to construction changes, new connections shall be made in most expeditious manner as directed or shown. Where wiring is involved, new wires shall be "pulled-in" between nearest available accessible reused outlets. In all cases where new wires are required, shown, or specified to be installed in existing conduits, if same cannot be installed, new conduits shall be provided therefore as directed.
 - 3. Existing switchboards, motor control centers, and panelboards which are required to be extended, altered or modified under the Work of this Division shall be provided with new sections, bus extensions, and all necessary hardware for a complete and operating system.
 - 4. Attention is called to the fact that all new conduit, wiring, and apparatus shown or specified shall be connected to existing systems so as to function as complete units.
 - 5. All conduits, electrical apparatus, and similar items, in place and not shown or specified to be reused or which will not be essential to functioning of various systems when Work is completed, shall be removed. No existing material shall be reinstalled or reused, unless shown or specified. Concealed conduits which are not shown or specified to be reused and become exposed due to construction changes shall be removed to nearest available accessible reused outlets.

3.3 PERFORMANCE:

- A. Sleeves, Chases, and Concrete Inserts:
 - 1. This Division shall provide, to cause no delay, all required sleeves, chases, concrete inserts, anchor bolts, and similar items before concrete is placed, and be responsible for correct location and installation of same.
 - 2. Sleeves and chases are prohibited in structural members, except where shown or as otherwise approved in writing.
- B. Cutting and Patching:
 - 1. Do all cutting and patching, including structural reinforcing, necessary for the Work of this Division.
 - 2. No reinforcing steel or pre-stressed tendons may be cut within concrete floors without prior approval. All new cores or drilled holes shall be a minimum of 1 ½" clear of existing reinforcing. Concrete slabs must be scanned to determine the location of all reinforcing steel prior to coring, anchorage, drilling or any other modifications.
 - 3. Do no cutting or patching without prior approval. Repair damage done by cutting and patching equal to original condition, in Architect's opinion.
- C. Provide metal backing plates, anchor plates, and similar items that are required for anchorage for the Work of this Section; securely weld or bolt to metal framing. Wood blocking or backing will not be permitted in combination with metal framing.

3.4 TESTING AND ADJUSTING:

- A. Furnish all labor and test equipment required for the Work of this Division. Testing work is defined as that work necessary to establish that equipment has been properly assembled, connected, and checked to verify that intent and purpose of the drawings, specifications, manufacturer's instruction manuals, and directions of Architect have been accomplished in satisfactory manner.
- B. Provide field tests to verify component compliance with Specifications, including but not limited to adjusting, calibrating, and setting circuit breakers, relays, timers, etc.
- C. After completion of testing and adjustment, operate the different systems and equipment under normal working conditions and show specified performance. If, in the opinion of the Architect, performance of equipment or systems is not in accordance with Contract Document or submitted data, alter or replace equipment at no increase in Contract Sum.
- D. Do not allow or cause any Work installed hereunder to be covered up or enclosed before it has been inspected and accepted. Should any Work be enclosed or covered up before it has been approved, uncover such Work, and after it has been inspected and approved, make all repairs necessary to restore Work of Others to condition in which it was found at time of cutting, all at no increase in Contract Sum.
- E. At completion of Work provide written certification that all Systems are functioning properly without defects.

3.5 CLEANING AND PAINTING:

- A. Properly prepare Work of this Division to be finish painted as part of the Work of Painting Section.
- B. Refinish Work supplied with final finish as part of the Work of this Division if damaged as part of the Work of this Division to satisfaction of Architect.
- C. Thoroughly clean interiors of switchboards and motor control centers. After other Work is accomplished, clean exposed conduit, panels (interiors and exteriors), fixtures, and equipment, and leave in condition satisfactory to Architect.
- D. Clean out and remove from site all surplus materials and debris resulting from this Work, including surplus excavated materials.

3.6 SALVAGE MATERIAL AND EQUIPMENT:

- A. Where remodel or demolition work is to be accomplished under this Contract, all removed materials and equipment which in the opinion of the Owner are salvable shall remain the property of the Owner. Such salvaged materials and equipment shall be delivered to the Owner on the premises as directed and shall be neatly piled or stored and protected from damage.
- B. All materials considered to be scrap and not salvable shall be removed from the premises and disposed of by the Contractor.

END OF SECTION

SECTION 26 05 01

TESTING REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. Test procedures specified in this Section are in addition to that specified in other Sections of Division 26.

1.2 REFERENCES

- A. Perform inspections and tests in accordance with the following codes and standards:
 - 1. National Electrical Manufacturer's Association - NEMA.
 - 2. American Society for Testing and Materials - ASTM.
 - 3. Institute of Electrical and Electronic Engineers - IEEE.
 - 4. InterNational Electrical Testing Association - NETA Acceptance Testing Specifications - ATS-2017.
 - 5. American National Standards Institute - ANSI.
 - 6. State and local codes and ordinances.
 - 7. Insulated Cable Engineers Association - ICEA.
 - 8. Occupational Safety and Health Administration - OSHA.
 - 9. ANSI/NFPA 70B: Electrical Equipment Maintenance.
 - 10. NFPA 70E: Electrical Safety Requirements for Employee Workplaces.
 - 11. ANSI/NFPA 78: Lightning Protection Code.
 - 12. ANSI/NPFA 101: Life Safety Code.
- B. Division 26 specification sections and drawings are interrelated. Use Division 26, in its entirety, and accompanying electrical drawings for interpreting inspection and testing requirements.
- C. Use Manufacturer's instruction manuals applicable to each apparatus for special inspection and testing requirements.

1.3 SUBMITTALS

- A. Provide brief field report after completion of any test prior to leaving the site. Report may be typed or printed. List the equipment tested, describe any deficiencies found and recommended corrections. Leave report copies with the Inspector of Record (IOR) and General Contractor.

1.4 TESTING AGENCY QUALIFICATIONS

- A. Company that is a financially independent testing organization which can function as an unbiased testing authority, professionally independent of the manufacturers, suppliers and installers of equipment or systems evaluated by the testing firm.
- B. Member of the International Electrical Testing Association, specializing in the testing of equipment or apparatus specified in this Section with minimum 3 years experience.

- C. Each on-site crew leader shall hold a current registered certification in electrical testing applicable to each type of apparatus to be inspected or tested. The certification in electrical testing shall be issued by an independent, nationally recognized, technician certification agency. The following entities shall qualify as independent agencies:
1. InterNational Electrical Testing Association (NETA). Accepted certifications:
 - a. Certified Technician/Level III
 - b. Certified Senior Technician/Level IV
 2. National Institute of Certification in Engineering Technologies (NICET). Accepted certifications specifically in Electrical Testing Engineering Technology:
 - a. Engineering Technician/Level III
 - b. Senior Engineering Technician/Level IV

1.5 DIVISION OF RESPONSIBILITY

- A. Routine work performed by the Contractor prior to and in addition to tests performed by the testing firm:
1. Cleaning of equipment and apparatus.
 2. Insulation-resistance and continuity test.
 3. Rotation test.
 4. Equipment bolt torquing.
 5. Inspect for physical damage.
 6. Proper equipment connection and operation.
 7. Coordinate exact motor overload requirements.
- B. The Contractor has the option to assign all or any portion of above listed routine work to the testing firm at his own expense.
- C. The Contractor provides suitable and stable source of electrical power to each test site as required by the testing firm.
- D. The Contractor notifies the Inspector of Record (IOR) and the testing firm when equipment becomes available for acceptance tests. Work coordinated to expedite project scheduling.
- E. The Owner's representative is responsible for approving a short-circuit analysis and coordination study prepared and certified by an independent testing or engineering firm or manufacturer as outlined by Section 26 05 73 - SHORT-CIRCUIT ANALYSIS AND COORDINATION STUDY.
- F. The testing firm notifies the Owner's representative prior to commencement of any testing.
- G. Report any system, material, or workmanship which is found defective on the basis of acceptance tests to the Owner's representative in writing.
- H. The testing firm maintains a written record of all tests and, upon completion of project, assembles and certifies final test report.
- I. Safety and Precautions:
1. Safety practices include, but are not limited to, the following requirements:
 - a. Occupation Safety and Health Act.

- b. Accident Prevention Manual for Industrial Operations, National Safety Council.
 - c. Applicable state and local safety operating procedures.
 - d. Owner's safety practices.
 - e. National Fire Protection Association - NFPA 70E.
 - f. American National Standards for Personnel Protection.
- 2. Testing performed with apparatus de-energized. Exceptions must be thoroughly reviewed to identify safety hazards and devise adequate safeguards.
- 3. The testing firm provides a designated safety representative on the project to supervise the testing operations with respect to safety.

PART 2 - PRODUCTS

2.1 TEST EQUIPMENT

- A. The testing agency provides all test equipment.
- B. Care and Precautions:
 - 1. Contractor responsible for any damage to equipment or material due to improper test procedures or test apparatus handling. Replace or restore to original condition any damaged equipment or material.
 - 2. Provide and use safety devices such as rubber gloves and blankets, protective screen, barriers and danger signs to adequately protect and warn all personnel in the vicinity of the tests.
 - 3. Use test equipment that is calibrated and certified traceable to the National Bureau of Standards. Certification date: No later than 6 months.

PART 3 - EXECUTION

3.1 ACCEPTABLE TESTING FIRMS

- A. Electro Test (ETI)
- B. Power Systems Testing
- C. Apparatus Testing and Engineering
- D. Electrical Reliability Services
- E. Alternate firm: Provide testing firm qualifications for consideration.

3.2 APPLICATION

- A. General:
 - 1. Provide all materials, supplies, tools, equipment, labor, and services required to perform all tests as specified in this Section.
 - 2. Correct all deficiencies revealed by tests. Replace at contractor's cost, all materials and equipment found faulty.
 - 3. The testing intent is to assure that all electrical equipment, both contractor and Owner supplied, is operational within industry and manufacturer's tolerances and is installed in accordance with design specifications.

4. The test and inspections determine the suitability for energization.
5. Use the Inter National Electrical Testing Association (NETA) guidelines for all testing procedure and acceptance test values of results.
6. Complete all test prior to commissioning and final acceptance.

B. Summary:

1. Test all cable, equipment and systems listed above to assure proper installation, setting, connections, and functioning in accordance with the Drawings, Specifications, and the manufacturer's recommendations. It is the intent that field testing be extensive, and complete as specified, to provide positive assurance of totally correct installation and operation of equipment.
2. Furnish all necessary test equipment to satisfactorily perform all tests specified herein.
3. When conducting tests, comply with the following:
 - a. Notify the Owner and Inspector of Record at least 2 weeks prior to commencement of any testing.
 - b. Conduct all tests in the presence of the Owner's Representative and IOR except when advised that his presence will not be necessary.
 - c. Include all tests and inspections recommended by the equipment manufacturer whether required by these Specifications or not, unless specifically waived by the owner.
 - d. Maintain a written record of all tests showing date, personnel making test, equipment or material tested, tests performed, manufacturer and serial number of testing equipment and results.
4. Tests include, but are not limited to, the following:
 - a. All Wiring: Free of shorts unintentional and grounds.
 - b. Molded case breakers 150 amperes and larger. Time and instantaneous tripping, physical condition, contact resistance, insulation resistance.
 - c. Power Circuit Breakers: Calibration to time/current curves, physical condition, contact resistance, insulation resistance.
 - d. Grounding system: Ground resistance (impedance), ground integrity.
 - e. Patient Care Areas: Test and measure voltage and impedance of grounding system per NFPA 99 2018 section 6.3.3.
 - f. Receptacles in Patient Care Areas: Inspect and test receptacles per NFPA 99 2018 section 6.3.3.2.
 - g. Secondary Service Bus Ducts: Proper torque on connections, insulation resistance, and physical condition.
 - h. Motor Controls: Proper overload heater sizes.
 - i. Ground Fault System: Neutral free of improper grounds and pick-up.
 - j. Protective Relays: Pick-up, timing, insulation resistance, physical condition.
 - k. Switchboards, Panelboards, and similar circuit breaker equipment: Insulation resistance, physical condition.
 - l. Feeder Cables: Insulation resistance.
 - m. Motors: proper rotation, insulation resistance.

C. Minimum Acceptable Test Results:

1. Ground System: The main ground electrode system resistance to ground no greater than 5 ohms.
2. Electrical Apparatus and System Insulation Resistance:

- a. Rating of Equipment of 250 volts maximum: Use 500 volt D.C. test voltage. Minimum insulation resistance, 25 megohms.
- b. Rating of equipment of 600 volts: Use 1000 volt D.C. test voltage. Minimum insulation resistance, 100 megohms.
- 3. Wire and Cables Under 600 Volts:
 - a. Rating of cables of 300 volts maximum. Use 500 volt D.C. test voltage. Minimum insulation resistance, 50 megohms.
 - b. Rating of cables of 600 volts maximum: Use 1000 volt D.C. test voltage. Minimum insulation resistance, 50 megohms.

