



PROJECT MANUAL

FOR

INTERIOR IMPROVEMENTS AT DENT E.S. AND EL PORTAL M.S.

For Escalon Unified School District

OWNER:

**Escalon Unified School District
1520 E. Yosemite Avenue
Escalon, CA 95320
(209) 838-3591**

ARCHITECT:

**TPH Architects
519 McHenry Avenue
Modesto, CA 95354
(209) 571-2232**

BID SET

INTERIOR IMPROVEMENTS AT DENT E.S. AND EL PORTAL M.S.
FOR
ESCALON UNIFIED SCHOOL DISTRICT

TABLE OF CONTENTS

DIVISION 0 - CONDITIONS OF THE CONTRACT

Notice to Bidders	2 pages
Instructions to Bidders	11 pages
Bid Bond	1 page
Non-Collusion Declaration	1 page
Payment Bond	2 pages
Performance Bond	2 pages
Bid Form	4 pages
General Conditions	80 pages
Construction Contract	4 pages
Workers Compensation	1 page
Declaration Regarding Employee Fingerprinting and Criminal Background Check	1 page
Asbestos Free Form	2 pages
Drug Free Form	1 page
Recycle Form	1 page

SPECIFICATIONS

DIVISION 1 - GENERAL REQUIREMENTS

012500 Substitutions	6 pages
012613 Contractor's Request for Information	3 pages
013113 Coordination	3 pages
013213 Construction Schedules	3 pages
013300 Submittals	3 pages
014523 Testing and Inspections	2 pages
015000 Temporary Facilities	3 pages
017000 Project Closeout	4 pages
017329 Cutting and Patching	3 pages
017423 Cleaning	3 pages

DIVISION 6 - WOOD, PLASTICS, AND COMPOSITES

061000 Rough Carpentry	8 pages
062000 Finish Carpentry	4 pages

DIVISION 7 - THERMAL AND MOISTURE PROTECTION

079200	Sealants and Caulking	3 pages
--------	-----------------------------	---------

DIVISION 9 - FINISHES

092000	Gypsum Board	6 pages
095113	Acoustical Ceiling	2 pages
096500	Resilient Flooring and Base	3 pages
096800	Carpeting	8 pages
097200	Vinyl Covered Tackboard	3 pages
098100	Acoustical Insulation and Sealants	3 pages
099000	Painting	6 pages

DIVISION 10 - SPECIALTIES

101116	Markerboards	2 pages
--------	--------------------	---------

DIVISION 22 - PLUMBING

220100	Basic Mechanical Materials and Methods	8 pages
--------	--	---------

DIVISION 23 - HEATING, VENTILATING AND AIR CONDITIONING

230100	Heating Ventilating and Air Conditioning	6 pages
--------	--	---------

DIVISION 26 - ELECTRICAL

260100	Basic Materials and Methods Electrical	10 pages
260533	Raceway and Boxes for Electrical Systems	4 pages
262000	Low Voltage Electrical Power Conductors and Cables	4 pages
262726	Wiring Devices	3 pages

END OF SECTION

ESCALON UNIFIED SCHOOL DISTRICT
1520 E. Yosemite Avenue, Escalon, CA 95320

NOTICE TO BIDDERS

Sealed bids for INTERIOR IMPROVEMENTS AT DENT E.S. AND EL PORTAL M.S., for ESCALON UNIFIED SCHOOL DISTRICT will be received in the District office of ESCALON UNIFIED SCHOOL DISTRICT, 1520 E. Yosemite Avenue, Escalon, CA 95320 **until June 10, 2025 at 10:00 a.m., at which time they will be opened and read.**

Plans and Specifications are on file and may be viewed or downloaded from the website of TPH Architects, at <http://tpharchitects.com/bidding/>

A mandatory pre-bid job walk is scheduled for **June 3, 2025 at 10:00 a.m. We will start at El Portal Middle School, 805 First Street, Escalon, CA, 95320. We will meet at the flagpole.** The pre-bid job walk must be attended by a Principal of the company proposing to submit a bid or an employee of the company who is a Construction Superintendent or a Project Manager. The bid of any Contractor not in attendance at the pre-bid job walk will not be accepted.

If further information is needed, call Mike Clark, AIA, at (209) 571-2232.

Bids shall be submitted on forms included in the Bid Package.

The District has determined the general prevailing rate to be the per diem wages for each craft or type of workman or mechanic needed to execute this contract as set forth in the collective bargaining agreements for Stanislaus, San Joaquin, and Merced Counties, California. COMPLIANCE MONITORING: This project is subject to compliance monitoring and enforcement by the Department of Industrial Relations, Office of the Labor Commissioner. Copies of all collective bargaining agreements relating to the work are on file and available for inspection in the office of the California Department of Industrial Relations, Division of Labor Statistics and Research, 455 Golden Gate Avenue, San Francisco, CA, 94102, (415-703-4780), <http://www.dir.ca.gov/dlsr/> .

In compliance with SB 854, no contractor or subcontractor may be listed on a bid proposal for a public works project unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5 [with limited exceptions from this requirement for bid purposes only under Labor Code section 1771.1(a)].

In addition, no contractor or subcontractor may be awarded a contract for public work on a public works project unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5.

This project is subject to compliance monitoring and enforcement by the Department of Industrial Relations.

A valid B, contractor's license will be required.

ESCALON UNIFIED SCHOOL DISTRICT reserves the right to waive any irregularity or informality in the bidding.

Published: May 23, 2025
May 30, 2025

INSTRUCTIONS TO BIDDERS

Table of Contents

1. Introduction
2. Plans
3. Local Conditions
4. Form of Bid and Signature
5. Submission of Bids
6. Preparation of the Bid
7. Bid Security
8. List of Subcontractors
9. Interpretation of Contract Documents
10. Modification of Bids
11. Withdrawals of Bids
12. Discrepancies
13. Servicing and Maintenance
14. Disqualification of Bidders
15. Award of Contract
16. Contract Bonds
17. Substitution of Securities for Monies Withheld
18. Execution of Contract
19. Escrow of Bid Documents
20. Power of Attorney
21. Time of Completion
22. Licensing Requirements for Contractors
23. Prevailing Wages
24. Substitutions
25. Contract Audits
26. Fingerprinting Requirements
27. Bid Form Alternates

1. Introduction

- A. Each bid shall be in accordance with the Contract Documents. Contract Documents are available on a purchase basis only. Where payment for such sets is specified, no refund will be made.

2. Plans

- A. Plans and Specifications are on file and may be viewed or downloaded from the website of TPH Architects at <http://tpharchitects.com/bidding/>

3. Local Conditions

- A. The quantities of work or material stated in the unit price items of the Bidding Schedule are given only as a basis for the comparison of Bids, and the District does not represent or warrant that the actual amount of work or material will correspond therewith, but reserves the right to increase or decrease the quantity of any unit price item of the Work as may be deemed necessary or expedient by the Architect.
- B. The bidder shall examine carefully the site of the Work contemplated and the Contract Documents. The submission of a proposal shall be conclusive evidence that the bidder has investigated and is satisfied as to the conditions to be encountered, as to the character, quality and quantities of work to be performed and the materials to be furnished, and as to the requirements of the Contract Documents.
- C. Information derived from inspection of topographic maps, or from Plans showing location of utilities and structures will not in any way relieve the bidder from any risk, or from properly examining the site and making such additional investigations as it may elect, or from properly fulfilling all the terms of the Contract.
- D. Each bidder shall inform itself of, and the bidder awarded a contract shall comply with, federal, state and local laws, statutes, and ordinances relative to the execution of the Work. This requirement includes, but is not limited to, applicable regulations concerning employment of labor, protection of public and employee safety and health, environmental protection, the protection of natural resources, fire protection, burning and non-burning requirements, permits, fees and similar subjects.

4. Form of Bid and Signature

- A. Bids shall be submitted only on the forms attached hereto or copies thereof and shall be enclosed in a sealed envelope and marked and addressed as hereinafter directed. The bidder shall state in figures the unit prices or the specific sums as the case may be, for which it proposes to supply the labor, materials, supplies or machinery, and perform the Work required by the Specifications. If the Bid is made by an individual, it shall be signed by the bidder and shall include the bidder's full name and address; if it is made by a partnership, it shall be signed with the co-partnership name by a member of the partnership, who shall also sign its own name, and the name and address of each member of such partnership shall be given; and, if it is made by a corporation the name of the corporation shall be given and it shall be signed by its duly authorized officer or officers attested by the corporate seal, the name and titles of all officers of the corporation shall be given, and the address of the corporation and the state in which incorporated shall be stated. Bids will be considered only from persons licensed as required under applicable provisions of the Contractors License Law (California Business and Professions Code section 7000 et seq.) and rules and regulations adopted pursuant thereto; and each bidder shall

insert its type of contractor's license, license number, and other requested information in the place provided in the bid. No oral, telephonic or telegraphic Bid or modification of a Bid will be considered.