3.3 TECHNICAL REQUIREMENTS

A. Grounding Systems:

- 1. Tests include measurement of ground resistance at the following equipment and structures:
 - a. All primary and secondary switchgear.
 - b. All power transformer frames and neutral grounds.
 - c. All secondary switchboards located within buildings.
 - d. Other miscellaneous grounds selected at random in a manner to be representative of the entire installation.
 - e. Ground system ground rods, including those in manholes.
 - f. Isolated instrumentation system.
- 2. Use "3 probe - fall of potential" method ground tests made on system ground rods. All other ground tests may be measured to system ground by use of ground reference method.
- 3. Verify that ground system installation is completed before performing testing work.
- 4. Ground circuits showing more than 5 ohms resistance will be considered defective and repaired by the Contractor at his own expense.

B. Circuit Breakers:

- 1. Electrical Tests:
 - a. Megger test breaker. Voltage $1000 + 2x$ rated voltage phase to phase, phase to ground with breaker closed, cross pole breaker open.
 - b. Check trip free operation.
 - c. Test trip devices using the primary injection current method. Verify trip timing to manufacturer's specification values. Test values that fail to meet the NETA or manufacturer guidelines: Include equipment, device, test values and failure reason on the daily report submitted to the IOR and General Contractor.

3.4 RETESTING

- A. Retest any equipment which does not pass initial tests, or where subsequent testing is required for acceptance as directed by the Owner's Representative.

3.5 REPLACEMENT OF DEFECTIVE MATERIAL OR EQUIPMENT

- A. Repair or replace any material or equipment found defective or cannot pass the tests specified in this Section at no additional cost to the Owner.

- B. Complete correction of defective material or equipment and retesting within the Contract period.
- C. If the equipment or material cannot pass the second test, remove the defective equipment and replace it with equivalent equipment that meets the requirements of the Specifications. Such replacement at no additional cost to the Owner.
- D. Remove defective equipment or material from the site no later than 15 days from the date of notification by the Owner or his representative.

END OF SECTION

SECTION 260502

ELECTRICAL COMMISSIONING

PART 1 - GENERAL

1.1 SUMMARY

- A. All electrical systems shall be commissioned in accordance with NECA 90-2004, Recommended Practice for Commissioning Building Electrical Systems (ANSI).
- B. This Section describes the requirements for start-up and commissioning for Division 26 installed work, including but not limited to:
 - 1. Fire alarm system.

1.2 REFERENCES

- A. National Electrical Testing Association (NETA)
- B. American National Standard Institute (ANSI)
- C. Institute of Electrical and Electronic Engineers (IEEE)
- D. National Electrical Code (NEC)
- E. National Electrical Contractors Association. (NECA)

1.3 SUBMITTALS

- A. Collaborate with the General Contractor to provide a complete commissioning and training plan submittal for the electrical work.

1.4 QUALITY ASSURANCE

- A. Provide testing equipment and accessories that are free of defects and are certified for use.
- B. Provide testing equipment with current calibration labels.
- C. Comply with commissioning procedures to ANSI and IEEE guidelines. Incorporate manufacturer's recommend commission procedures for equipment.

1.5 COORDINATION

- A. Coordinate commissioning work with the requirements of Section PROJECT COORDINATION and Section BUILDING SYSTEMS COMMISSIONING.
- B. Coordinate commissioning requirements noted in other Division 26 Sections.

PART 2 - PRODUCTS - Not Used.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that equipment testing work is complete before starting functional performance of power equipment.
- B. Verify that operational manuals are complete and been approved by the Architect before starting functional performance testing.
- C. Inspect equipment and confirm that it is clean and ready for operation. All shipping tags removed, nameplates installed and equipment manuals in place.

3.2 PREPARATION

- A. Provide at least 1 journeyman electrician with tools and equipment necessary to perform functional testing.
- B. Provide equipment factory representative for this work when needed.
- C. Provide certified testing agency personnel for this work when needed.
- D. Provide any necessary temporary power provisions, diesel fuel, equipment and sundries to complete this work.

3.3 FIRE ALARM SYSTEM COMMISSIONING

- A. Perform commissioning work after alarm equipment is installed and system ready for operation.
- B. Perform commissioning work in accordance to the manufacturer's standard procedures and check lists, including but not limited to:
 - 1. Verify tests such as:
 - a. Alarm db.
 - b. Detectors initiating signal.
 - c. Trouble lights.
 - 2. Verify settings of
 - a. Smoke detectors.
 - b. Heat detectors.
 - c. Duct detectors.
 - 3. Verify readings of remote data, such as annunciator panel.
 - 4. Verify operation of system modes, such:
 - a. Elevator control.
 - b. Sprinkler supervisory alarm.
 - c. Existing kitchen hood extinguishing system.
 - d. Door hold open/release.
 - 5. Verify that total alarm system is performing to provide conditions as outlined in the design intent.

3.4 CHECKLIST - FIRE ALARM SYSTEM

- A. Prior to Functional Performance Test:
 - 1. System in place, including all components indicated, and tested.
 - 2. Connected to emergency power system.
 - 3. Wiring is plenum rated where required.
 - 4. Exposed Areas: Wiring installed in conduit.
 - 5. System checked for grounds or breaks.
 - 6. System connected to elevator control system, sprinkler alarm system and air handling systems.
 - 7. Wiring installed in cable tray, or J-hooks, or bridal spring clips.
 - 8. Cables have color coded identification tags.
 - 9. Boxes and nameplates meet color coding requirements.
 - 10. Verify system has been inspected and given approval by jurisdiction authority.
- B. Personnel to be present or assist as required to perform Functional Performance Test:
 - 1. General Contractor, Mechanical Contractor, Control Contractor, Fire Alarm Manufacturer's Representative, and Electrical Contractor, sub-contractors and specialty contractors as required.
 - 2. Owner's Project Manager/Representative and/or Inspector of Record (I.O.R.).
 - 3. Owner's maintenance staff, as desired.
 - 4. Architect's Design Engineer(s).
- C. Functional Performance Test: Demonstrate operation of fire alarm system per specifications including the following:
 - 1. Alarm initiating devices including pull stations, ceiling smoke detectors, duct smoke detectors, heat detectors, and sprinkler alarm switches.
 - 2. Air handling unit redirect upon alarm.
 - 3. Elevators upon alarm.
 - 4. Verify tie-in and proper system operation with any off-site system monitoring.
 - 5. Fire alarm system annunciator panel.
 - 6. Alarm devices, visual and audible.
 - 7. Central processing unit alphanumeric display and printer.
 - 8. Verify system function upon loss of power.
- D. Results:
 - 1. If specified equipment performance is not verified, the General Contractor to have corrections made and reschedule Functional Performance Test as soon as possible after corrective work is completed.
- E. Reports:
 - 1. Submit reports of functional performance test (item C above) to Architect.

3.5 TRAINING

- A. Coordinate with the training requirements of BUILDING SYSTEMS COMMISSIONING.
- B. At job completion, allot a period of not less than 24 hours for instruction of building

operating and maintenance personnel in the use of all systems. Include high voltage safety training where medium voltage equipment is installed. This instruction time (24 hours) is in addition to any instruction time called out in other Division 26 Sections.

- C. Instruct all personnel at the same time. Contractor responsible for coordinating factory representative arrangements.
- D. Contractor responsible for training expenses incurred.

END OF SECTION

SECTION 26 05 19

LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes building wire and cable; nonmetallic-sheathed cable; service entrance cable; armored cable; metal clad cable; and wiring connectors and connections.
- B. Related Sections:
 - 1. Section 26 05 53 - Identification for Electrical Systems: Product requirements for wire identification.

1.2 REFERENCES

- A. International Electrical Testing Association:
 - 1. ANSI/NETA ATS – 2017 Acceptance Testing Specifications for Electrical Power Equipment and Systems.
- B. NECA (National Electrical Contractors Association) - Standard of Installation.
- C. ANSI/NFPA 70 – National Electrical Code (NEC).
- D. Part 3, Title 24, - California Electrical Code (CEC).
- E. Underwriters Laboratories, Inc. (UL).
 - 1. UL-83, UL-44 – Thermoplastic-Insulated Wire and Cables.
 - 2. UL-1569 – Metal Clad Cable.

1.3 SYSTEM DESCRIPTION

- A. Product Requirements: Provide products as follows:
 - 1. Stranded conductor for feeders and branch circuits 10 AWG and smaller.
 - 2. Stranded conductors for control circuits.
 - 3. Conductor not smaller than 12 AWG for power and lighting circuits.
 - 4. Conductor not smaller than 16 AWG for control circuits.
 - 5. 10 AWG conductors for 20 amperes, 120-volt branch circuit home runs longer than 75 feet.
- B. Wiring Methods: Provide the following wiring methods:
 - 1. Concealed Dry Interior Locations: Use only building wire, Type THHN/THWN-2 insulation, in raceway, armored cable or metal clad cable.

1.4 DESIGN REQUIREMENTS

- A. Conductor sizes are based on copper unless indicated as aluminum or "AL".
- B. When aluminum conductor is substituted for copper conductor, size to match circuit requirements for conductor ampacity and voltage drop.

1.5 SUBMITTALS

- A. Product Data: Submit for building wire and each cable assembly type.

1.6 CLOSEOUT SUBMITTALS

- A. Project Record Documents: Record actual locations of components and circuits.

1.7 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum three years experience.

1.8 FIELD MEASUREMENTS

- A. Verify field measurements are as indicated on Drawings.

1.9 COORDINATION

- A. Where wire and cable destination is indicated and routing is not shown, determine routing and lengths required.
- B. Determine required separation between wire, cable and other work. Determine cable routing to avoid interference with other work.
- C. Wire and cable routing indicated is approximate unless dimensioned.

PART 2 PRODUCTS

2.1 BUILDING WIRE

- A. Manufacturers:
 - 1. Diamond Wire & Cable Co.
 - 2. Essex Group Inc.
 - 3. General Cable Co.
 - 4. Approved equal.
- B. Product Description: Single conductor insulated wire.
- C. Conductor: Copper.

2.2 NONMETALLIC-SHEATHED CABLE

- A. Manufacturers:
 - 1. Diamond Wire & Cable Co.
 - 2. Essex Group Inc.
 - 3. General Cable Co.
 - 4. Approved equal.
- B. Conductor: Copper.

- C. Insulation Voltage Rating: 600 volts.
- D. Insulation Temperature Rating: 90 degrees C.

2.3 METAL CLAD CABLE

- A. Manufacturers:
 - 1. AFC.
 - 2. Substitutions: Approved equal.
- B. Conductor: #12 AWG Copper.
 - 1. Ground: Internal insulated green copper with redundant grounded armor.
 - 2. Neutral: Separate neutral per each phase conductor with identifying color strip.
 - 3. Insulation Voltage Rating: 600 volts.
 - 4. Insulation Temperature Rating: 75- or 90-degrees C.
 - 5. Insulation Material: Thermoplastic.
 - 6. Armor Material: Steel Aluminum.
 - 7. Fittings: Steel or malleable iron squeeze connectors with insulated throat.

2.4 PLASTIC TAPE:

- A. Black 7 mil thick general purpose electrical tape, Scotch 33 plus or equal.

2.5 HEAT SHRINK TUBING

- A. Black medium/heavy dual wall adhesive flexible Polyolefin tubing, 3M or equal.

2.6 INSULATING RESIN:

- A. Use two-part liquid epoxy resin with resin and catalyst in premeasured, sealed mixing pouch. Scotchcast 4 or equivalent.

2.7 REDUCING ADAPTERS:

- A. Burndy, Thomas and Betts or approved equal.

2.8 WIRING CONNECTORS

- A. Bolted pressure connectors: Cast bronze compression bolts designed for parallel taps, tees, crosses, or end-to-end connections.
- B. Compression connectors: One-piece tin-plated copper high-compression type lugs for installation with hand or hydraulically operated crimping tools and dies.
- C. Insulated spring wire connectors: multi-part construction incorporating a steel spring enclosed with a color coded outer thermoplastic shell.
- D. Insulated spring wire wet/damp location spring wire connectors: multi-part construction incorporating a steel spring enclosed with a color coded outer thermoplastic shell pre-filled with silicone base to protect against moisture and corrosion.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify interior of building has been protected from weather.
- B. Verify mechanical work likely to damage wire and cable has been completed.
- C. Verify raceway installation is complete and supported.

3.2 PREPARATION

- A. Completely and thoroughly swab raceway before installing wire.

3.3 EXISTING WORK

- A. Remove exposed abandoned wire and cable, including abandoned wire and cable above accessible ceiling finishes. Patch surfaces where removed cables pass through building finishes.
- B. Disconnect abandoned circuits and remove circuit wire and cable. Remove abandoned boxes when wire and cable servicing boxes is abandoned and removed. Install blank cover for abandoned boxes not removed.
- C. Provide access to existing wiring connections remaining active and requiring access. Modify installation or install access panel.
- D. Extend existing circuits using materials and methods compatible with existing electrical installations, or as specified.
- E. Clean and repair existing wire and cable remaining or wire and cable to be reinstalled.

3.4 INSTALLATION

- A. Route wire and cable to meet Project conditions.
- B. Neatly train and lace wiring inside boxes, equipment, and panelboards.
- C. Identify and color code wire and cable under provisions of Section 26 05 53. Identify each conductor with its circuit number or other designation indicated.
- D. Special Techniques--Building Wire in Raceway:
 - 1. Pull conductors into raceway at same time.
- E. Special Techniques - Cable:
 - 1. Protect exposed cable from damage.
 - 2. Support cables above accessible ceiling, using spring metal clips or plastic cable ties to support cables from structure. Do not rest cable on ceiling panels.
 - 3. Use suitable cable fittings and connectors.
 - 4. Armored Cable or Metal Clad Cable is not permitted for homerun use. Extend cable from junction/wireway box having branch circuits for the immediate area.

Use conduit or electrical metallic tubing for routing branch circuit conductors from junction/wireway box to panelboard.

5. Armored Cable or Metal Clad Cable is not permitted to be routed through rated or non-rated walls.
6. AC or MC cable is not permitted for Critical or Life Safety branch circuit wiring except where permitted by the CEC.

F. Special Techniques - Wiring Connections:

1. Clean conductor surfaces before installing lugs and connectors.
2. Make splices, taps, and terminations to carry full ampacity of conductors with no perceptible temperature rise.
3. Tape uninsulated conductors and connectors with electrical tape to 150 percent of insulation rating of conductor.
4. Provide heat shrink tubing to completely cover compression connections.
5. Install solderless tool applied pressure split bolt connectors and lugs for copper conductor splices and taps, 8 AWG and larger.
6. Install insulated spring wire connectors with plastic caps for copper conductor splices and taps, 10 AWG and smaller.
7. Encapsulate below grade splices at outlet, pull and junction boxes with specified insulating resin kits. Make all splices watertight.
8. Install waterproof wire connectors with plastic caps for copper conductor splices and taps, 10 AWG and smaller in outdoor or wet locations.
9. Where oversized cables are used to accommodate voltage drop, whether a single or parallel feeder, provide appropriate reducing adapter and conductors for termination.
10. Secure conductors to circuit breakers, lugs and ground/neutral bus terminations utilizing a torque screwdriver or wrench to the manufacturer's specified torque values.
11. Terminate aluminum conductors with tin-plated, aluminum-bodied compression connectors only. Fill with antioxidant compound before installing conductor.
12. Install suitable reducing connectors or mechanical connector adaptors for connecting aluminum conductors to copper conductors.

3.5 WIRE COLOR

A. General

1. For wire sizes 10 AWG and smaller, install wire colors in accordance with the following:
 - a. Black, red, and blue for circuits at 120/208 volts single or three phase.

B. Branch Circuits: Shared neutral conductors for multiple circuits are not permitted. Provide a separate neutral conductor for each phase conductor.

C. Neutral Conductors: White. When two or more neutrals are in one conduit, individually identify each with proper circuit number.

D. Branch Circuit Conductors: Install three or four wire home runs with each phase uniquely color coded.

E. Feeder Circuit Conductors: Uniquely color code each phase.

F. Ground Conductors:

1. For 6 AWG and smaller: Green.

3.6 FIELD QUALITY CONTROL

A. Provide visual and mechanical inspection in accordance with NETA ATS-2017, 7.3.2A.

END OF SECTION

SECTION 26 05 26

GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Rod electrodes.
 - 2. Active electrodes.
 - 3. Wire.
 - 4. Grounding well components.
 - 5. Mechanical connectors.
 - 6. Exothermic connections.
- B. Related Sections:
 - 1. Section 26 41 00 - Facility Lightning Protection: Grounding of lightning protection system.

1.2 REFERENCES

- A. Institute of Electrical and Electronics Engineers:
 - 1. IEEE 142 - Recommended Practice for Grounding of Industrial and Commercial Power Systems.
 - 2. IEEE 1100 - Recommended Practice for Powering and Grounding Electronic Equipment.
- B. International Electrical Testing Association:
 - 1. ANSI/NETA ATS – 2017 Acceptance Testing Specifications for Electrical Power Equipment and Systems.
- C. Part 3, Title 24, - California Electrical Code (CEC).
- D. NFPA 99 - Standard for Health Care Facilities.

1.3 SYSTEM DESCRIPTION

- A. Grounding systems use the following elements as grounding electrodes:
 - 1. Existing Metal underground water pipe.
 - 2. Metal building frame.
 - 3. Concrete-encased electrode.
 - 4. Existing Metal underground gas piping system.
 - 5. Rod electrode.
 - 6. Plate electrode.
 - 7. [_____].

1.4 DESIGN REQUIREMENTS

- A. Construct and test grounding systems for access flooring systems on conductive floors accordance with IEEE 1100.

1.5 PERFORMANCE REQUIREMENTS

- A. Grounding System Resistance: 5 ohms maximum.

1.6 SUBMITTALS

- A. Product Data: Submit data on grounding electrodes and connections.
- B. Test Reports: Indicate overall resistance to ground [and resistance of each electrode].
- C. Manufacturer's Installation Instructions: Submit for active electrodes.

1.7 CLOSEOUT SUBMITTALS

- A. Project Record Documents: Record actual locations of components and grounding electrodes.

1.8 QUALITY ASSURANCE

- A. Provide grounding materials conforming to requirements of NEC, IEEE 142, and UL labeled.

1.9 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing Products specified in this section with minimum three years experience.

1.10 DELIVERY, STORAGE, AND HANDLING

- A. Accept materials on site in original factory packaging, labeled with manufacturer's identification.
- B. Protect from weather and construction traffic, dirt, water, chemical, and mechanical damage, by storing in original packaging.
- C. Do not deliver items to project before time of installation. Limit shipment of bulk and multiple-use materials to quantities needed for immediate installation.

1.11 COORDINATION

- A. Complete grounding and bonding of building reinforcing steel prior concrete placement.

PART 2 PRODUCTS

2.1 ROD ELECTRODES

- A. Product Description:

1. Material: Copper.
 2. Diameter: 3/4 inch.
 3. Length: 10 feet.
 - B. Connector: U-bolt clamp.
- 2.2 WIRE
- A. Material: Stranded copper.
 - B. Grounding Electrode Conductor: Copper conductor insulated if in conduit or above grade exposed, bare if direct buried.
 - C. Bonding Conductor: Copper conductor insulated.
- 2.3 MECHANICAL CONNECTORS
- A. Description: Bronze connectors, suitable for grounding and bonding applications, in configurations required for particular installation.
- 2.4 EXOTHERMIC CONNECTIONS
- A. Product Description: Exothermic materials, accessories, and tools for preparing and making permanent field connections between grounding system components.
- PART 3 EXECUTION
- 3.1 EXAMINATION
- A. Verify final backfill and compaction has been completed before driving rod electrodes.
- 3.2 PREPARATION
- A. Remove paint, rust, mill oils and surface contaminants at connection points.
- 3.3 EXISTING WORK
- A. Modify existing grounding system to maintain continuity to accommodate renovations.
 - B. Extend existing grounding system using materials and methods as specified.
- 3.4 INSTALLATION
- A. Install rod electrodes at locations as indicated on Drawings. Install additional rod electrodes to achieve specified resistance to ground.
 - B. Install grounding and bonding conductors concealed from view.
 - C. Install grounding well pipe with cover at each rod location. Install well pipe top flush with finished grade.

- D. Install [4] [] AWG bare copper wire in foundation footing [as indicated on Drawings] [].
- E. Bond together metal siding not attached to grounded structure; bond to ground.
- F. Equipment Grounding Conductor: Install separate, insulated conductor within each feeder and branch circuit raceway. Terminate each end on suitable lug, bus, or bushing.
- G. Install continuous grounding using underground cold water system and building steel as grounding electrode. Where water piping is not available, install artificial station ground by means of driven rods or buried electrodes.
- H. Permanently ground entire light and power system in accordance with NEC, including service equipment, distribution panels, lighting panelboards, switch and starter enclosures, motor frames, grounding type receptacles, and other exposed non-current carrying metal parts of electrical equipment.
- I. Install branch circuits feeding isolated ground receptacles with separate insulated grounding conductor, connected only at isolated ground receptacle, ground terminals, and at ground bus of serving panel.
- J. Size grounding conductors in accordance with CEC or as indicated on drawings. Install from grounding bus of serving panel to ground bus of served panel, grounding screw of receptacles, lighting fixture housing, light switch outlet boxes or metal enclosures of service equipment. Ground conduits as necessary by means of grounding bushings on terminations at panelboards and switchboards to grounding bus.
- K. Permanently attach equipment and grounding conductors prior to energizing equipment.

3.5 FIELD QUALITY CONTROL

- A. Provide visual and mechanical inspection in accordance with NETA ATS, 7.13A.
- B. Perform electrical tests in accordance with NETA ATS, 7.13B.
- C. Perform ground resistance testing in accordance with IEEE 142.
- D. Perform continuity testing in accordance with IEEE 142.
- E. Provide written test results of grounding system and submit to Architect.

END OF SECTION

SECTION 26 05 29

HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Conduit and cable tray supports.
 - 2. Formed steel channel.
 - 3. Spring steel clips.
 - 4. Sleeves.
 - 5. Mechanical sleeve seals.
 - 6. Firestopping relating to electrical work.
 - 7. Firestopping accessories.
 - 8. Floor and wall mounted equipment bases and supports.

1.2 REFERENCES

- A. ASTM International:
 - 1. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
 - 2. ASTM E119 - Standard Test Methods for Fire Tests of Building Construction and Materials.
 - 3. ASTM E814 - Standard Test Method for Fire Tests of Through-Penetration Fire Stops.
 - 4. ASTM E1966 - Standard Test Method for Fire-Resistive Joint Systems.
- B. Part 3, Title 24, - California Electrical Code (CEC).
- C. Underwriters Laboratories Inc.:
 - 1. UL 1479 - Fire Tests of Through-Penetration Firestops.
 - 2. UL - Fire Resistance Directory.

1.3 DEFINITIONS

- A. Firestopping (Through-Penetration Protection System): Sealing or stuffing material or assembly placed in spaces between and penetrations through building materials to arrest movement of fire, smoke, heat, and hot gases through fire rated construction.

1.4 SYSTEM DESCRIPTION

- A. Firestopping Materials: UL 1479, to achieve fire ratings in accordance with UL Design Numbers noted on Drawings.

1.5 PERFORMANCE REQUIREMENTS

- A. Penetrations: Provide through-penetration firestop systems that are installed to resist the spread of fire, passage of smoke and other hot gases according to requirements indicated, to restore the original fire-resistance rating of assembly penetrated.
 - 1. Install complete through penetration firestop systems that have been tested and are listed by recognized testing agencies per ASTM E 814 or UL 1479 fire tests in a configuration that is representative of site conditions.
 - 2. F-Rated Systems: Install through-penetration firestop systems with F-ratings indicated, as determined per ASTM E 814 or UL 1479, but not less than the fire resistance rating of the assembly being penetrated.
 - 3. T-Rated Systems: Install through-penetration firestop systems with T-ratings indicated, as well as F-ratings, as determined per ASTM E 814 or UL 1479, where required by the Building Code.

1.6 SUBMITTALS

- A. Shop Drawings: Indicate system layout with location and detail of trapeze hangers.
- B. Product Data:
 - 1. Hangers and Supports: Submit manufacturers catalog data including load capacity.
 - 2. Firestopping: Submit data on product characteristics, performance and limitation criteria.
- C. Firestopping Schedule: Submit schedule of opening locations and sizes, penetrating items, and required listed design numbers to seal openings to maintain fire resistance rating of adjacent assembly.
- D. Design Data: Indicate load carrying capacity of trapeze hangers and hangers and supports.
- E. Manufacturer's Installation Instructions:
 - 1. Hangers and Supports: Submit special procedures and assembly of components.
 - 2. Firestopping: Submit preparation and installation instructions.
- F. Manufacturer's Certificate: Certify products meet or exceed specified requirements.
- G. Engineering Judgements: For conditions not covered by UL or WH listed designs, submit judgements by licensed professional engineer suitable for presentation to authority having jurisdiction for acceptance as meeting code fire protection requirements.

1.7 SEISMIC DETAILS AND CALCULATIONS

- A. Submit details and calculations for support and anchors that are not specifically detailed on the Drawings where required by California Building Standards Code, California Code of Regulations, Title 24. Pre-approved systems may be used as noted below only if the pre-approval is current and accepted by the local agency having jurisdiction.
- B. Where pre-approved bracing systems will be employed, submit:
 - 1. System component brochure describing components used and detailed installation instructions.

2. Loads to be transmitted to the structure at anchor points.
- C. Where pre-approved bracing systems are not used, submit details and calculations of proposed systems. Include:
 1. Detailed drawings and calculations showing system to be installed, stamped by a Structural Engineer registered in the state of California.
 2. Loads to be transmitted to the structure at anchor points.
- D. Submit detailed routing and installation drawings of all raceway systems requiring seismic supports for review. Include attachment points, raceway sizes and methods proposed for securing and attaching.