5. Submission of Bids

- A. All bids must be submitted not later than the time prescribed, at the place and in the manner set forth in the Invitation to Bid. Bids must be made on the prescribed Bid forms. A complete Bid requires submission of fully completed Contract Documents. Each Bid must be submitted in a sealed envelope, so marked as to indicate its contents without being opened, and addressed in conformance with the instructions in the Notice Inviting Bids. The bidder is wholly responsible to see that its Bid is submitted at the time and place named for the opening of bids.
- B. Bids shall include all addenda or clarifications issued during the bidding period acknowledged by the bidder's signature thereon. Failure to so include or acknowledge an addendum or clarification will result in the Bid being rejected as not responsive.
- C. Bids shall be opened at the time and place specified in the Invitation to Bid, unless changed by addendum.

6. Preparation of the Bid

- A. Blank spaces in the Bid shall be properly completed. The phraseology of the Bid must not be changed and no additions shall be made to the items mentioned therein. Unauthorized conditions, limitations or provisions attached to a Bid will render it informal and may cause its rejection. If erasures, interlineations or other changes appear on the form, each erasure, interlineation or change must be initialed by the person signing the Bid. Alternative bids will not be considered unless specifically provided for in the Bidding Schedule. No Bid received after the time fixed, or received at any place other than the place stated in the Notice Inviting Bids will be considered. All bids will be opened and read publicly. Bidders, their representatives and other interested parties are invited to be present at the opening. Where bonds are required, the bidder shall name in its Bid the surety or sureties which have agreed to furnish the bonds.

7. Bid Security

- A. All Bids shall be accompanied by Bid Security, as defined, made payable to the District. The Bid Security shall include cash, cashier's check made payable to the District, certified check made payable to the District, or a Bid Bond executed by an admitted surety insurer. The Bid Security must be enclosed in the same envelope with the Bid. The amount of the Bid Security shall be not less than ten percent

(10%) of the total amount of the Bid, including additive items.

- B. The Attorney-in-Fact (resident agent) who executes the Bid Bond on behalf of the surety company must attach a copy of its Power of Attorney as evidence of its authority. A notary shall acknowledge the power as of the date of execution of the surety bond which it covers.
- C. A Bid Bond will be accepted only if it is made out on either the Bid Bond form enclosed in these documents or on a form which conforms to it. The Bid Bond must be from an admitted and responsible corporate surety which is acceptable to the District, and which maintains in California at least one office for conducting business.

8. List of Subcontractors

- A. Each bidder shall set forth in its Bid on the form provided the following information in accordance with the provisions of Public Contract Code sections 4100-4113:
 - 1. The name, California contractor license number, and location of the place of business of each Subcontractor who will perform work or labor or render service to the prime Contractor in or about the construction of the Work or improvement, or a Subcontractor licensed by the State of California who, under subcontract to the prime Contractor, specifically fabricates and installs a portion of the Work or improvement according to the Contract Documents, in any amount in excess of one-half of one percent of the prime Contractor's total bid, or, in the case of bids or offers for the construction of streets or highways, including bridges, in excess of one-half of one percent of the Contractor's total bid or ten thousand dollars (\$10,000), whichever is greater.
 - 2. The portion of the Work which will be done by each such Subcontractor. Only one Subcontractor shall be listed for each such portion of the Work as defined in the Bid.
- B. If the bidder fails to specify a Subcontractor for any portion of the Work to be performed under the Contract, the bidder agrees to perform that portion of the Work itself.

9. Interpretation of Contract Documents

- A. Any explanation desired by the bidders regarding the meaning or interpretation of any of the Contract Documents must be requested in writing, with sufficient allowance of time for receipt of reply before the time set for opening of Bids. Written requests should be addressed to: Escalon, Architect at TPH Architects, 519 McHenry Ave., Modesto, CA 95354, hereinafter referred to as "Architect." Any such explanations or interpretations will be made in the form of addenda to the

documents and will be furnished to all bidders who shall submit all addenda with their Bids. Neither the Architect nor any representative of the District is authorized to give oral explanations or interpretations of Contract Documents, and a submission of a Bid constitutes agreement by the bidder that it has placed no reliance on any such oral explanation or interpretation. However, the Architect may, upon inquiry by bidder, orally direct the bidder's attention to specific provisions of the Contract Documents which cover the subject of the inquiry.

10. Modification of Bids

- A. A bidder may modify its Bid by written communication provided such communication is received by the District prior to the closing time for receipt of Bids. The written communication should not reveal the Bid price but should state the addition or subtraction or other modification so that the final prices or terms will not be known by the District until the sealed bid is opened.

11. Withdrawals of Bids

- A. Bids may be withdrawn without prejudice by written or telegraphic requests received from bidder prior to the time for opening of Bids, and Bids so withdrawn will be returned to bidders unopened when reached in the process of opening Bids. No Bid may be withdrawn after the hour affixed for opening Bids without rendering the accompanying Bid Bond subject to retention as liquidated damages in like manner as in the case of failure to execute the Contract after award, as in the Contract Documents herein provided. Negligence on the part of the bidder preparing its Proposal shall not constitute a right to withdraw the Bid subsequent to the opening of Proposals.

12. Discrepancies

- A. In the case of discrepancy between unit prices and totals, unit prices will prevail. In case of discrepancy between words and figures, words will prevail.

13. Servicing and Maintenance

- A. Each bidder must, if requested, furnish evidence that there is an efficient service organization which regularly carries a stock of repair parts for the proposed equipment to be furnished and installed in the Work and that the organization is conveniently located for prompt service.

14. Disqualification of Bidders

- A. More than one Bid from an individual, firm, partnership or corporation under the same or different names will not be considered. Reasonable grounds for believing that any individual, firm, partnership or corporation is interested in more than one Bid for the Work contemplated may cause the rejection of all Bids in which the individual, firm, partnership or corporation is interested. If there is reason for believing that collusion exists among the bidders, any or all Bids may be rejected. Bids in which the price is obviously unbalanced may be rejected.
- B. All bidders are put on notice that any collusive agreement fixing the prices to be bid so as to control or affect the awarding of this Contract is in violation of the competitive bidding requirements of the Public Contract Code and may render void any contract let under such circumstances.

15. Award of Contract

- A. The District reserves the right to accept or reject any and all Bids for a period of ninety (90) days after the date of opening, and to waive any informality or irregularity in any Bid. No Bid can be withdrawn during that period.
- B. The award of the Contract, if it is awarded, will be to the lowest responsible responsive bidder whose Bid complies with the requirements set forth herein. The determination of the lowest bid will be evaluated based upon each bidder's Total Base Bid, which shall be the lowest bid price on the base contract without consideration of the prices on the additive items. The issuance by the District of a notice to the successful bidder of the award of the contract (Notice of Award) shall be deemed the Award of Contract.

16. Contract Bonds

- A. The successful bidder shall furnish both a Performance Bond and a Payment Bond in the amounts specified in the forms attached hereto. These Bonds shall be furnished in the forms enclosed following the Contract and shall be satisfactory to the District and shall be obtained from a responsible corporate surety (or sureties) acceptable to the District, which is licensed by the State of California to act as surety upon bonds and undertakings and which maintains in this State at least one office for the conduct of its business. The surety (or sureties) shall furnish reports as to its financial condition from time to time as requested by the District. The premiums for the Bonds shall be paid by the successful bidder. If any surety becomes unacceptable to the District or fails to furnish reports as to its financial condition as requested by the District, the Contractor shall promptly furnish such additional security as may be required from time to time to protect the interests of the District and of persons supplying labor or materials in the prosecution of the Work contemplated by this

Contract.

- B. In the event of any conflict between the terms of the Contract and the terms of the Bonds, the terms of the Contract shall control and the Bonds shall be deemed to be amended thereby. Without limiting the foregoing, the District shall be entitled to exercise all rights granted to it by the Contract in the event of default, without control thereof by the surety, provided that the District gives the surety notice of such default at the time or before the exercise of any such right by the District, and, regardless of the terms of the Bonds, the exercise of any such right by the District shall in no manner affect the liability of the surety under the Bonds.

17. Substitution of Securities for Monies Withheld

- A. Bidders are hereby notified that in accordance with the provisions of Public Contract Code section 22300, securities may be substituted for any monies which the District may withhold pursuant to the terms of the Contract to insure performance.