1.8 QUALITY ASSURANCE

- A. Through Penetration Firestopping of Fire Rated Assemblies: UL 1479 with 0.10 inch water gage minimum positive pressure differential to achieve fire F-Ratings and temperature T-Ratings as indicated on Drawings, but not less than 1-hour.
 1. Wall Penetrations: Fire F-Ratings as indicated on Drawings, but not less than 1-hour.
 2. Floor Penetrations: Fire F-Ratings and temperature T-Ratings as indicated on Drawings, but not less than 1-hour.
 - a. Floor Penetrations Within Wall Cavities: T-Rating is not required.
- B. Through Penetration Firestopping of Non-Fire Rated Floor Assemblies: Materials to resist free passage of flame and products of combustion.
 1. Noncombustible Penetrating Items: Noncombustible materials for penetrating items connecting maximum of three stories.
 2. Penetrating Items: Materials approved by authorities having jurisdiction for penetrating items connecting maximum of two stories.

1.9 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing Products specified in this section with minimum three years experience.

1.10 DELIVERY, STORAGE, AND HANDLING

- A. Accept materials on site in original factory packaging, labeled with manufacturer's identification.
- B. Protect from weather and construction traffic, dirt, water, chemical, and mechanical damage, by storing in original packaging.

1.11 ENVIRONMENTAL REQUIREMENTS

- A. Do not apply firestopping materials when temperature of substrate material and ambient air is below 60 degrees F.
- B. Maintain this minimum temperature before, during, and for minimum 3 days after installation of firestopping materials.

PART 2 PRODUCTS

2.1 CONDUIT SUPPORTS

- A. Hanger Rods: Threaded high tensile strength galvanized carbon steel with free running threads.
- B. Beam Clamps: Malleable Iron, with tapered hole in base and back to accept either bolt or hanger rod. Set screw: hardened steel.
- C. Conduit clamps for trapeze hangers: Galvanized steel, notched to fit trapeze with single bolt to tighten.
- D. Conduit clamps - general purpose: One hole malleable iron for surface mounted conduits.
- E. Cable Ties: High strength nylon temperature rated to 185 degrees F. Self locking.

2.2 FORMED STEEL CHANNEL

- A. Product Description: Galvanized 12 gage) thick steel. With holes 1-1/2 inches on center.

2.3 SPRING STEEL CLIPS

- A. Spring steel conduit hanger to threaded rod or wire.

2.4 SLEEVES

- A. Sleeves for Through Non-fire Rated Floors: 18 gage thick galvanized steel.
- B. Sleeves for Through Non-fire Rated Beams, Walls, Footings, and Potentially Wet Floors: Steel pipe.
- C. Sleeves for Through Fire Rated and Fire Resistive Floors and Walls, and Fire Proofing: Prefabricated fire rated sleeves including seals, UL listed.
- D. Fire-stopping Insulation: Glass fiber type, non-combustible.

2.5 MECHANICAL SLEEVE SEALS

- A. Product Description: Modular mechanical type, consisting of interlocking synthetic rubber links shaped to continuously fill annular space between object and sleeve, connected with bolts and pressure plates causing rubber sealing elements to expand when tightened, providing watertight seal and electrical insulation.

2.6 FIRESTOPPING

- A. Product Description: Different types of products by multiple manufacturers are acceptable as required to meet specified system description and performance requirements; provide only one type for each similar application.

1. Silicone Firestopping Elastomeric Firestopping: Single or Multiple component silicone elastomeric compound and compatible silicone sealant.
2. Foam Firestopping Compounds: Single or Multiple component foam compound.
3. Formulated Firestopping Compound of Incombustible Fibers: Formulated compound mixed with incombustible non-asbestos fibers.
4. Fiber Stuffing and Sealant Firestopping: Composite of mineral or ceramic fiber stuffing insulation with silicone elastomer for smoke stopping.
5. Mechanical Firestopping Device with Fillers: Mechanical device with incombustible fillers and silicone elastomer, covered with sheet stainless steel jacket, joined with collars, penetration sealed with flanged stops.
6. Intumescent Firestopping: Intumescent putty compound which expands on exposure to surface heat gain.
7. Firestop Pillows: Formed mineral fiber pillows.

2.7 FIRESTOPPING ACCESSORIES

- A. Primer: Type recommended by firestopping manufacturer for specific substrate surfaces and suitable for required fire ratings.
- B. Installation Accessories: Provide clips, collars, fasteners, temporary stops or dams, and other devices required to position and retain materials in place.
- C. General:
 1. Furnish UL listed products.
 2. Select products with rating not less than rating of wall or floor being penetrated.
- D. Non-Rated Surfaces:
 1. Stamped steel, chrome plated, hinged, split ring escutcheons or floor plates or ceiling plates for covering openings in occupied areas where conduit is exposed.
 2. For exterior wall openings below grade, furnish modular mechanical type seal consisting of interlocking synthetic rubber links shaped to continuously fill annular space between conduit and cored opening or water-stop type wall sleeve.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify openings are ready to receive sleeves.
- B. Verify openings are ready to receive firestopping.

3.2 PREPARATION

- A. Clean substrate surfaces of dirt, dust, grease, oil, loose material, or other matter affecting bond of firestopping material.
- B. Remove incompatible materials affecting bond.
- C. Install damming materials to arrest liquid material leakage.

- D. Obtain permission from Architect/Engineer before using powder-actuated anchors.
- E. Do not drill or cut structural members.

3.3 INSTALLATION - HANGERS AND SUPPORTS

- A. Anchors and Fasteners:
 - 1. Concrete Structural Elements: Provide, expansion anchors, powder actuated anchors.
 - 2. Steel Structural Elements: Provide beam clamps, spring steel clips, steel ramset fasteners.
 - 3. Concrete Surfaces: Provide expansion anchors.
 - 4. Hollow Masonry, Plaster, and Gypsum Board Partitions: Provide structural backing plate.
 - 5. Solid Masonry Walls: Provide expansion anchors.
 - 6. Sheet Metal: Provide sheet metal screws.
 - 7. Wood Elements: Provide wood screws.
- B. Inserts:
 - 1. Install inserts for placement in concrete forms.
 - 2. Install inserts for suspending hangers from reinforced concrete slabs and sides of reinforced concrete beams.
 - 3. Provide hooked rod to concrete reinforcement section for inserts carrying pipe over 4 inches.
 - 4. Where concrete slabs form finished ceiling, locate inserts flush with slab surface.
 - 5. Where inserts are omitted, drill through concrete slab from below and provide through-bolt with recessed square steel plate and nut [above] [flush with top of] [recessed into and grouted flush with] slab.
- C. Install conduit and raceway support and spacing in accordance with the California Electrical Code.
- D. Install all support devices according to manufacturer's guidelines and recommendations.
- E. Do not fasten supports to pipes, ducts, mechanical equipment, or conduit.
- F. Do not drill through structural framing members.
- G. Do not support equipment or fixtures from the roof deck. Provide necessary framing and joist hangers to span between structural members to locate hangers properly.
- H. Install multiple conduit runs on common hangers.
- I. Supports:
 - 1. Fabricate supports from structural steel or formed steel channel. Install hexagon head bolts to present neat appearance with adequate strength and rigidity. Install spring lock washers under nuts.
 - 2. Install surface mounted cabinets and panelboards with minimum of four anchors.
 - 3. In wet and damp locations install steel channel supports to stand cabinets and panelboards 1 inch off wall.
 - 4. Support vertical conduit at every floor.

3.4 INSTALLATION - FIRESTOPPING

- A. Install material at fire rated construction perimeters and openings containing penetrating sleeves, piping, ductwork, conduit and other items, requiring firestopping.
- B. Apply primer where recommended by manufacturer for type of firestopping material and substrate involved, and as required for compliance with required fire ratings.
- C. Apply firestopping material in sufficient thickness to achieve required fire and smoke rating.
- D. Fire Rated Surface:
 - 1. Seal opening at floor, wall, partition, ceiling, and roof as follows:
 - a. Install sleeve through opening and extending beyond minimum of 1 inch on both sides of building element.
 - b. Pack void with backing material.
 - c. Seal ends of sleeve with UL listed fire resistive silicone compound to meet fire rating of structure penetrated.
 - 2. Where cable tray, bus, cable bus, conduit, wireway, trough, and penetrates fire rated surface, install firestopping product in accordance with manufacturer's instructions.
- E. Non-Rated Surfaces:
 - 1. Seal opening through non-fire rated wall, partition floor, ceiling, and roof opening as follows:
 - a. Install sleeve through opening and extending beyond minimum of 1 inch on both sides of building element.
 - b. Install type of firestopping material recommended by manufacturer.
 - 2. Install escutcheons floor plates or ceiling plates where conduit, penetrates non-fire rated surfaces in occupied spaces. Occupied spaces include rooms with finished ceilings and where penetration occurs below finished ceiling.
 - 3. Exterior wall openings below grade: Assemble rubber links of mechanical seal to size of conduit and tighten in place, in accordance with manufacturer's instructions.
 - 4. Interior partitions: Seal pipe penetrations at clean rooms, laboratories, hospital spaces, computer rooms, telecommunication rooms data rooms and. Apply sealant to both sides of penetration to completely fill annular space between sleeve and conduit.

3.5 INSTALLATION - EQUIPMENT BASES AND SUPPORTS

- A. Provide housekeeping pads of concrete, minimum 4 inches thick and extending 6 inches beyond supported equipment.
- B. Using templates furnished with equipment, install anchor bolts, and accessories for mounting and anchoring equipment.
- C. Construct supports of steel members formed steel channel. Brace and fasten with flanges bolted to structure.

3.6 INSTALLATION - SLEEVES

- A. Exterior watertight entries: Seal with adjustable interlocking rubber links.
- B. Conduit penetrations not required to be watertight: Sleeve and fill with silicon foam.
- C. Set sleeves in position in forms. Provide reinforcing around sleeves.
- D. Size sleeves large enough to allow for movement due to expansion and contraction. Provide for continuous insulation wrapping.
- E. Extend sleeves through floors 1 inch above finished floor level. Caulk sleeves.
- F. Where conduit or raceway penetrates floor, ceiling, or wall, close off space between conduit or raceway and adjacent work with fire stopping insulation and caulk.
- G. Install chrome plated steel escutcheons at finished surfaces where penetrations occur below finished ceilings.

3.7 FIELD QUALITY CONTROL

- A. Inspect installed firestopping for compliance with specifications.

3.8 CLEANING

- A. Clean adjacent surfaces of firestopping materials.

3.9 PROTECTION OF FINISHED WORK

- A. Protect adjacent surfaces from damage by material installation.

END OF SECTION

SECTION 26 05 33

RACEWAY AND BOXES FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes conduit and tubing, surface raceways, wireways, outlet boxes, pull and junction boxes, and handholes.
- B. Related Sections:
 - 1. Section 26 05 26 - Grounding and Bonding for Electrical Systems.
 - 2. Section 26 05 29 - Hangers and Supports for Electrical Systems.
 - 3. Section 26 27 26 - Wiring Devices.

1.2 REFERENCES

- A. American National Standards Institute:
 - 1. ANSI C80.1 - Rigid Steel Conduit, Zinc Coated.
 - 2. ANSI C80.3 - Specification for Electrical Metallic Tubing, Zinc Coated.
 - 3. ANSI C80.5 - Aluminum Rigid Conduit - (ARC).
- B. National Electrical Manufacturers Association:
 - 1. NEMA 250 - Enclosures for Electrical Equipment (1000 Volts Maximum).
 - 2. NEMA FB 1 - Fittings, Cast Metal Boxes, and Conduit Bodies for Conduit and Cable Assemblies.
 - 3. NEMA OS 1 - Sheet Steel Outlet Boxes, Device Boxes, Covers, and Box Supports.
 - 4. NEMA OS 2 - Nonmetallic Outlet Boxes, Device Boxes, Covers, and Box Supports.
 - 5. NEMA RN 1 - Polyvinyl Chloride (PVC) Externally Coated Galvanized Rigid Steel Conduit and Intermediate Metal Conduit.
 - 6. NEMA TC 2 - Electrical Polyvinyl Chloride (PVC) Tubing and Conduit.
 - 7. NEMA TC 3 - PVC Fittings for Use with Rigid PVC Conduit and Tubing.
- C. Part 3, Title 24, - California Electrical Code (CEC).

1.3 SYSTEM DESCRIPTION

- A. Raceway and boxes located as indicated on Drawings, and at other locations required for splices, taps, wire pulling, equipment connections, and compliance with regulatory requirements. Raceway and boxes are shown in approximate locations unless dimensioned. Provide raceway to complete wiring system.
- B. Concealed Dry Locations: Provide rigid steel conduit, intermediate metal conduit or electrical metallic tubing [and] [nonmetallic tubing]. Provide sheet-metal boxes. Provide flush mounting outlet box in finished areas. Provide hinged enclosure for large pull boxes where shown on drawings.

- C. Exposed Interior Dry Locations: Use rigid steel conduit or intermediate metal conduit below eight feet or where subject to damage. Use rigid steel conduit, intermediate metal conduit, or electrical metallic tubing above eight feet or in electrical, mechanical or telecommunication rooms. Use sheet-metal or cast metal boxes. Use flush mounting outlet box in finished areas. Provide hinged enclosure for large pull boxes.

1.4 DESIGN REQUIREMENTS

- A. Minimum Raceway Size:
 - 1. 3/4 inch.
 - 2. 3/4 inch. for homeruns.
 - 3. 1 inch outside foundation line.
 - 4. 1 1/4" inch for communication system outlets.

1.5 SUBMITTALS

- A. Product Data: Submit for the following:
 - 1. Metallic conduit.
 - 2. Electrical metallic tubing.
 - 3. Flexible metal conduit.
 - 4. Liquidtight flexible metal conduit.
 - 5. Nonmetallic conduit.
 - 6. Flexible nonmetallic conduit.
 - 7. Nonmetallic tubing.
 - 8. Raceway fittings.
 - 9. Conduit bodies.
 - 10. Surface raceway.
 - 11. Wireway.
 - 12. Pull and junction boxes.
 - 13. Handholes.
- B. Manufacturer's Installation Instructions: Submit application conditions and limitations of use stipulated by Product testing agency specified under Regulatory Requirements. Include instructions for storage, handling, protection, examination, preparation, and installation of Product.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Protect conduit from corrosion and entrance of debris by storing above grade. Provide appropriate covering.

1.7 COORDINATION

- A. Coordinate mounting heights, orientation and locations of outlets mounted above counters, benches, and backsplashes.
- B. Coordinate Work of this Division and Work of other Divisions in advance of installation. Provide additional Work to overcome tight conditions at no increase in Contract Sum.
- C. Coordinate installation of outlet boxes for equipment specified in other divisions.

PART 2 PRODUCTS

2.1 METAL CONDUIT

- A. Rigid Steel Conduit: ANSI C80.1.
- B. Intermediate Metal Conduit (IMC): Rigid steel.
- C. Fittings: NEMA FB 1. Fittings shall be [steel] [malleable iron] with threaded fittings. Use insulated metallic bushings with lug where ground connections are required. Use plastic bushing for non-bonding applications.
- D. Conduit Bodies: Bodies connected to rigid steel or intermediate conduit shall be malleable iron. Provide matching gasketed cover with at least two corrosion resistant screws.

2.2 PVC COATED METAL CONDUIT

- A. Product Description: NEMA RN 1; rigid steel conduit with external PVC coating, 40 mil thick.
- B. Fittings and Conduit Bodies: NEMA FB 1; steel fittings with external PVC coating to match conduit.

2.3 FLEXIBLE METAL CONDUIT

- A. Product Description: Interlocked steel construction.
- B. Fittings: NEMA FB 1; steel iron squeeze type with insulated throat.

2.4 LIQUIDTIGHT FLEXIBLE METAL CONDUIT

- A. Product Description: Interlocked steel construction with PVC jacket.
- B. Fittings: NEMA FB 1; steel fitting with insulated throat.

2.5 ELECTRICAL METALLIC TUBING (EMT)

- A. Product Description: ANSI C80.3; galvanized tubing.
- B. Fittings: NEMA FB 1; steel set screw compression couplings and connectors. Box connectors shall have with insulated throat. Compression couplings and connectors for 2-inch trade size and smaller. Set screw type couplings for 2 1/2-inch trade size or larger.
- C. Conduit Bodies: Provide types of shapes, and sizes to suit individual applications. Bodies shall be malleable iron.

2.6 NONMETALLIC CONDUIT

- A. Product Description: NEMA TC 2; Schedule 40 PVC.
- B. Fittings: NEMA TC 3.

2.7 NONMETALLIC TUBING

- A. Product Description: NEMA TC 2.
- B. Fittings and Conduit Bodies: NEMA TC 3.

2.8 SURFACE METAL RACEWAY

- A. Manufacturers:
 - 1. Carlon Electrical Products Model [_____].
 - 2. Hubbell Wiring Devices Model [_____].
 - 3. Thomas & Betts Corp. Model [_____].
 - 4. Walker Systems Inc. Model [_____].
The Wiremold Co. Model [_____].
- B. Product Description: Sheet metal channel with fitted cover, suitable for use as surface metal raceway.
- C. Fittings, Boxes, and Extension Rings: Furnish manufacturer's standard accessories; match finish on raceway.

2.9 SURFACE NONMETAL RACEWAY

- A. Manufacturers:
 - 1. Carlon Electrical Products Model [_____].
 - 2. Hubbell Wiring Devices Model [_____].
Thomas & Betts Corp. Model [_____].
 - 3. Walker Systems Inc. Model [_____].
 - 4. The Wiremold Co. Model [_____].
- B. Product Description: Plastic channel with fitted cover, suitable for use as surface raceway.
- C. Fittings, Boxes, and Extension Rings: Furnish manufacturer's standard accessories, finish to match raceway.

2.10 WIREWAY

- A. Product Description: General purpose or Raintight type wireway.
- B. Finish: Rust inhibiting primer coating with gray enamel finish.

2.11 OUTLET BOXES

- A. Sheet Metal Outlet Boxes: NEMA OS 1, galvanized steel.
 - 1. Luminaire and Equipment Supporting Boxes: Rated for weight of equipment supported; furnish 1/2-inch male fixture studs where required.
 - 2. Boxes for shall be 1-1/2 inch deep by 4-inch square minimum.
 - 3. Boxes for telecommunications outlets shall be 2-1/2 inch deep by 4 11/16 2-7/8 inch deep by 5-inch square minimum. Provide 2-gang device ring.
 - 4. Concrete Ceiling Boxes: Concrete type.

- B. Nonmetallic Outlet Boxes: NEMA OS 2.
- C. Cast Boxes: NEMA FB 1, Type FD, cast ferrous alloy. Furnish gasketed cover by box manufacturer. Furnish threaded hubs.
- D. Wall Plates for Finished Areas: As specified in Section 26 07 26.
- E. Wall Plates for Unfinished Areas: Furnish gasketed cover.

2.12 PULL AND JUNCTION BOXES

- A. Sheet Metal Boxes: NEMA OS 1, galvanized steel.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify outlet locations and routing and termination locations of raceway prior to rough-in.

3.2 EXISTING WORK

- A. Remove exposed abandoned raceway, including abandoned raceway above accessible ceiling finishes. Cut raceway flush with walls and floors, and patch surfaces.
- B. Remove concealed abandoned raceway to its source.
- C. Disconnect abandoned outlets and remove devices. Remove abandoned outlets when raceway is abandoned and removed. Install blank cover for abandoned outlets not removed.
- D. Maintain access to existing boxes and other installations remaining active and requiring access. Modify installation or provide access panel.
- E. Extend existing raceway and box installations using materials and methods as specified.
- F. Clean and repair existing raceway and boxes to remain or to be reinstalled.

3.3 INSTALLATION

- A. Ground and bond raceway and boxes in accordance with Section 26 05 26.
- B. Fasten raceway and box supports to structure and finishes in accordance with Section 26 05 29.
- C. Identify raceway and boxes in accordance with Section 26 05 53.
- D. Arrange raceway and boxes to maintain headroom and present neat appearance.
- E. Maintain minimum 12" clearance from top of suspended ceiling to bottom of conduits where possible.

- F. Electrical wiring, conduits and boxes may not be installed within 1 ½" of metal deck roofs.

3.4 INSTALLATION - RACEWAY

- A. Raceway routing is shown in approximate locations unless dimensioned. Route to complete wiring system.
- B. Support raceway using coated steel or malleable iron straps, lay-in adjustable hangers, clevis hangers, and split hangers.
- C. Group related raceway; support using conduit rack. Construct rack using steel channel specified in Section 26 05 29; provide space on each for 25 percent additional raceways.
- D. Provide flexible conduit connections of short length to equipment subject to vibration and all motors; twenty-four inches maximum.
- E. Provide flexible conduit for connections to light fixtures above ceilings; six foot maximum.
- F. Do not support raceway with wire or perforated pipe straps. Remove wire used for temporary supports
- G. Do not attach raceway to ceiling support wires or other piping systems.
- H. Do not route flexible conduit through rated or non-rated walls.
- I. Construct wireway supports from steel channel specified in Section 26 05 29.
- J. Route exposed raceway parallel and perpendicular to walls.
- K. Route raceway installed above accessible ceilings parallel and perpendicular to walls.
- L. Maintain clearance between raceway and piping for maintenance purposes.
- M. Maintain 2 inch clearance between raceway running perpendicular to piping with temperatures exceeding 104 degrees F.
- N. Maintain 12 inch clearance between raceway and surfaces with temperatures exceeding 104 degrees F.
- O. Cut conduit square using saw or pipe cutter; de-burr cut ends.
- P. Join nonmetallic conduit using cement as recommended by manufacturer. Wipe nonmetallic conduit dry and clean before joining. Apply full even coat of cement to entire area inserted in fitting. Allow joint to cure for minimum 20 minutes.
- Q. Install conduit hubs or sealing locknuts to fasten conduit to sheet metal boxes in damp and wet locations.
- R. Install no more than equivalent of four 90 degree bends between boxes. Install conduit bodies to make sharp changes in direction, as around beams.

- S. Avoid moisture traps; install junction box with drain fitting at low points in conduit system.
- T. Install fittings to accommodate expansion and deflection where raceway crosses seismic, control or expansion joints.
- U. Install suitable pull string or cord in each empty raceway except sleeves and nipples.
- V. Install suitable caps to protect installed conduit against entrance of dirt and moisture.
- W. Surface Raceway: Install flat-head screws, clips, and straps to fasten raceway channel to surfaces; mount plumb and level. Install insulating bushings and inserts at connections to outlets and corner fittings.
- X. Close ends and unused openings in wireway.
- Y. All conduits installed on this project for Telecommunications Cabling where any portion of the conduit is below slab on grade, shall be cleaned and swabbed dry by the installing contractor. In pathways installed within the building, the Telecommunications Contractor shall not place Telecommunications Cabling into slab on grade conduits containing water. Wet conditions will immediately be reported to the General Contractor or Project Manager upon discovery and cleaned prior to cable installation.

3.5 INSTALLATION - BOXES

- A. Boxes for Concealed Conduits:
 - 1. Flush mounted.
 - 2. Provide raised covers for boxes to suit the wall or ceiling, construction and finish.
- B. Install wall mounted boxes at elevations to accommodate mounting heights as indicated on Drawings.
- C. Adjust box location up to 10 feet prior to rough-in to accommodate intended purpose.
- D. Orient boxes to accommodate wiring devices oriented as specified in Section 26 27 26.
- E. Install pull boxes and junction boxes above accessible ceilings and in unfinished areas only.
- F. In Inaccessible Ceiling Areas: Install outlet and junction boxes no more than 24 inches from ceiling access panel or from removable recessed luminaire.
- G. Locate flush mounting box in masonry wall to require cutting of masonry unit corner only. Coordinate masonry cutting to achieve neat opening.
- H. Do not install flush mounting box back-to-back in walls; install with minimum 6 inches separation.
- I. Provide acoustical rated moldable putty pads for all boxes located in acoustic rated walls.
- J. Provide fire rated moldable putty pads for all boxes located in fire rated walls.

- K. Secure flush mounting box to interior wall and partition studs with screws, not nails. Use box support bracket with far side support leg. Accurately position to allow for surface finish thickness.
- L. Install stamped steel bridges to fasten flush mounting outlet box between studs.
- M. Install flush mounting box without damaging wall insulation or reducing its effectiveness.
- N. Install adjustable steel channel fasteners for hung ceiling outlet box.
- O. Do not fasten boxes to ceiling support wires or other piping systems.
- P. Support boxes independently of conduit.
- Q. Install gang box where more than one device is mounted together. Do not use sectional box.
- R. Install gang box with plaster ring for single device outlets.
- S. Boxes located below eight feet in exposed interior dry locations shall be one piece drawn steel or cast type.

3.6 INTERFACE WITH OTHER PRODUCTS

- A. Install conduit to preserve fire resistance rating of partitions and other elements.
- B. Route conduit through roof openings for piping and ductwork or through suitable roof jack with pitch pocket. Coordinate location with roofing installation specified in other Sections.
- C. Locate outlet boxes to allow luminaires positioned as indicated on Drawings.
- D. Align adjacent wall mounted outlet boxes for switches, thermostats, and similar devices.

3.7 ADJUSTING

- A. Adjust flush-mounting outlets to make front flush with finished wall material.
- B. Install knockout closures in unused openings in boxes.

3.8 CLEANING

- A. Clean interior of boxes to remove dust, debris, and other material.
- B. Clean exposed surfaces and restore finish.

END OF SECTION

SECTION 26 05 53

IDENTIFICATION FOR ELECTRICAL SYSTEMS

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Nameplates.
 - 2. Labels.
 - 3. Engraved coverplates.
 - 4. Wire markers.
 - 5. Conduit markers.
 - 6. Underground Warning Tape.
 - 7. Lockout Devices.

1.2 SUBMITTALS

- A. Product Data:
 - 1. Submit manufacturer's catalog literature for each product required.
 - 2. Submit electrical identification schedule including list of wording, symbols, letter size, color coding, tag number, location, and function.

1.3 QUALITY ASSURANCE

- A. Provide material supplied by a manufacturer producing identification systems
- B. Comply with OSHA, NFPA or local jurisdiction identification requirements for electrical systems.