18. Execution of Contract

- A. The successful bidder will be notified in writing by the District of the award of the Contract within ninety (90) days after opening of Bids, unless the time period is extended as provided in the Invitation to Bid. Accompanying the District's Notice of Award will be the contract, in triplicate, which the successful bidder will be required to execute and return, together with the Performance and Payment Bonds, and the required policies of insurance together with the required endorsements thereto for the Contractor and the workers compensation certificate, to the District within ten (10) days following receipt of such Notice of Award. Failure to do so shall be just cause for annulment of the award and for forfeiture of the Bid Bond which shall be retained as liquidated damages, and it is agreed that the bond sum is a fair estimate of the amount of damages that the District will sustain by reason of such failure. The District will promptly determine whether such Contract, Bonds and insurance are as required by the Contract Documents, and upon such determination will forward a fully executed copy of the Contract and a Notice to Proceed with the Work to the successful bidder. Signature by both parties constitutes execution of the Contract. In the event of failure of the lowest responsible bidder to sign and return the Contract with acceptable Bonds and insurance as prescribed herein, the District may award the Contract to the next lowest responsible bidder, and, in the event that bidder fails to sign and return the Contract with acceptable Bonds and insurance, the District may award the Contract to the then next lowest responsible bidder, until no bidders remain.

19. Escrow of Bid Documents

- A. Upon award of the job to the successful bidder ("Contractor"), and at the time of execution of this Contract, Contractor shall present all documentation used by the Contractor in arriving at the bid upon which the Contract was awarded ("Bid Documentation") to the Director of Maintenance, Operations, and Transportation for the Escalon Unified School District. Such documentation shall be presented in a sealed envelope or box. This Bid Documentation shall include, but not be limited to any documents, pictures, or writings which relate to, arise out of, or constitute in any way notes, memoranda, phone logs, subcontractor and material men estimates, computations, or the like used by, complied by, or drafted by the Contractor or its agents in arriving at its bid for the Project.
- B. The District's right of audit shall include the right of access to such documents at the premises of Contractor during usual business hours. Said documents shall remain with Contractor, subject to production for inspection and copying pursuant to subpoena in the event of any dispute between the parties, until after the Work has been completed and accepted and all disputes arising from the Work have been resolved. Additional requirements regarding specified audits are set forth in the General Conditions.

20. Power of Attorney

- A. The Attorney-in-Fact (resident agent) who executes the Performance Bond and Payment Bond on behalf of the surety company must attach a copy of its Power of Attorney as evidence of its authority. A notary shall acknowledge the power as of the date of the execution of the surety bond which it covers.

21. Time of Completion

- A. The time of completion of the Work to be performed under this Contract is the essence of the Contract. Delays and extensions of time may be allowed in accordance with the provisions of the General Conditions. **The time allowed for the completion of the Work is stated in the Contract.**

22. Licensing Requirements for Contractors

- A. All bidders, including Contractor and specialty contractors, shall hold such licenses as may be required by the laws of the State of California for the performance of the Work specified in the Contract Documents.

23. Prevailing Wages

- A. Copies of the prevailing rate of per diem wages are on file at the Escalon Unified School District office, as well as the local office of the Director of the Department of Industrial Relations and will be made available to any interested party on request. Bidders shall be responsible for verifying with the Director of the Department of Industrial Relations that all such copies of the prevailing rate provided by the District are current and accurate. The requirement to pay the wage rate so specified is further detailed in the General Conditions. The District reserves the right to implement any additional compliance program as necessary by law.

24. Substitutions

- A. If awarded the contract, the successful bidder must use the listed subcontractor(s) and/or supplier(s) proposed in its final bid/proposal unless the bidder requests substitution from the District prior to the execution of the contract and the District has approved such substitution. At a minimum, the request must include: 1) a written explanation of the reason for the substitution, 2) the identity of the person or firm substituted. The District's approval or disapproval of a substitution request should not be construed as an excuse for noncompliance with any other provision of law, including but not limited to the Subletting and Subcontracting Fair Practices Act or any other contract requirements relating to substitution of subcontractor.

25. Contract Audits

- A. Contractor agrees that the State or District has the right to review, obtain and copy all records pertaining to performance of the contract. Contractor agrees to provide the State or District with any relevant information requested and shall permit the State or the District access to its premises upon reasonable notice for purposes of interviewing employees and inspecting records. The Contractor shall maintain records for at least a period of three years, unless a longer period of time is applicable under the General Conditions.

26. Fingerprinting Requirements

- A. All bidders shall submit at the time of bid opening a fully executed "Declaration Regarding Employee Fingerprinting and Criminal Background Check," although Education Code section 45125.2(a)(3) provides an option regarding District surveillance, the District does NOT provide this as an option to the Contractor.

27. Bid Form Alternates

- A. If shown on the Bid Form, all bidders must complete and fill in all costs for each additive alternate in addition to the total base bid amount. The contract will be awarded based on the Total Base Bid amount. If the Board of Trustees elects to accept any additive alternate the cost would be added to the Total Base Bid amount at the time of award or as a change order throughout the life of this contract.

**DECLARATION REGARDING EMPLOYEE FINGERPRINTING
AND CRIMINAL BACKGROUND CHECK**

I, _____, declare as follows:

1. Where the employees will have contact with pupils, the safety of the pupils will be ensured by one or more of the following:
 - a) The installation of a physical barrier, at the expense of the Contractor, at the Work site to limit contact with pupils.
 - b) Continual supervision and monitoring of all employees of Contractor and Subcontractor by an employee of Contractor whom the Department of Justice has ascertained has not been convicted of a violent or serious felony.

I am a duly authorized representative of _____ for the purpose of providing this certification and declare under penalty of perjury and the laws of the State of California that the foregoing is true and correct.

Executed this _____ day of _____, 2025, in _____, California.

Signature

Printed Name/Title

END OF SECTION

BID BOND

Know All Men by These Present: that _____ as Principal, and _____, as Surety, are held and firmly bound unto ESCALON UNIFIED SCHOOL DISTRICT as Oblige, in the sum of:

_____ Dollars
(\$ _____)

lawful money of the United States for the payment whereof, well and truly to be made, above bonded Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigns, firmly by these presents.

THE CONDITION OF THE ABOVE OBLIGATION is such that whereas the above bonded Principal is herewith submitting a proposal for the

INTERIOR IMPROVEMENTS AT DENT E.S. AND EL PORTAL M.S.
for
ESCALON UNIFIED SCHOOL DISTRICT

NOW, THEREFORE, if the above bounded Principal shall, within ten (10) calendar days after receipt of written notification of acceptance of its proposal, enter into a contract and execute and deliver to Oblige a bond for the faithful performance of said contract and payment (labor and materials) bond, then this obligation shall be null and void; otherwise to remain in full force and effect.

IN WITNESS WHEREOF, above bounden Principal and Surety have hereunto set their hands and seals on this _____ day of _____, 2025.

Attest:

(Corporate Principal)

(Print Name and Title)

(This bond must be signed and acknowledged by both Principal and Surety before a Notary Public, and acknowledgments with Notarial Seals attached hereto.)

Surety

By: _____
Attorney-in-fact

(The above must be filled in by Corporate Surety. Surety company must be California admitted insured.)

END OF SECTION

NON-COLLUSION DECLARATION
(To Be Executed by Bidder and Submitted with Bid)

State of California _____)
County of _____)

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].”

Signature

Printed Name of Bidder

Title

END OF SECTION

PAYMENT BOND
(To Accompany Contract)

WHEREAS, the ESCALON UNIFIED SCHOOL DISTRICT ("District") has awarded to _____ as principal, hereinafter designated as the "Contractor," a Contract for the work described as follows:

INTERIOR IMPROVEMENTS AT DENT E.S. AND EL PORTAL M.S.
for
ESCALON UNIFIED SCHOOL DISTRICT
1998 Yosemite Avenue, and 805 First Street, Escalon, CA, 95320

and WHEREAS, said Contractor is required by the provisions of Chapter 5, Title 3, Part 6, Division 4, section 9550 et seq., Civil Code, to furnish a bond in connection with said Contract;

NOW, THEREFORE, we the undersigned Contractor and Surety are bound to the District in the sum of _____ Dollars
Said sum being determined consistent with the provisions of section 9554 of the Civil Code, for which payment we bind ourselves, our heirs, executors and administrators, successors and assigns, jointly and severally, by the Condition of this bond.