1.4 ENVIRONMENTAL REQUIREMENTS

- A. Install labels or nameplates only when ambient temperature and humidity conditions for adhesive are within range recommended by manufacturer.

PART 2 PRODUCTS

2.1 NAMEPLATES

- A. Product Description: Laminated three-layer plastic with engraved white letters on contrasting background color.
 - 1. Provide minimum letter height as follows:
 - a. For Fire Alarm Panels , battery cabinets, equipment cabinets, terminal cabinets, control panels and other cabinet enclosed apparatus use 3/8 inch letters to identify equipment designation.

- B. Minimum nameplate thickness: 1/16 inch for signs up to 20 square inches, or 8 inches in length; 1/8 inch thick for larger sizes. Furnish with pre-punched holes for mechanical fasteners.

2.2 BRASS TAGS

- A. Metal tags with die-stamped legend, punched for fastener. 2 inch diameter, 19 gauge.

2.3 LABELS

- A. Labels: Thermal transfer laminated adhesive tape, with 1/8-inch black letters on clear tape cartridge.

2.4 WIRE MARKERS

- A. Description: Self-adhering, pre-printed, machine printable or write-on, self-laminating vinyl wrap around strips. Inscribe blank markers using the printer or pen recommended by the manufacturer for this purpose.
- B. Legend:
 - 1. Power and Lighting Circuits: Branch circuit or feeder number as indicated on Drawings.
 - 2. Control Circuits: Control wire number as indicated on shop drawings.

2.5 CONDUCTOR PHASE MARKERS

- A. Colored vinyl plastic electrical tape, 3/4 inch wide, for identification of phase conductors.

2.6 CONDUIT AND RACEWAY MARKERS

- A. Description: Labels fastened with adhesive.
- B. Color:
 - 1. 208 Volt System: Blue lettering on white background.
 - 2. Fire Alarm System: Red lettering on white background.
- C. Legend:
 - 1. 208 Volt System: 208 VOLTS.
 - 2. Fire Alarm System: FIRE ALARM.

2.7 UNDERGROUND WARNING TAPE

- A. Description: 6 inch wide plastic tape, detectable type, colored yellow or red with suitable warning legend describing buried electrical lines.

2.8 LOCKOUT DEVICES

- A. Lockout Hasps:
 - 1. Anodized aluminum or Reinforced nylon] hasp with erasable label surface; size minimum 7-1/4 x 3 inches.

PART 3 EXECUTION

3.1 PREPARATION

- A. Degrease and clean surfaces to receive adhesive for identification materials.

3.2 EXISTING WORK

- A. Install identification on existing equipment to remain in accordance with this section.
- B. Install identification on unmarked existing equipment.
- C. Replace lost nameplates, labels and markers.

3.3 INSTALLATION

- A. Install identifying devices after completion of painting.
- B. Nameplate Installation:
 - 1. Install nameplate parallel to equipment lines.
 - 2. Secure nameplate to equipment front using rivets.
- C. Nameplates for signal systems equipment and devices are to be black except as follows:
 - 1. Fire alarm and life safety - White with red letters
 - 2. Security/Card access/CCTV systems - Green with white letters
 - 3. Building management system (BMS): White with black letters
- D. Label Installation:
 - 1. Install label for identification of individual control device stations, receptacles.
 - 2. Locate the top of label 1/2 inch below the top edge of coverplates.
 - 3. Install label for multi-outlet assembly receptacles.
 - 4. Install labels for permanent adhesion.
- E. Inscribed Device Cover plate:
 - 1. General: Lettering type shall be Helvetica, 12 point or 1/8" high. Color of characters shall be black. Locate the top of the inscription 1/2" below the top edge of the coverplate. Inscription shall be centered and square with coverplate.
 - 2. Provide inscribed coverplates for devices as outlined below:
 - a. Receptacles.
 - b. Outlets in surface raceways.
 - c. Multi-ganged (four or more) switch arrangement.
 - d. Special purpose switches, i.e. projection screens, shades, exhaust fans, etc.
- F. Wire Marker Installation:
 - 1. Install wire marker for each conductor at panel gutters, pull boxes, outlet and junction boxes, and each load connection.

2. Provide colored plastic phase tape in half-lapped turns for a distance of 3 inches from terminal points and in boxes where splices or taps are made.

G. Junction box identification:

1. Color code and identify all junction boxes located above suspended ceilings and below ceilings in non-public areas.
2. Use finish paint suitable for use on metal surfaces.
3. Boxes shall be identified with permanent felt tip marker on cover indicating panel and circuit numbers. Paint junction box covers using the color coding listed below.
 - a. 208/120 Volt System: Blue.
 - b. Fire Alarm System: Red.

3.4 Firestopping

- A. Firestopping shall be labeled at each location where installed, on each side of the penetrated fire barrier, and within 12 in. of the firestopping material.

END OF SECTION

SECTION 26 27 16

ELECTRICAL CABINETS AND ENCLOSURES

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes hinged cover enclosures, cabinets, terminal blocks, and accessories.
- B. Related Sections:
 - 1. Section 26 05 26 - Grounding and Bonding for Electrical Systems.
 - 2. Section 26 05 33 - Raceway and Boxes for Electrical Systems.
 - 3. Section 27 05 33 - Conduits and Backboxes for Communications Systems.
 - 4. Section 28 05 33 - Conduits and Backboxes for Electronic Safety and Security.

1.2 REFERENCES

- A. National Electrical Manufacturers Association:
 - 1. NEMA 250 - Enclosures for Electrical Equipment (1000 Volts Maximum).
 - 2. NEMA ICS 4 - Industrial Control and Systems: Terminal Blocks.

1.3 SUBMITTALS

- A. Product Data: Submit manufacturer's standard data for enclosures, cabinets, and terminal blocks.
- B. Manufacturer's Installation Instructions: Submit application conditions and limitations of use stipulated by product testing agency specified under Regulatory Requirements. Include instructions for storage, handling, protection, examination, preparation, and installation of product.

1.4 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing Products specified in this section with minimum three years experience.

1.5 EXTRA MATERIALS

- A. Furnish two of each key.

PART 2 PRODUCTS

2.1 HINGED COVER ENCLOSURES

- A. Construction: NEMA 250, Type 1 steel enclosure.
- B. Covers: Continuous hinge, held closed by flush latch operable by screwdriver, key, hasp and staple for padlock.

- C. Furnish interior metal panel for mounting terminal blocks and electrical components; finish with white enamel.
- D. Enclosure Finish: Manufacturer's standard enamel.

2.2 CABINETS

- A. Boxes: Galvanized steel [with removable end walls].
- B. Box Size: as required.
- C. Fronts: Steel, flush, surface type with, concealed trim clamps, screw cover front, door with concealed hinge, and flush lock.
- D. Furnish metal barriers to form separate compartments wiring of different systems and voltages.
- E. Furnish accessory feet for free-standing equipment.

2.3 TERMINAL BLOCKS

- A. Terminal Blocks: NEMA ICS 4.
- B. Power Terminals: Unit construction type with closed back and tubular pressure screw connectors, rated 600 volts.
- C. Signal and Control Terminals: Modular construction type, suitable for channel mounting, with tubular pressure screw connectors, rated 300 volts.
- D. Furnish ground bus terminal block, with each connector bonded to enclosure.

PART 3 EXECUTION

3.1 EXISTING WORK

- A. Remove abandoned cabinets and enclosures, including abandoned cabinets and enclosures above accessible ceiling finishes. Patch surfaces.
- B. Maintain access to existing cabinets and enclosures and other installations remaining active and requiring access. Modify installation or provide access panel.
- C. Extend existing cabinets and enclosures using materials and methods compatible with existing electrical installations, or as specified.
- D. Clean and repair existing cabinets and enclosures to remain or to be reinstalled.

3.2 INSTALLATION

- A. Install enclosures and boxes plumb. Anchor securely to wall and structural supports at each corner in accordance with Section 26 05 29.

B. Install cabinet fronts plumb.

3.3 CLEANING

A. Clean electrical parts to remove conductive and harmful materials.

B. Remove dirt and debris from enclosure.

C. Clean finishes and touch up damage.

END OF SECTION

SECTION 26 27 26

WIRING DEVICES

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes wall switches; wall dimmers; receptacles; multioutlet assembly; and device plates and decorative box covers.
- B. Related Sections:
 - 1. Section 26 05 33 - Raceway and Boxes for Electrical Systems: Outlet boxes for wiring devices.

1.2 REFERENCES

- A. National Electrical Manufacturers Association:
 - 1. NEMA WD 1 - General Requirements for Wiring Devices.
 - 2. NEMA WD 6 - Wiring Devices-Dimensional Requirements.

1.3 SUBMITTALS

- A. Product Data: Submit manufacturer's catalog information showing dimensions, colors, and configurations.
- B. All switches, receptacles and device plates throughout project shall be from the same manufacturer unless otherwise specified.

1.4 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum three years experience.

1.5 EXTRA MATERIALS

- A. Furnish two of each style, size, and finish wall plate.

PART 2 PRODUCTS

2.1 RECEPTACLES

- A. Manufacturers:
 - 1. Pass & Seymour
 - 2. Hubbell
 - 3. Leviton
 - 4. Cooper
 - 5. Approved equal

- B. Product Description: Specification Grade, NEMA WD 1, Heavy-duty general use receptacle. Grounding system shall be all brass and integral to the wrap around mounting strap. Combination head brass grounding screw. Brass alloy triple wipe contacts shall grip both sides of plug prongs.
- C. Device Body: White thermoplastic rectangular design with smooth] face. Red for devices connected to Emergency circuits.
- D. Wiring: Back and side wired. Back wiring with clamp type terminals suitable for stranded or solid wire.
- E. Configuration: NEMA WD 6, type as indicated on Drawings.
- F. Convenience Receptacle: Duplex type 5-20.
- G. Dedicated Receptacle: Duplex type 5-20
- H. GFCI Receptacle: Convenience receptacle with integral ground fault circuit interrupter to meet regulatory requirements.
- I. Tamper Resistant Receptacle: Convenience receptacle with internal spring loaded mechanical shutter. Type 5-20.
- J. Special Purpose Receptacles: Type and rating and number of poles indicated or required for the anticipated purpose.

2.2 WALL PLATES

- A. Decorative Cover Plate: White, nylon smooth thermoplastic and White factory painted stainless steel.
- B. Jumbo Cover Plate: White, nylon smooth thermoplastic 430 stainless steel and White factory painted stainless steel.
- C. Mounting Screws: Stainless steel, painted head to match plate finish.
- D. Surface cover plate in dry locations: Galvanized steel. Four inch square, raised 1/2" for surface mounted switches and receptacles.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify outlet boxes are installed at proper height.
- B. Verify wall openings are neatly cut and completely covered by wall plates.
- C. Verify branch circuit wiring installation is completed, tested, and ready for connection to wiring devices.

3.2 PREPARATION

- A. Clean debris from outlet boxes.

3.3 EXISTING WORK

- A. Disconnect and remove abandoned wiring devices.
- B. Modify installation to maintain access to existing wiring devices to remain active.
- C. Clean and repair existing wiring devices to remain or to be reinstalled.

3.4 INSTALLATION

- A. Install devices plumb and level.
- B. Mounting heights shown shall be measured from finished floor to the center of the outlet box.
- C. Install switches with OFF position down.
- D. Install receptacles with grounding pole on bottom.
- E. Connect wiring device grounding terminal to outlet box with bonding jumper and branch circuit equipment grounding conductor.
- F. Install decorative plates on switch, receptacle, and blank outlets in finished areas.
- G. Install Hospital Grade receptacles in all areas defined as Patient Care Areas.
- H. Terminate ground wire at device where ground wire is provided within the raceway system.
- I. Carefully strip thermoplastic wire to length and make-up terminal connection as recommended by the device manufacturer.
- J. Secure device to outlet box with proper screws.
- K. Use jumbo size plates for outlets installed in masonry walls.
- L. Install galvanized steel plates on outlet boxes and junction boxes in unfinished areas, above accessible ceilings, and on surface mounted outlets.
- M. Install weather resistant receptacle with GFCI protection in wet or damp locations.

3.5 LABELS AND INSCRIPTIONS:

- A. Identify receptacle cover plate with panel and branch circuit number (for example L2A-3). Engrave and fill with 1/8" high black letters.

3.6 INTERFACE WITH OTHER PRODUCTS

- A. Coordinate locations of outlet boxes provided under Section 26 05 33 to obtain mounting heights as indicated on drawings.

- B. Coordinate installation of wiring devices with underfloor raceway service fittings provided under Section 26 05 39.
- C. Coordinate installation of wiring devices with floor box service fittings provided under Section 26 05 34.

3.7 FIELD QUALITY CONTROL

- A. Inspect each wiring device for defects.
- B. Operate each wall switch with circuit energized and verify proper operation.
- C. Verify each receptacle device is energized.
- D. Test each receptacle device for proper polarity and grounding.
- E. Test each GFCI receptacle device for proper operation.

3.8 ADJUSTING

- A. Adjust devices and wall plates to be flush and level.

3.9 CLEANING

- A. Clean exposed surfaces to remove splatters and restore finish.