THE CONDITION OF THIS OBLIGATION IS SUCH that if the Contractor, its heirs, executors, administrators, successors, or assigns, or a subcontractor, shall fail to pay any person or persons named in Civil Code Section 9100 or fail to pay for any materials or other supplies used in, upon, for, or about the performance of the work contracted to be done, or for any work or labor thereon of any kind, or for amounts due under the Unemployment Insurance Code with respect to work or labor thereon of any kind, or shall fail to deduct, withhold, and pay over to the Employment Development Department any amounts required to be deducted, withheld, and paid over by Section 13020 of the Unemployment Insurance Code with respect to work and labor thereon of any kind, then said Surety will pay for the same, in or to an amount not exceeding the amount set forth above, and in case suit is brought upon this bond Surety will also pay such reasonable attorney's fees as shall be fixed by the court, awarded and taxed as provided in Division 4, Part 6, Title 3, Chapter 5 (commencing at Section 9550) of the California Civil Code.

This bond shall inure to the benefit of any of the persons named in Section 9100 of the California Civil Code so as to give a right of action to such person or their assigns in any suit brought upon this bond.

It is further stipulated that the Surety of this bond shall not be exonerated or released from the obligation of the bond by any change, extension of time for performance, addition, alteration, or modification in, to, or of any contract, plans, specifications, or agreement pertaining or relating to any scheme or work of improvement described above or pertaining or relating to the furnishing of

labor, materials, or equipment therefor, nor by any change or modification of any terms of payment or extension of the time for any payment pertaining or relating to any scheme or work of improvement described above, nor by any rescission or attempted rescission of the Contract, agreement, or bond, nor by any conditions precedent or subsequent in the bond attempting to limit the right of recovery of claimants otherwise entitled to recover under any such contract or agreement or under the bond, nor by any fraud practiced by any person other than the claimant seeking to recover on the bond, and that this bond be construed most strongly against the Surety and in favor of all persons for whose benefit such bond is given, and under no circumstances shall Surety be released from liability to those for whose benefit such bond has been given, by reason of any breach of contract between the District and original contractor or on the party of the obligee named in such bond, but the sole conditions of recovery shall be that claimant is a person described in Section 8400 and 8402 of the California Civil Code and has not been paid the full amount of his/her or its claim and that Surety does hereby waive notice of any such change, extension of time, addition, alteration, or modification.

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

Contractor (signature)

Print Name and Title

(This bond must be signed and
acknowledged by both Principal
and Surety before a Notary Public,
and acknowledgments, with
Notarial Seals, attached hereto.)

_____ (Seal)

Surety

Attorney-in-fact

Print Name

END OF SECTION

PERFORMANCE BOND
(To Accompany Contract)

WHEREAS, the ESCALON UNIFIED SCHOOL DISTRICT ("District") has awarded to _____, as principal, hereinafter designated as the "Contractor," a Contract for the work described as follows:.

INTERIOR IMPROVEMENTS AT DENT E.S. AND EL PORTAL M.S.
for
ESCALON UNIFIED SCHOOL DISTRICT
1998 Yosemite Avenue and El Portal Middle School, 805 First Street, Escalon, CA, 95320

and WHEREAS, the Contractor is required to furnish a bond in connection with said Contract guaranteeing the faithful performance of the requirements contained in the Contract Documents, which are fully incorporated herein by this reference.

NOW, THEREFORE, we the undersigned Contractor and _____ as Surety, hereby guarantee the Contractor's full, faithful and complete performance of the requirements contained in the Contract Documents are bound to the District in the sum of

_____ Dollars
(\$ _____)

dollars for the payment of which sum, we bind ourselves, our heirs, executors, administrators and successors, jointly, severally, by this agreement to perform or have performed all of the work and activities required to complete the Project pursuant to the Contract Documents and to pay to the District all damages the District incurs as a result of the Contractor's failure to fully perform in accordance with the Contract Documents.

The CONDITION of this obligation is such that if the above Contractor, 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 its 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 District, 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.

The Surety, for value received, stipulated and agrees that no change, extension of time, alteration or addition to the Contract Documents shall in any way affect its obligations on this bond and it waives notice of any such change, extension of time, alteration or addition.

In case suit is brought upon this bond the said Surety or sureties shall pay all court costs, expenses and the reasonable attorney's fees fixed by the court, in addition to any other sum required by this bond in the event the claimant is deemed to be the prevailing party. Surety further agrees that death, dissolution, or bankruptcy of the Contractor shall not relieve the Surety of its obligations under this bond.

IN WITNESS WHEREOF,

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

Contractor (signature)

Print Name and Title

(This bond must be signed and acknowledged by both Principal and Surety before a Notary Public, and acknowledgments, with Notarial Seals, attached hereto.)

(Seal)

Surety

Attorney-in-fact

Print Name

END OF SECTION

BID FORM

Bid Opening Time and Date: June 10, 2025 at 10:00 a.m.,

TO: Board of Education - ESCALON UNIFIED SCHOOL DISTRICT

Dear Board Members:

Pursuant to the Notice Inviting Bids, and in compliance with the Instructions to Bidders, having reviewed the Contract Documents and the site of the Work, the undersigned hereby proposes to furnish all work, labor, materials, transportation, equipment and services necessary for,

INTERIOR IMPROVEMENTS AT DENT E.S. AND EL PORTAL M.S.
for
ESCALON UNIFIED SCHOOL DISTRICT
at 1998 Yosemite Avenue and 805 First Street, Escalon, CA, 95320

all in accordance with the plans, specifications and working details and other Contract Documents, together with Addenda which are hereby acknowledged as received:

Addendum No. _____	Date _____
Addendum No. _____	Date _____
Addendum No. _____	Date _____

for the Total Base Bid as set forth below, which sum includes all labor, materials, transportation and services necessary to complete said Work, including State of California and local sales or use taxes, license or permit fees, if any.

Dent Elementary School - The undersigned proposes to perform **all** work as defined as ‘Interior Improvements at Dent Elementary School’ plans and specifications, to construct the project and all appurtenant work thereto for the sum of:

_____ Dollars (\$_____).

El Portal Middle School - The undersigned proposes to perform **all** work as defined as ‘Interior Improvements at El Portal Middle School’ plans and specifications, to construct the project and all appurtenant work thereto for the sum of:

_____ Dollars (\$_____).

TOTAL BASE BID: The sum total of both Dent Elementary School and El Portal Middle School:

_____ Dollars (\$_____).

Bids will be evaluated base upon the sum of the TOTAL BASE BID.

In the event Total Base Bid Price is incorrect, the corrected addition will govern and the Owner will

correct the Total Bid Price accordingly.

In case of discrepancy between words and figures, words will prevail.

If awarded the contract, I (we) will begin the Work not later than ten (10) days after being notified in writing by the District to commence Work on any of the projects within the district over the life of the contract. **I (we) will complete the Work for each Notice to Proceed on or before forty five (45) calendar days after the date of commencement of each Notice to Proceed.**

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

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

Copies of the prevailing rate of per diem wages as determined by the Director of the Department of Industrial Relations in accordance with Labor Code section 1773 are on file at the District's office, and copies are available for inspection at that office to any interested party on request. Bidders shall be responsible for verifying with the Director of the Department of Industrial Relations that all such copies of the prevailing rate provided by the District are current and accurate. The requirement to pay the wage rate so specified is further detailed in the General Conditions. Upon request for certified payroll records, the Contractor shall supply one original (8½ x 11 sheets) and three copies. The Contractor shall obliterate the identity and social security numbers of all employees.

The undersigned agrees that the enclosed cash deposit, cashier's check, certified check or surety bond accompanying this proposal, shall be left on deposit with the Escalon Unified School District that its amount is the measure of the liquidated damages which the District will sustain by the default of the undersigned through failure to execute and deliver the above agreement and bonds within ten (10) days of written notice of the award of the contract to the undersigned and that the money or surety bond so deposited shall be collectible and become the property of the District in case of such default.

Within seven (7) days after the date of bid opening, the responsible low bidder shall deliver to the District, in a form acceptable to the District, a complete cost breakdown for the project herein bid.

Listed hereunder is the name of each subcontractor, California contractor license number, and address and location of place of business of the mill, shop or office of each subcontractor who will perform work or labor or render service to the undersigned in or about the construction of the Work hereinabove described in excess of one-half of one percent of the total bid and the dollar value of said Work which will be done by each subcontractor, if the contract for the said Work is awarded to the undersigned. (Attach additional sheet, if necessary, and note attachment on this page.) (See Pub. Contract Code §§ 4100-4113.)

List of Subcontractors

Subcontractor Name: _____ **Location:** _____
Portion of Work: _____ **License#:** _____ **DIR#:** _____

Subcontractor Name: _____ **Location:** _____
Portion of Work: _____ **License#:** _____ **DIR#:** _____

Subcontractor Name: _____ **Location:** _____
Portion of Work: _____ **License#:** _____ **DIR#:** _____

Subcontractor Name: _____ **Location:** _____
Portion of Work: _____ **License#:** _____ **DIR#:** _____

Subcontractor Name: _____ **Location:** _____
Portion of Work: _____ **License#:** _____ **DIR#:** _____

Subcontractor Name: _____ **Location:** _____
Portion of Work: _____ **License#:** _____ **DIR#:** _____

Subcontractor Name: _____ **Location:** _____
Portion of Work: _____ **License#:** _____ **DIR#:** _____

Subcontractor Name: _____ **Location:** _____
Portion of Work: _____ **License#:** _____ **DIR#:** _____

Subcontractor Name: _____ **Location:** _____
Portion of Work: _____ **License#:** _____ **DIR#:** _____

Subcontractor Name: _____ **Location:** _____
Portion of Work: _____ **License#:** _____ **DIR#:** _____

Subcontractor Name: _____ **Location:** _____
Portion of Work: _____ **License#:** _____ **DIR#:** _____

Subcontractor Name: _____ **Location:** _____
Portion of Work: _____ **License#:** _____ **DIR#:** _____

Subcontractor Name: _____ **Location:** _____
Portion of Work: _____ **License#:** _____ **DIR#:** _____

Subcontractor Name: _____ **Location:** _____
Portion of Work: _____ **License#:** _____ **DIR#:** _____

Subcontractor Name: _____ **Location:** _____
Portion of Work: _____ **License#:** _____ **DIR#:** _____

Subcontractor Name: _____ **Location:** _____
Portion of Work: _____ **License#:** _____ **DIR#:** _____

Subcontractor Name: _____ **Location:** _____
Portion of Work: _____ **License#:** _____ **DIR#:** _____

Subcontractor Name: _____ **Location:** _____
Portion of Work: _____ **License#:** _____ **DIR#:** _____

Subcontractor Name: _____ **Location:** _____
Portion of Work: _____ **License#:** _____ **DIR#:** _____

Subcontractor Name: _____ **Location:** _____
Portion of Work: _____ **License#:** _____ **DIR#:** _____

Subcontractor Name: _____ **Location:** _____
Portion of Work: _____ **License#:** _____ **DIR#:** _____

Subcontractor Name: _____ **Location:** _____
Portion of Work: _____ **License#:** _____ **DIR#:** _____

Subcontractor Name: _____ **Location:** _____
Portion of Work: _____ **License#:** _____ **DIR#:** _____

This bid is hereby submitted by:

CONTRACTOR: _____

By: _____
(Signature)

Print Name: _____

Title: _____

Mailing Address:

Telephone No.: _____

State License No.: _____

DIR No.: _____

State License Classification: _____

Dated this _____ day of _____, 20____.

(NOTE TO BIDDERS: No bid shall be valid unless signed by the person making the bid. If the party is an individual, the same shall be signed by the individual; if the party is a partnership, the name of the partnership shall be given and signed by one of the partners; if the same is a corporation, the bid should be signed by the corporation by its properly authorized officer or officers.)

END OF SECTION

GENERAL CONDITIONS

ARTICLE 1 DEFINITIONS AND GENERAL PROVISIONS

1.1. BASIC DEFINITIONS

1.1.1 Application for Final Payment

"Application for Final Payment" shall mean that application made to the District pursuant to Section 9.9.3 of these General Conditions.

1.1.2 Application for Payment

"Application for Payment" shall mean those applications made to the District pursuant to Section 9.3 of these General Conditions.

1.1.3 Architect

The Architect is the person lawfully licensed to practice architecture or an entity lawfully practicing architecture identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The term "Architect" means the Architect or the Architect's authorized representative, and shall also refer to all engineering consultants under the Architect's direction and control.

1.1.4 Certificate of Payment

Shall mean that final certificate issued by the Architect as described in Section 9.9.1.

1.1.5 Change Order

"Change Order" shall refer to a written form of agreement, signed by the District, Architect and Contractor approved by the Division of the State Architect ("DSA") (if required by law), modifying the Contract. The Change Order cannot be incorporated into the progress payments until it has been fully executed and accepted by DSA.

1.1.6 Claim

A Claim is a demand or assertion by one of the parties seeking, as a matter of right, adjustment or interpretation of Contract terms, payment of money, extension of time, or other relief with respect to the terms of the Contract. The term "Claim" also includes other disputes and matters in question between the District and the Contractor arising out of or relating to the Contract Documents. Claims must be made by written notice. The responsibility to substantiate Claims shall rest with the party making the Claim.

1.1.7 Construction Change Directive

Construction Change Directive or CCD is a written order prepared by the Architect, and signed by the District and the Architect, directing a change in the Work and stating a proposed basis for adjustment, if any, in the Contract Sum or Contract Time, or both.

1.1.8 Contract

The Contract Documents form the Contract. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. The Contract may be amended or modified only by a written Modification. A Modification is a written amendment to the Contract signed by both parties, a Change Order, a Construction Change Directive, or a written order for a minor change in the Work issued by the Architect. The Contract Documents are not intended and shall not be construed to create a contractual relationship of any kind between the Architect and Contractor, between the District and any Subcontractor or Sub-subcontractor, or between any persons or entities other than the District and the Contractor. Except as expressly stated herein below, the Contract Documents are not intended and shall not be construed to benefit or create any benefits or rights of performance whatsoever in any persons or entities other than the District and the Contractor.

1.1.9 Contract Documents

The Contract Documents consist of the Construction Contract between District and Contractor (hereinafter the Agreement), General Conditions, Supplementary and Special Conditions, if any, Drawings, Specifications, addenda issued prior to bid, deferred approvals, the Notice Inviting Bids, accepted bid, Designation of Subcontractors, Information for Bidders, Contractor's Certification Regarding Workers' Compensation and Payment and Performance Bonds, and any documents incorporated by or attached to said documents.

1.1.10 Contract Sum or Contract Price

"Contract Sum" means the total compensation specified in the Contract. The Contract Sum may be adjusted by Change Order.

1.1.11 Contract Time

"Contract Time" means the number of calendar days set forth in the Bid Form within which the full completion of the Contractor's work must be achieved. The Contract Time may be adjusted by Change Order.

1.1.12 Contractor

The Contractor is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number and masculine in gender. The term Contractor means the Contractor or his authorized representative. To the extent that any portion of the Work is provided with the Contractor's own forces, any reference to Subcontractors shall be equally applicable to the Contractor.

1.1.13 Daily Reports

The Contractor shall cause, and require subcontractor's to cause, the preparation of a daily report, describing salient job site progress and events in a format acceptable to the Architect. These daily reports from both the contractor and subcontractors shall be forwarded to the Architect at regular intervals. Please note: These daily reports will not be reviewed on a continuous basis, or even by the Architect. The Contractor is advised, therefore, these daily reports will not, and cannot, satisfy or supersede the Contractor's obligation to give timely notice of added time or cost under the various paragraphs of the contract.

1.1.14 Days

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

1.1.15 Deferred Approvals

Deferred approval items are identified in the drawings and/or specifications that require the Contractor to prepare drawings and/or calculations and other data for submission to DSA for formal review and approvals requiring a structural engineer’s stamp and calculations, a structural engineer licensed in the State of California shall be utilized in the submittal process. The contractor shall pay all costs associated with the preparation and approval of the deferred approval items.

1.1.16 District

“District” means the Escalon Unified School District, its board members, officers, and employees.

1.1.17 Drawings

The Drawings are graphic and pictorial portions of the Contract Documents prepared for the Project and approved changes thereto, wherever located and whenever issued, showing the design, location, and scope of the Work, generally including plans, elevations, sections, details, schedules, and diagrams as drawn or approved by the Architect.

1.1.18 Inspector

“Inspector” shall mean the inspector or inspectors employed by the District and approved by the Division of the State Architect who will be assigned to the Work in accordance with the requirements of Title 24 of the California Code of Regulations

1.1.19 Notice of Completion

"Notice of Completion" shall mean such notice duly recorded by the District with the County Clerk Recorder pursuant to California Civil Code section 8180 et seq.

1.1.20 Notice to Proceed

The date of commencement of the Work is the date established in the Notice to Proceed. The date shall not be postponed by the failure to act of the Contractor or of persons or entities for whom the Contractor is responsible.

1.1.21 Project

The Project is the total construction of the Work performed in accordance with the Contract Documents in whole or in part and which may include construction by the District or by separate Contractors.

1.1.22 Project Site or Site

The physical location at which the Contractor undertakes the Project.

1.1.23 Project Manual

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

1.1.24 Retainage

Up to five (5%) percent of the Contract Sum which may be retained by the District in accordance with California Public Contract Code section 7201 and Subsection 9.9.2 below.