END OF SECTION

SECTION 28 31 00

FIRE DETECTION AND ALARM

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes fire alarm control panels, manual fire alarm stations, automatic smoke and heat detectors, fire alarm signaling appliances, and auxiliary fire alarm equipment and power and signal wire and cable.
- B. All references to manufacturer's model numbers and other pertinent information herein is intended to establish minimum standards of performance, function and quality. Equivalent equipment (compatible UL listed) from other manufacturers may be substituted for the specified equipment as long as the minimum standards are met.
- C. For equipment other than that specified, the contractor shall supply proof that such substitute equipment equals or exceeds the features, functions, performance, and quality of the specified equipment.

1.2 REFERENCES

- A. National Fire Protection Association:
 - 1. NFPA 72 - National Fire Alarm Code.
 - 2. NFPA 262 - Standard Method of Test for Flame Travel and Smoke of Wires and Cables for Use in Air-Handling Spaces.

1.3 SYSTEM DESCRIPTION

- A. This specification includes the furnishing, installation, connection, and testing of a PC based graphical facilities monitoring system; including Underwriters Laboratories (UL) listed application software and hardware complete and ready for operation.
- B. The basic system shall be Underwriters Laboratories (UL) listed.
- C. The system shall comply with requirements of NFPA Standard No. 72 for Proprietary Signaling System Receiving Unit except as modified and supplemented by this specification.
- D. The system and associated equipment as specified herein shall be manufactured 100% by a single U.S. manufacturer (or division thereof).
 - 1. The manufacturer shall be of the highest caliber and quality.
 - 2. An ISO 9001 certified company shall manufacture the system.

- E. Alarm Sequence of Operation: Actuation of initiating device causes the following system operations:
 - 1. Local fire alarm signaling devices sound and display with march time signal.
 - 2. Zone-coded signal transmits to municipal connection, remote station equipment, central station.
 - 3. Location of alarm zone indicates on fire alarm control panel and on remote annunciator panel.
 - 4. Signal transmits to building smoke removal system.
 - 5. Signal transmits to building elevator control panel, initiating return to main floor or alternate floor and lockout for fire service.
 - 6. Signal transmits to building mechanical controls, shutting down fans and operating dampers.
 - 7. Signal transmits to release door hold-open devices.
 - 8. Signal releases magnetic door hold opens.
 - 9. Signal releases electric door locks.
- F. Drill Sequence of Operation: Manual drill function causes alarm mode sequence of operation.
- G. Trouble Sequence of Operation: System or circuit trouble causes the following system operations:
 - 1. Visual and audible trouble alarm indicates by zone at fire alarm control panel.
 - 2. Visual and audible trouble alarm indicates at remote annunciator panel.
 - 3. Trouble signal transmits to remote station, central station.

1.4 SCOPE

- A. A PC based graphical facilities monitoring system shall be installed in accordance to the project specifications and drawings.
- B. The PC based graphical facilities monitoring system shall include, but not be limited to, optional touch screen or LCD wide screen monitor, one or more PC based graphical workstations, all input/output devices, network communications media, control equipment, auxiliary control devices, power supplies, and wire / fiber optic media as shown on the drawings and specified herein.
- C. A supervised interface to fire alarm control panels and shall be made available.
- D. The system shall employ an advanced technology network to monitor and control various fire, security and other facility information over a network.
- E. The system shall include an interface to digital alarm communicator receivers for wide area network monitoring.
- F. The system shall include a device that allows remote viewing of the system via the Internet or an intranet.
- G. The system shall include a redundant interface for network for survivability.

- H. The system shall allow a mixture of different technologies and manufacturers' equipment to operate on the same network and provide the operator with a consistent look and operation for all monitored equipment.
- I. The system shall support a variety of topologies and media and shall provide an industry standard open architecture transport layer protocol.
- J. Using standard RS-232 ports on existing and future monitoring and control systems used by the facility, the system shall connect to and interpret status change data transmitted from the ports and provide graphic annunciation, control, history logging and reporting as specified herein.
- K. The system shall be electrically supervised and monitor the integrity of all conductors.
- L. The system shall provide E-Mail functions capability to send system information via an email server to an email account.
- M. The system shall utilize Boolean logic for automatic event response.
- N. The system shall have the facility to page directly from the workstation to any DVC installed on the network.

1.5 SUBMITTALS

- A. Section 01 33 00 - Submittal Procedures: Submittal procedures.
- B. Submit the following information with Shop Drawings:
 - 1. Sufficient information clearly presented shall be included to determine compliance with drawings and specifications.
 - 2. Include manufacturer's names, model numbers, ratings, power requirements, equipment layout, device arrangement, complete wiring point-to-point diagrams, and conduit layouts.
 - 3. Show annunciator layout, configurations, and terminations.
 - 4. Floor plans showing the entire project area, all fire alarm devices and conduit and wire runs. The room number and use must be indicated for all rooms or spaces. Label all fire alarm initiating and notification devices with device address, and label all conduit runs with the type, size, and number of conductors with the conduit.
 - 5. The floor plan must indicate the location and type for all fire rated walls and partitions.
 - 6. Single Line Riser Diagram.
 - 7. Point-to-Point details that indicate the interconnections between the items of equipment.
 - 8. Technical data showing exact types and quantity of all fire alarm devices. Highlight or otherwise identify specific components on catalog cut sheets. All equipment drawing alarm or supervisory current shall have documentation of the current draw highlighted in the submittal information.

9. Battery capacity calculations: Complete battery calculations showing all the electrical requirements of the entire fire alarm system, including the power consumption of the individual devices, both in alarm and supervisory modes. Include battery calculation for door hold open devices systems. Battery capacity calculations shall be a minimum of 125% of the calculated requirement.
 10. Voltage drop calculations which shall be point to point on indicating device circuits. Voltage drop shall not exceed 10%.
 11. Power supply rating justification showing power requirements for each of the system power supplies. Power supplies shall be sized to furnish the total connected load in a worst-case condition plus 25% spare capacity.
 12. The title page of the drawings shall include an accurate legend of symbols for all fire alarm devices being installed. In addition, the legend must include the quantity, model number and State Fire Marshal listing number for each device.
 13. Annunciator text message and device address for each device shown on submittals.
 14. Indicate that the control panel has 25% capacity left for expansion of modules, initiating circuits, initiating point capacity on signaling circuits, alarm circuits and on door release circuits.
 15. Elevation drawing that shows all fire alarm equipment enclosures and raceways on the wall where they will be installed. Panels must not be higher than 6' and system status displays should be at eye level. No equipment or raceways may be located under a cabinet containing batteries.
 16. A wire list that shows the wire type, gauge and conductor count for all wires and cables.
 17. Elevation details for manual pull stations and visual alarm signaling devices.
 18. Details on support and anchorage of any fire alarm equipment weighing over 20 pounds.
 19. Details and listing number of through penetration fire stop system.
 20. Provide sequence of operations to show how system will react to the activation of each type of device.
- C. Product Data: Submit catalog data showing electrical characteristics and connection requirements.
- D. Submit California State Fire Marshal listing sheet with current expiration date for each component.
- E. Test Reports: Indicate procedures and results for specified field testing and inspection.
- F. Manufacturer's Field Reports: Indicate activities on site, adverse findings, and recommendations.

1.6 CLOSEOUT SUBMITTALS

- A. Section 01 70 00 - Execution and Closeout Requirements: Closeout procedures.
- B. Project Record Documents: Provide a minimum of 6 copies of full-size Record Drawings with records of actual locations of fire alarm equipment. Include a complete sequence of

operation matrix, symbol lists with CSFM listings, final battery and voltage drop calculations, riser and wiring diagrams and wire schedules.

- C. Provide copies of Record Drawings in a USB Drive in CAD and PDF format.
- D. Operation and Maintenance Data: Submit manufacturer's standard operating and maintenance manuals and instructions.

1.7 QUALITY ASSURANCE

- A. Provide wiring materials located in plenums with peak optical density not greater than 0.5, average optical density not greater than 0.15, and flame spread not greater than 5 feet (1.5 m) when tested in accordance with NFPA 262.
- B. Perform Work in accordance with State & Municipality standard.
- C. Maintain one copy of each document on site.

1.8 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum three years documented experience, and with service facilities within 50 miles of project.
- B. Installer: Certified fire alarm installer with service facilities within 50 miles of Project.
- C. Contractor approved for and installing the work shall have on staff NICET minimum level 2 technicians.
- D. Design fire alarm under direct supervision of Professional Engineer experienced in design of this Work and licensed in State of California.

1.9 MAINTENANCE SERVICE

- A. Section 01 70 00 - Execution and Closeout Requirements: Maintenance service.
- B. Furnish service and maintenance of fire alarm equipment for one year from Date of Completion.

1.10 MAINTENANCE MATERIALS

- A. Section 01 70 00 - Execution and Closeout Requirements: Spare parts and maintenance products.
- B. Furnish ten manual station break-glass rods.
- C. Furnish six keys of each type.

1.11 EXTRA MATERIALS

- A. Section 01 70 00 - Execution and Closeout Requirements: Spare parts and maintenance products.
- B. Furnish ten of each type of automatic smoke detector without base.

1.12 APPLICABLE PUBLICATIONS

- A. The publications listed below form a part of this specification. The publications are referenced in text by the basic designation only.
- B. NFPA No. 70 – National Electric Code (NEC).
- C. NFPA No. 72-2022 – National Fire Alarm Code.
- D. UL No. 50 – Cabinets and Boxes.
- E. UL No. 294 – Access Control System Units.
- F. UL No. 864 – Control Units for Fire Protective Signaling Systems.
- G. UL No. 1076 – Proprietary Burglar Alarm Units and Systems.
- H. UL No. 1481 – Power Supplies for Fire Protective Signaling Systems.
- I. Local and State Building Codes.
- J. City of Sacramento High Rise Requirements chapter 15.100.
- K. All requirements of the Authority Having Jurisdiction (AHJ).

1.13 APPROVALS:

- A. The system shall have proper listing and/or approval from the following nationally recognized agencies:
 - 1. UL Underwriters Laboratories Inc
 - 2. FM Factory Mutual
 - 3. CSFM California State Fire Marshal
 - 4. Seismic Certification per 15.100.730 City High Rise.
- B. The Fire Alarm Control Panel and all transponders shall meet the modular listing requirements of Underwriters Laboratories, Inc. Each subassembly, including all printed circuits, shall include the appropriate UL modular label. This includes all printed circuit board assemblies, power supplies, and enclosure parts. Systems that do not include modular labels may require return to the factory for system upgrades and are not acceptable.

1.14 1.4 GUARANTY

- A. All work performed and all material and equipment furnished under this contract shall be free from defects and shall remain so for a period of at least one (1) year from the date of acceptance. The full cost of maintenance, labor, and materials required to correct any defect during this one-year period shall be included in the submittal bid.

PART 2 PRODUCTS

2.1 CONTROL PANEL

- A. Manufacturers:
 - 1. NOTIFIER
 - 2. Edwards
 - 3. Siemens
 - 4. Approved equal.
- B. Product Description: Modular fire alarm control panel with surface wall-mounted enclosure.
- C. Power supply: Adequate to serve control panel modules, remote detectors, remote annunciators, smoke dampers, relays, and alarm signaling devices. Battery shall have sufficient capacity to power the fire alarm system for not less than twenty-four hours plus 5 minutes of alarm upon a normal AC power failure.
- D. System Supervision: Component or power supply failure places system in trouble mode.
- E. Initiating Device Circuits: Supervised zone module with alarm and trouble indication; occurrence of single ground or open condition places circuit in trouble mode but does not disable circuit from initiating alarm.
- F. Indicating Appliance Circuits: Supervised march time signal module, sufficient for signal devices connected to system; occurrence of single ground or open condition places circuit in trouble mode but does not disable circuit from signaling alarm.

2.2 WORKSTATION

- A. The system shall operate on no less than an IBM compatible UL listed Intel Quad Core processor operating at 2.4 GHz on the Microsoft® Windows® 10 64 bit OS platform.
- B. The workstation shall be an industrial grade computer listed for UL Standards 864 (Control Units for Fire-Protective Signaling Systems) under category UUKL (Smoke Control Equipment). The workstation shall be capable of annunciation and control of all fire detection and smoke control points.
- C. The workstation shall have: no less than 16 Gigabytes of RAM, Solid-State Hard Drive with no less than 240 Gigabytes of storage space, a minimum of 64 megabytes of video RAM, internal supervisory CPU watchdog board with audible annunciator, 100 Base-T

Ethernet NIC card, a 104 key keyboard, and a mouse type pointing device with a center wheel.

- D. The workstation shall come equipped with all necessary gateway modules to allow connection to the network(s) it monitors as standard equipment. All workstations shall support Ethernet communications when multiple workstations are required.
- E. The workstation shall support dual SVGA monitors and be supplied with a 22" or 42" flat screen LCD monitor with integrated speakers or an optional touch screen monitor.
- F. The computer shall be capable of networking to additional computers and these computers shall be capable of operating as workstations and/or gateways for local area or wide area networks.
- G. Alarm annunciation shall appear on all workstations and may be silenced at each local workstation.
- H. Only one workstation and operator shall be in command of the system for global alarm acknowledgement at any time.

2.3 PRINTER

- A. Support one or more Windows® compatible printers to be located and connected each workstation for graphics and report printing.
- B. Support one model PRN-7, 80-column dot matrix tractor feed industrial grade printer for event and date-stamped printouts of off-normal events and status changes per workstation.

2.4 MANUAL FIRE ALARM STATIONS

- A. Manufacturers:
 - 1. NOTIFIER
 - 2. Edwards
 - 3. Siemens
 - 4. Approved equal.
- B. Product Description: Manual single-action station with break-glass rod.
- C. Mounting: Semi-Flush & Surface.
- D. Type: Coded
- E. Backbox: Manufacturer's standard.

2.5 CEILING SMOKE DETECTOR

- A. Manufacturers:

1. NOTIFIER
 2. Edwards
 3. Siemens
 4. Approved equal.
- B. Product Description: NFPA 72, photoelectric type ceiling smoke detector with the following features:
1. Adjustable sensitivity.
 2. Plug-in base.
 3. Auxiliary relay contact.
 4. Integral thermal element rated 135 degrees F.
 5. Visual indication of detector actuation.
- C. Mounting: 4 inch outlet box.
- D. Furnish two-wire detector with common, four-wire detector with separate power supply and signal circuits.

2.6 DUCT-MOUNTED SMOKE DETECTOR

- A. Manufacturers:
1. NOTIFIER
 2. Edwards
 3. Siemens
 4. Approved equal.
- B. Product Description: NFPA 72, ionization type or intelligent photoelectric type with the following features:
1. Auxiliary SPDT relay contact.
 2. Key-operated normal-reset-test switch.
 3. Duct sampling tubes extending width of duct.
 4. Visual indication of detector actuation.
 5. Duct-mounted housing.
- C. Furnish two-wire detector with common or four-wire detector with separate power supply and signal circuits.

2.7 ALARM HORN/STROBE

- A. Manufacturers:
1. NOTIFIER
 2. Edwards
 3. Siemens
 4. Approved equal.
- B. Product Description: NFPA 72, surface, flush projector type fire alarm horn with the following features:
1. Sound Rating: 87 dB at 10 feet.
 2. Mounting: ADA Compliant.

2.8 ALARM STROBE

- A. Manufacturers:
 - 1. NOTIFIER
 - 2. Edwards
 - 3. Siemens
 - 4. Approved equal.

2.9 REMOTE ANNUNCIATOR

- A. Manufacturers:
 - 1. NOTIFIER
 - 2. Edwards
 - 3. Siemens
 - 4. Approved equal.
- B. Product Description: Supervised remote, Remote annunciator including audible and visual indication of fire alarm by zone, and audible and visual indication of system trouble.
- C. Mounting: Factory mounted in flush, surface, or wall-mounted enclosure.

2.10 DOOR RELEASE

- A. Manufacturers:
 - 1. NOTIFIER
 - 2. Edwards
 - 3. Siemens
 - 4. Approved equal.
- B. Product Description: Magnetic door holder with integral diodes to reduce buzzing.
- C. Coil voltage: 24 VDC

2.11 CONDUIT AND WIRE

- A. Conduit:
 - 1. Conduit shall be in accordance with The National Electrical Code (NEC), local and state requirements.
 - 2. All wiring shall be installed in conduit or raceway. Conduit fill shall not exceed 40 percent of interior cross sectional area where three or more cables are contained within a single conduit.
 - 3. Cable must be separated from any open conductors of Power, or Class 1 circuits, and shall not be placed in any conduit, junction box or raceway containing these conductors, as per NEC Article 760-29.

4. Wiring for 24 volt control, alarm notification, emergency communication and similar power-limited auxiliary functions may be run in the same conduit as initiating and signaling line circuits. All circuits shall be provided with transient suppression devices and the system shall be designed to permit simultaneous operation of all circuits without interference or loss of signals.
5. Conduit shall not enter the fire alarm control panel, or any other remotely mounted control panel equipment or backboxes, except where conduit entry is specified by the FACP manufacturer.
6. Wiring & fiber optics shall be in accordance with local, state and national codes (e.g., NEC Article 760) and as recommended by the manufacturer of the fire alarm system. Number and size of conductors & fiber optics shall be as recommended by the fire alarm system manufacturer.
7. All communication wire to nodes or to computers shall consist of minimum manufacturer's recommendations and approved wire specification supporting speeds of 78Kps to 10mB/sec communications.
8. Conduit shall be 3/4 inch minimum.

B. Wire:

1. All fire alarm system wiring must be new.
2. Wiring shall be in accordance with local, state and national codes (e.g., NEC Article 760) and as recommended by the manufacturer of the fire alarm system. Number and size of conductors shall be as recommended by the fire alarm system manufacturer, but not less than 18 AWG (1.02 mm) for initiating device circuits and signaling line circuits, and 14 AWG (1.63 mm) for notification appliance circuits.
3. All wire and cable shall be listed and/or approved by a recognized testing agency for use with a protective signaling system.
4. The system shall permit the use of IDC and NAC wiring in the same conduit with the multiplex communication loop.
5. All field wiring shall be completely supervised. In the event of a primary power failure, disconnected standby battery, removal of any internal modules, or any open circuits in the field wiring; a trouble signal will be activated until the system and its associated field wiring are restored to normal condition.
6. All voice speaker and telephone circuits shall use twisted/shielded pair to eliminate cross talk.
7. All notification appliance circuits installed in vertical risers and to the point of entry from each zone into the control unit shall be wired with a 2-hour rated cable assembly.
8. Product Description: Non-power limited fire-protective signaling cable, copper conductor, 150 volt insulation rated 60 degrees C. Power limited fire-protective signaling cable, copper conductor, 300 volts insulation rated 105 degrees C.
9. Cable Located Exposed in Plenums: Power limited fire-protective signaling cable classified for fire and smoke characteristics, copper conductor, 300 volts insulation rated 105 degrees C, suitable for use in air handling ducts, hollow spaces used as ducts, and plenums.

C. Terminal Boxes, Junction Boxes and Cabinets:

1. All boxes and cabinets shall be UL listed for their intended purpose.

- D. Initiating circuits shall be arranged to serve like categories (manual, smoke, waterflow). Mixed category circuitry shall not be permitted except on signaling line circuits connected to intelligent reporting devices.
- E. The fire alarm control panel shall be connected to a separate dedicated branch circuit, maximum 20 amperes. This circuit shall be labeled at the main power distribution panel as FIRE ALARM. Fire alarm control panel primary power wiring shall be 12 AWG. The control panel cabinet shall be grounded securely to either a cold-water pipe or grounding rod.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Section 01 30 00 - Administrative Requirements: Coordination and project conditions.
- B. Verify products and systems receiving devices are ready for installation.

3.2 EXISTING WORK

- A. Remove exposed abandoned fire alarm wiring, including abandoned wiring above accessible ceiling finishes. Cut cable flush with walls and floors, and patch surfaces.
- B. Disconnect and remove all the existing fire alarm equipment after full acceptance of the new fire alarm system.
- C. Maintain access to existing fire alarm equipment and other installations remaining active and requiring access. Modify installation or provide access panel.
- D. Clean and repair existing fire alarm equipment to remain or to be reinstalled.

3.3 INSTALLATION

- A. Installation shall be in accordance with the NEC, NFPA 72, local and state codes, as shown on the drawings, and as recommended by the major equipment manufacturer.
- B. All conduit, junction boxes, conduit supports and hangers shall be concealed in finished areas and may be exposed in unfinished areas. Smoke detectors shall not be installed prior to the system programming and test period. If construction is ongoing during this period, measures shall be taken to protect smoke detectors from contamination and physical damage.
- C. Install manual station with operating handle 42 inches, nor more than 48 inches above the finished floor.
- D. Install audible and visual signal devices 7 feet 6 inches above floor.

- E. Mount outlet box for electric door holder to withstand 80 pounds pulling force.
- F. Connect conduit and wire to door release devices, sprinkler flow switches, sprinkler valve tamper switches, fire suppression system control panels, and duct smoke detectors.
- G. Automatic Detector Installation: Conform to NFPA 72.
- H. Install engraved plastic nameplates in accordance with Section 26 05 53.
- I. Ground and bond fire alarm equipment and circuits in accordance with Section 26 05 26.

3.4 TYPICAL OPERATION:

- A. Actuation of any manual station, smoke detector heat detector or water flow switch shall cause the following operations to occur unless otherwise specified:
 - 1. Activate all programmed speaker circuits.
 - 2. Actuate all strobe units until the panel is reset.
 - 3. Light the associated indicators corresponding to active speaker circuits.
 - 4. Release all magnetic door holders to doors to adjacent zones on the floor from that the alarm was initiated.
 - 5. Return all elevators to the primary or alternate floor of egress.
 - 6. A smoke detector in any elevator lobby shall, in addition to the above functions, return all elevators to the primary or alternate floor of egress.
 - 7. Smoke detectors in the elevator machine room or top of hoistway shall return all elevators in to the primary or alternate floor. Smoke detectors or heat detectors installed to shut down elevator power shall do so in accordance with ANSI A17.1 requirements and be coordinated with the electrical contractor.
 - 8. Duct type smoke detectors shall, in addition to the above functions shut down the ventilation system or close associated control dampers as appropriate.
 - 9. Activation of any sprinkler system low pressure switch, or valve tamper switch shall cause a system supervisory alarm indication.
- B. HVAC/Smoke Control System Operation:
 - 1. On/Auto/Off switches and status indicators (LEDS) shall be provided for monitoring and manual control of each fan, damper, HVAC control unit, stairwell pressurization fan, and smoke exhaust fan. To ensure compliance the units supplied shall meet the following UL categories : UUKL, PAZX, UDTZ, QVAX as well as the requirements of NFPA 90A, HVAC, and NFPA 92A & 92B, Smoke Control. The control System shall be field programmable for either 90A operation or 92A/B operation to allow for future use and system expansion.
 - 2. The OFF LED shall be Yellow, the ON LED shall be green, the Trouble/Fault LED shall be Amber/Orange for each switch. The Trouble/Fault indicator shall indicate a trouble in the control and/or monitor points associated with that switch. In addition, each group of eight switches shall have two LEDS and one momentary switch which allow the following functions: An Amber LED to indicate an OFF-NORMAL switch position, in the ON or OFF position; A Green LED to indicate ALL AUTO switch position; A Local Acknowledge/Lamp Test momentary switch.

3. Each switch shall have the capability to monitor and control two addressable inputs and two addressable outputs. In all modes, the ON and OFF indicators shall continuously follow the device status not the switch position. Positive feedback shall be employed to verify correct operation of the device being controlled. Systems that indicate on/off/auto by physical switch position only are not acceptable.
4. All HVAC switches (i.e., limit switches, vane switches, etc.) shall be provided and installed by the HVAC contractor.
5. It shall be possible to meet the requirements mentioned above utilizing wall mounted custom graphic annunciators if the project requires such.

3.5 TEST:

- A. Provide the service of a competent, factory-trained engineer or technician authorized by the manufacturer of the fire alarm equipment to technically supervise and participate during all of the adjustments and tests for the system.
 1. Before energizing the cables and wires, check for correct connections and test for short circuits, ground faults, continuity, and insulation.
 2. Close each sprinkler system flow valve and verify proper supervisory alarm at the FACP.
 3. Verify activation of all flow switches.
 4. Open initiating device circuits and verify that the trouble signal actuates.
 5. Open signaling line circuits and verify that the trouble signal actuates.
 6. Open and short notification appliance circuits and verify that trouble signal actuates.
 7. Ground initiating device circuits and verify response of trouble signals.
 8. Ground signaling line circuits and verify response of trouble signals.
 9. Ground notification appliance circuits and verify response of trouble signals.
 10. Check presence and audibility of tone at all alarm notification devices.
 11. Check installation, supervision, and operation of all intelligent smoke detectors during a walk test.
 12. Each of the alarm conditions that the system is required to detect should be introduced on the system. Verify the proper receipt and the proper processing of the signal at the FACP and the correct activation of the control points.
 13. When the system is equipped with optional features, the manufacturer's manual should be consulted to determine the proper testing procedures. This is intended to address such items as verifying controls performed by individually addressed or grouped devices, sensitivity monitoring, verification functionality and similar.

3.6 FINAL INSPECTION:

- A. At the final inspection a factory trained representative of the manufacturer of the major equipment shall demonstrate that the systems function properly in every respect.

3.7 INSTRUCTION:

- A. Provide instruction as required for operating the system. Hands-on demonstrations of the operation of all system components and the entire system including program changes and functions shall be provided.
- B. The contractor and/or the systems manufacturer's representatives shall provide a typewritten "Sequence of Operation."
- C. Training:
 - 1. Manufacturer shall provide factory authorized application engineer to train owner personnel in the operation and programming of the fire control system. Upon completion of the installation, the manufacturer's factory authorized technician shall provide training for the facility operating personnel covering operation and maintenance of the equipment provided. The training program shall be not less than two 2 hour sessions in duration and the operation and maintenance manuals shall be available for use during the training sessions. Training date shall be coordinated with the State Representative.

END OF SECTION