1.1.25 Schedule of Values

Schedule of Values shall mean that detailed breakdown of the Contract Price as described in Section 9.2.1 below.

1.1.26 Specialty Contractors

If a Subcontractor is designated as a "Specialty Contractor" as defined in section 7058 of the Business and Professions Code, all of the Work outside of that Subcontractor's specialty shall be performed in compliance with the Subletting and Subcontracting Fair Practices Act, Public Contract Code section 4100 *et seq.*

1.1.27 Specifications

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

1.1.28 Subcontractor

A Subcontractor is a person or entity who has a contract with the Contractor to perform a portion of the Work at the Site. The term "Subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Subcontractor or an authorized representative of the Subcontractor. The term "Subcontractor" does not include a separate contractor or subcontractors of a separate contractor. To the extent that the term Trade Contractor is utilized in the Contract Documents, it shall have the same meaning as the term "Subcontractor."

1.1.29 Sub-Subcontractor

A Sub-Subcontractor is a person or entity who has a contract with a Subcontractor to perform a portion of the Work at the Site. The term "Sub-Subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Sub-Subcontractor or an authorized representative of the Sub-Subcontractor.

1.1.30 Work

The Work shall include all labor, materials and equipment necessary for the Contractor to fulfill all of its obligations pursuant to the Contract Documents. It shall include the initial and continuing obligation of the Contractor before bidding the Project and thereafter throughout the Project to visit the Site of the proposed Work, and to fully acquaint and familiarize itself with the conditions as they exist and the character of the operations to be carried on under the Contract Documents, and to make such surface or subsurface investigation as is appropriate so that it shall fully understand the facilities, physical conditions, and restrictions attending the Work under the Contract Documents. The Contractor shall also thoroughly examine and become familiar with the Drawings, Specifications, and associated bid documents. The "Site" refers to the grounds of the Project as defined in the Contract Documents and such adjacent lands as may be directly affected by the performance of the Work. Any Subcontractor or sub supplier of any tier which may submit

a bid for any part of the Work shall be deemed to have assumed, as to be such part of the Work, the same obligations of investigation and familiarization. Failure to visit the site or examine the drawings, specifications and associated bid documents will not excuse either contractor, subcontractor or sub supplier from having knowledge that was reasonably inferable had these duties been faithfully performed.

1.2. EXECUTION, CORRELATION AND INTENT

1.2.1 Correlation and Intent

1.2.1.1 Documents Complementary and Inclusive

The Contract Documents are complementary and are intended to include all items required for the proper execution and completion of the Work. Any item of work mentioned in the Specifications and not shown on the Drawings, or shown on the Drawings and not mentioned in the Specifications, shall be provided by Contractor as if shown or mentioned in both.

1.2.1.2 Coverage of the Drawings and Specifications

The Drawings and Specifications generally describe the work to be performed by Contractor. Generally, the Specifications describe work which cannot be readily indicated on the Drawings, and indicate types, qualities, and methods of installation of the various materials and equipment required for the Work. It is not intended to mention every item of Work in the Specifications, which can be adequately shown on the Drawings, or to show on the Drawings all items of Work described or required by the Specifications even if they are of such nature that they could have been shown. All materials or labor for Work, which is shown on either by the Drawings or the Specifications (or is reasonably inferable therefrom as being necessary to complete the Work), shall be provided by the Contractor whether or not the Work is expressly covered in either the Drawings and/or the Specifications. It is intended that the Work be of sound, quality construction, and the Contractor shall be responsible for the installation of all items indicated, described, or implied in the portion of the Work to be performed by them. It is the intent of these Contract Documents that the work performed under the Contract shall result in a complete operating system in satisfactory working condition with respect to the functional purposes of the installation, and no extra compensation will be allowed for anything omitted but fairly implied.

In the case of conflict or inconsistency, the Supplementary and/or Special Conditions (if any) shall control over the General Conditions, and the Specifications shall control over the Drawings. Figured dimensions shall control over scaled measurements. In all cases, the more expensive interpretation is deemed to control and be the interpretation incorporated into the Contract Documents and Contract Sum.

Organization of the specifications into various subdivisions and the arrangement of the Drawings shall not control Contractor in dividing the Work among subcontractors or in establishing the extent of work to be performed by any trade.

Unless otherwise stated in the Contract Documents, technical words and abbreviations contained in the Contract Documents are used in accordance with commonly understood construction industry meanings; and non-technical words and abbreviations are used in accordance with their commonly understood meanings.

The Contract Documents may omit modifying words such as “all” and “any,” and articles such as “the” and “an,” but the fact that a modifier or an article is absent from one statement and appears in another is not intended to affect the interpretation of either statements. The use of the word “including,” when following any general statement, shall not be construed to limit such statement to specific items or matters set forth immediately following such word or to similar items or matters, whether or not non-limiting language (such as “without limitation,” “but not limited to,” or words of similar import) is used with reference thereto, but rather shall be deemed to refer to all other items or matters that could reasonably be deemed to fall within the broadest possible scope of such general statement.

Whenever the context so requires, the use of the singular number shall be deemed to include the plural and vice versa. Each gender shall be deemed to include any other gender, and each shall include corporation, partnership, trust, or other legal entity whenever the context so requires. The captions and headings of the various subdivisions of the Contract Documents are intended only as a matter of reference and convenience, and in no way define, limit, or prescribe the scope or intent of the Contract Documents or any subdivision thereof.

1.2.1.3 Conformance With Laws

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

Before commencing any portion of the Work, Contractor shall check and review the Drawings and Specifications for such portion for conformance and compliance with all laws, ordinances, codes, rules and regulations of all governmental authorities and public utilities affecting the construction and operation of the physical location of the Project, all quasi-governmental and other regulations affecting the construction and operation of the physical location of the Project, and other special requirements, if any, designated in the Contract Documents. In the event Contractor observes any violation of any law, ordinance, code, rule or regulation, or inconsistency with any such restrictions or special requirements of the Contract Documents, Contractor shall promptly notify Architect and District in writing of same and shall ensure that any such violation or inconsistency shall be corrected in the manner provided thereunder prior to the construction of that portion of the Project.

Work of this Contract is subject to the applicable requirements of Group 1, Chapter 4, Part I, Title 24, California Code of Regulations.

1.2.1.4 Ambiguity

Before commencing any portion of the Work, Contractor shall carefully examine all Drawings and Specifications and other information given to Contractor as to materials and methods of construction and other Project requirements. Contractor shall immediately notify Architect and District in writing of any perceived or alleged error, inconsistency, ambiguity, or lack of detail or explanation in the Drawings and Specifications in the manner provided herein. If the Contractor or its Subcontractors, material or equipment suppliers, or any of their officers, agents, and employees performs, permits, or causes the performance of any Work under the Contract Documents, which it knows or should have known to be in error, inconsistent, or ambiguous, or

not sufficiently detailed or explained, Contractor shall bear any and all costs arising therefrom including, without limitation, the cost of correction thereof without increase or adjustment to the Contract Price or the time for performance. In no case shall any Subcontractor proceed with the Work if uncertain without the Contractor's written direction and/or approval.

1.2.2 Addenda and Deferred Approvals

1.2.2.1 Addenda

Addenda shall govern over all other Contract Documents. Subsequent addenda issued shall govern over prior addenda only to the extent specified. In accordance with Title 24, California Code of Regulations, addenda shall be approved by the DSA.

1.2.2.2 Deferred Approvals

The requirements approved by the DSA on any item submitted as a deferred approval in accordance with Title 24, California Code of Regulations, shall take precedence over any previously issued addenda, drawing or specification.

1.2.3 Specification Interpretation

1.2.3.1 As Shown, Etc.

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

1.2.3.2 Provide

"Provide" means "provide complete in place," that is, furnished, installed, tested, and ready for operation and use.

1.2.3.3 General Conditions

The General Conditions and any Supplementary and/or Special Conditions are hereby incorporated into each and every section of the Specifications.

1.2.3.4 Abbreviations

In the interest of brevity, the Specifications are written in an abbreviated form and may not include complete sentences. Omission of words or phrases such as "Contractor shall," "shall be," etc., is intentional. Nevertheless, the requirements of the Specifications are mandatory. Omitted words or phrases shall be supplied by inference in the same manner as they are when a "note" occurs on the Drawings.

1.2.3.5 Plural

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

1.2.3.6 Metric

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

1.2.3.7 Standard Specifications

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

1.2.3.8 Absence of Modifiers

In the interest of brevity, the Contract Documents frequently omit modifying words such as "all" and "any" and articles such as "the" and "an," but the fact that a modifier or an article is absent from one statement and appears in another is not intended to affect the interpretation of either statement.

1.2.4 Rules of Document Interpretation

- A. In the event of conflict within the drawings, the following rules shall apply:
 - 1. General Notes, when identified as such, shall be incorporated into other portions of Drawings.
 - 2. Equipment and Material Schedules, when identified as such, are complementary with other notes and other portions of Drawings including those identified as General Notes.
 - 3. Larger scale drawings shall take precedence over smaller scale drawings.
 - 4. Figured, derived, or numerical dimensions shall govern. At no time shall the Contractor base construction on scaled drawings.
- B. Specifications shall govern as to materials, workmanship, and installation procedures.
- C. In the case of disagreement or conflict between or within standards, specifications, and drawings, the more stringent, higher quality, and greater quantity of Work shall apply.

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

The Drawings, Specifications, and other documents prepared on behalf of the District are instruments of the services of the Architect and its consultants and are the property of the District. The Contractor may retain one contract record set. Neither the Contractor nor any Subcontractor, Sub-subcontractor, or material or equipment supplier shall own or claim a copyright in the Drawings, Specifications, and other documents prepared by the Architect, and unless otherwise indicated the Architect shall be deemed the author of them. All copies of them, except the

Contractor's record set, shall be returned or suitably accounted for to the Architect, upon request upon completion of the Work. The Drawings, Specifications, and other documents prepared by the Architect, and copies thereof 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 or for additions to this Project outside the scope of the Work without the specific written consent of the District and the Architect. The Contractor, Subcontractors, Sub-subcontractors, and material or equipment suppliers are granted a limited license to use and reproduce applicable portions of the Drawings, Specifications, and other documents prepared by the Architect appropriate to and for use in the execution of their Work under the Contract Documents. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with this Project is not to be construed as publication in derogation of the District's property interest or other reserved right.

ARTICLE 2 THE DISTRICT

2.1. INFORMATION AND SERVICES REQUIRED OF THE DISTRICT

2.1.1 Site Survey

When required by the scope of the Project, the District will furnish, at its expense, a legal description and a land survey of the Site, giving, as applicable, grades and lines of streets, alleys, pavements, adjoining property, rights-of-way, restrictions, easements, encroachments, zoning, deed restrictions, boundaries, and contours of the Site. Surveys to determine locations of construction, grading, and site work shall be provided by the Contractor.

2.1.2 Soils

2.1.2.1 District Furnished Services

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

2.1.2.2 Contractor Reliance

Test borings and soils reports for the Project have been made for the District to indicate the subsurface materials that might be encountered at particular locations on the Project. The District has made these documents available to the Contractor and the Contractor has studied the results of such test borings and information that it has as to the subsurface conditions and Site geology as set forth in the test borings and soils reports. The District does not assume any responsibility whatsoever with respect to the sufficiency or accuracy of the borings made, or of the logs of the test borings, or of other investigations, or of the soils reports furnished pursuant hereto, or of the interpretations to be made beyond the location or depth of the borings. There is no warranty or guarantee, either express or implied, that the conditions indicated by such investigations, borings, logs, soil reports or other information are representative of those existing throughout the Site of the Project, or any part thereof, or that unforeseen developments may not occur. The Contractor is fully responsible for interpreting subsurface information made available and ascertaining Site

conditions for the purposes of determining construction means and methods prior to construction. At the District's request, the Contractor shall make available to the District the results of any Site investigation, test borings, analyses, studies or other tests conducted by or in the possession of the Contractor or any of its agents. Nothing herein contained shall be deemed a waiver by the Contractor to pursue any available legal right or remedy it may have at any time against any third party who may have prepared any report and/or test relied upon by the Contractor.

2.1.3 Utility Survey

When required by the scope of the Project, the District will furnish, at its expense, all information regarding known existing utilities on or adjacent to the Site, including location, size, inverts, and depths.

2.1.4 Information

Upon the request of the Contractor, District will make available such existing information regarding utility services and Site features, including existing construction, related to the Project as is available from District's records. The Contractor may not rely upon the accuracy of any such information, other than that provided under Sections 2.1.2 through 2.1.4 (except that the Contractor may not rely upon and must question in writing to the District and the Architect any information which appears incorrect based upon Contractor's Site inspection, knowledge of the Project, and prior experience with school projects), unless specifically stated in writing that the Contractor may rely upon the designated information.

2.1.5 Existing Utility Lines; Removal, Relocation

In accordance with Government Code Section 4215, the Contractor shall be compensated for the costs of locating, repairing damage not due to the failure of the Contractor to exercise reasonable care, and removing or relocating existing main or trunk line utility facilities which are not indicated in the Drawings and Specifications with reasonable accuracy, and for the equipment on the Project necessarily idled during such work, provided that the Contractor shall first notify the District before commencing work on locating, repairing damage to, removing or relocating such utilities.

2.1.5.1 The Contractor shall take all precautions necessary to protect the existing utilities within the Project area. Any utilities damaged due to the Contractor's negligence shall be repaired or restored to their original condition at the Contractor's sole expense. Existing utilities shall be kept in service during the life of the Contract unless relocation, reconstruction, abandonment, or outage is specifically authorized by the Architect.

2.1.5.2 The Contractor shall provide and maintain such temporary supports as may be necessary to preserve the functions of the various utility systems. No wires, conduits and/or pipes shall be removed until all services therein have been made inoperable.

2.1.5.3 The Contractor shall notify the Architect and appropriate Regional Notification Center for operators of subsurface installations at least two (2) working days, but not more than fourteen (14) calendar days, prior to performing excavation or other work close to any underground pipeline, conduit, duct, wire and other structures. The Contractor shall provide updated information to the Notification Center as required and on a periodic basis. The Regional Notification Center includes but is not limited to the Underground Service Alert-Northern California (USA) at (800) 642-2444. The Contractor is advised that the State of California does

not participate in USA. The Contractor is required to notify CalTrans Permits Branch (916) 741-4036 for the location of State facilities.

2.1.5.4 The Contractor shall not proceed with work until utility facilities involved have been located, disconnected, or otherwise adjusted by utility representatives.

2.1.5.5 The District's Maintenance and Operations department, or its equivalent, will make repairs to all water service laterals and water mains damaged by the Contractor during the course of construction unless directed otherwise by the Architect. Except as otherwise provided in this Section, the Contractor shall be required to pay all labor, material and equipment costs incurred by the District's Maintenance and Operations department for the repairs made to damaged water service laterals and water mains. The District will bill the Contractor for the repairs and the bills will be paid by the Contractor prior to either the next monthly progress payment or prior to the final payment, whichever comes first. The Contractor shall provide to the Architect proof of payment of the repair bills prior to the issuance of either the monthly progress payment or final payment. The current labor and equipment rates for the District's Maintenance and Operations department will be made available to the Contractor at the preconstruction conference. The District shall have the right to deduct the total amount of any unpaid District repair bill from the money due or to become due the Contractor.

2.2. DISTRICT'S RIGHT TO STOP THE WORK

If the Contractor fails to correct Work which is not in accordance with the requirements of the Contract Documents as required by paragraph 12.2, or persistently fails to carry out Work in accordance with the Contract Documents, the District, after providing Notice pursuant to paragraph 2.4, by written order signed personally or by an agent specifically so empowered by the District in writing, may order the Contractor to stop the Work or any portion thereof, until the cause for such order has been eliminated. The right of the District to stop the Work shall not give rise to a duty on the part of the District to exercise this right for the benefit of the Contractor or any other person or entity, except to the extent required by Article 6. The District shall have the authority to suspend the work wholly or in part due to unsuitable prosecution of the Work, or for such time as it may deem necessary, due to the failure on the part of the Contractor to carry out orders given or to perform any provisions of the Contract or for any other reason. The Contractor shall immediately comply with such written order of the District to suspend the work wholly or in part. The suspended work shall be resumed only when conditions are favorable or methods are corrected, as ordered or approved in writing by the District.

If a suspension of the work is ordered by the District due to the failure on the part of the Contractor to carry out orders or to perform any provisions of the Contract, the days on which the suspension order is in effect shall be considered working days, and shall not in any way modify or invalidate any of the provisions of this Contract, and the Contractor shall not be entitled to any damages or compensation on account of such suspension or delay.

2.3. DISTRICT'S RIGHT TO CARRY OUT THE WORK

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails (within a three-day period after receipt of written notice or the time period

expressly stated in the written notice from the District) to commence and continue correction of such default or neglect with diligence and promptness, the District may correct such deficiencies without prejudice to other remedies the District may have. In such case, the Contractor will be invoiced the cost of correcting such deficiencies, including compensation for additional professional and internally generated services and expenses made necessary by such default, neglect, or failure. The invoice amount shall be deducted from the next payment due the Contractor. If payments then or thereafter due the Contractor are not sufficient to cover such amounts, the Contractor shall pay the difference to the District.

ARTICLE 3 THE CONTRACTOR

3.1. SUPERVISION AND CONSTRUCTION PROCEDURES

3.1.1 Contractor

The Contractor shall supervise and direct the Work using the Contractor's best skill and attention. The Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences, procedures, and coordinating all portions of the Work under the Contract, unless Contract Documents give other specific instructions concerning these matters. If any of the Work is performed by contractors retained directly by the District, Contractor shall be responsible for the coordination and sequencing of the Work of those other contractors so as to avoid any impact on the Project Schedule pursuant to the requirements of Article 6. Specific duties of the Contractor shall be in accordance with Title 24 of the California Code of Regulations. Contractor shall fully comply with any and all reporting requirements of Education Code section 17309 in the manner prescribed by Title 24.

Contractor shall assume responsibility for design of systems and fabrications needed to meet performance criterion described in the Contract Documents. Design by Contractor shall include, but is not limited to, concrete form work, casework joinery, fire sprinkler systems, and mechanical and electrical systems represented diagrammatically on Contract Drawings. Design shall be governed by descriptive criteria specified for each item. Contractor shall also assume responsibility for temporary structures used to implement construction, such as shoring and scaffolding. Where noted in the Contract Documents, or requested by the Architect, the Contractor will furnish design adequacy support stamped by appropriate, licensed California Engineers.

3.1.2 Contractor Responsibility

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

The Contractor shall comply with all air pollution control rules, regulations, ordinances, and statutes which apply to any work performed pursuant to the Contract, including any air pollution control rules, regulations, ordinances, and statutes specified in section 11017 of the Government Code.

Unless otherwise provided in the Contract Documents, material to be disposed of shall not be burned.

The Contractor shall comply with all rules, regulations, ordinances, and statutes which apply to water pollution, including any State requirements.

The Contractor shall comply with all sound control and noise level rules, regulations, and ordinances which apply to any work performed pursuant to the Contract.

Each internal combustion engine, used for any purpose on the job or related to the job, shall be equipped with a muffler of a type recommended by the manufacturer. No internal combustion engine shall be operated on the project without said muffler.

3.1.3 Obligations not Changed by Architect's Actions

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

3.1.4 Acceptance/Approval of Work

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

3.1.5 Compliance with California Education Code Section 45125.2, as follows:

California Education Code section 45125.2 requires entities providing services to the District, where the employee of the entity or subcontractor will have contact with pupils, to ensure the safety of the pupils by one or more of the following methods:

1. The installation of a physical barrier at the Work Site, at the expense of Contractor, to limit contact with pupils.
2. Continual supervision and monitoring of Contractor and Subcontractors by an employee of Contractor whom the Department of Justice has ascertained has not been convicted of a violent or serious felony. A violent felony is defined in Penal Code section 667.5(c) and a serious felony is defined in Penal Code section 1192.7(c).

All bidders shall submit at the time of bid opening a fully executed "Declaration Regarding Employee Fingerprinting and Criminal Background Check." Although Education Code section 45125.2(a)(3) provides an option regarding District surveillance, the District does not provide this as an option to the Contractor. Sample of Certification form follows and is provided in the Bidding Documents.

**DECLARATION REGARDING EMPLOYEE FINGERPRINTING
AND
CRIMINAL BACKGROUND CHECK**

I, _____, declare as follows:

1. Where the employees will have contact with pupils, the safety of the pupils will be ensured by one or more of the following:
 - a) The installation of a physical barrier, at the expense of the Contractor, at the Work Site to limit contact with pupils.
 - b) Continual supervision and monitoring of all employees of Contractor and Subcontractor by an employee of Contractor whom the Department of Justice has ascertained has not been convicted of a violent or serious felony.

I am a duly authorized representative of _____ for the purpose of providing this certification and declare under penalty of perjury and the laws of the State of California that the foregoing is true and correct.

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

Signature

Printed Name/Title

3.2. SUPERINTENDENT

3.2.1 Full-Time Superintendent

The Contractor shall provide a competent, English-speaking superintendent and assistants as necessary who shall be in attendance at the Project Site during performance of the Work. The superintendent shall represent the Contractor, and communications given to the superintendent shall be as binding as if given to the Contractor.

3.2.2 Staff

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

3.2.3 Right to Remove

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

3.3. LABOR AND MATERIALS

3.3.1 Contractor to Provide

Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, material, equipment, tools, construction equipment and machinery, water, heat, 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.

3.3.2 Quality

Unless otherwise specified, all materials and equipment to be permanently installed in the Project shall be new and shall be of such quality as required to satisfy the standards of the Contract Documents. The Contractor shall, if requested, furnish satisfactory evidence as to kind and quality of all materials and equipment. All labor shall be performed by workers skilled in their respective trades, and shall be of such quality so that work in accordance with the standards of construction set forth in Contract Documents will result. All work and materials shall be in full accordance with the latest rules and regulations of the State Fire Marshall; the Safety Orders of the Division of Industrial Safety; the California Electrical Code; the State Plumbing Code; the National Fire Protection Association; the Manual of Accident Prevention in Construction published by the Associated General Contractors of America; and other applicable state laws or regulations pertaining to locations. Nothing in these Drawings or Specifications shall be construed as permitting work not in accordance with these codes.

When specified brands or kinds of material are called for, they are mentioned merely as standards and the Contractor has the option of using any other brand of equal quality provided that Contractor shall have submitted to the Architect in timely fashion, proof that such other brand is in all respects

equal in quality to the specified brand or material; and provided that Architect shall have approved such other brand or material as an acceptable substitution. All substitution submittals shall comply with Section 3.9. infra.

Any material specified by reference to the number, symbol, or title of a specified standard such as a Commercial Standard, a Federal Specification, a trade association standard, or other similar standards, shall comply with the requirements in the latest approved revision thereof and any amendments or supplements thereto in effect on the date of Notice to Contractors, except as limited to type, class, or grade, or modified in such reference.

The standards referred to, except as modified in the Specifications, shall have full force and effect as though printed in these Specifications. These standards are not furnished to bidders, for the reason that the manufacturers and trades involved are assumed to be familiar with their requirements.

Where it is required in the Specifications that materials, products, processes, equipment or the like be installed or applied in accordance with manufacturers' instructions, directions, or specifications, it shall be construed to mean that said application or installation shall be in strict accordance with the printed instructions furnished by the manufacture of the materials considered for use under conditions similar to those at the job Site.

3.3.3 Replacement

Any work, materials, or equipment, which do not conform to these requirements or the standards set forth in the Contract Documents, may be disapproved and rejected by the District, in which case, they shall be removed and replaced by the Contractor. The Contractor shall protect and preserve the work from all damage or accident, providing any temporary roofs, window and door coverings, boxings, or other construction as required. This shall include any adjoining property of the District or others affected by the work of the Contractor.

The Contractor shall assume full responsibility for all glass and plastic glazing installed under this Contract against damage from any source during construction. The Contractor shall replace all broken, cracked or scratched glass or plastic without expense to the District until date of Final completion.

3.3.4 Discipline

The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Contract in accordance with paragraph 10.3.4 including, but not limited to, Subcontractors, and material or equipment suppliers retained for the Project. The Contractor shall not permit employment of unfit persons or persons not skilled in tasks assigned to them.

3.4. WARRANTY

The District shall not, in any way or manner, be answerable or suffer loss, damage, expense or liability for any loss or damage that may happen to said building, work, or equipment or any part thereof, or in, on, or about the same during its construction and before acceptance. The Contractor unqualifiedly warrants all work and materials to be free of defects whether performed or installed by it or by any subcontractor or supplier in the project which is the subject of the Contract, unless

a lesser quality is expressly authorized in the Plans and Specifications, in which event Contractor unqualifiedly warrants such lesser quality. Contractor further warrants that the work as performed by Contractor, subcontractor, or supplier will conform with the Plans and Specifications or any written authorized deviations therefrom.

3.5. TAXES

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

3.6. PERMITS, FEES AND NOTICES

3.6.1 Payment

The Contractor shall secure and pay for all permits and governmental fees, licenses, and inspections necessary for proper execution and completion of the Work which are customarily secured after execution of the Contract and are legally required by any authority having jurisdiction over the Project, except those required by the Division of the State Architect (DSA). District shall be responsible for all testing and inspection as required by the DSA on-Site or within the distance limitations set forth in paragraph 13.5.2, unless a different mileage range is specified in the Special Conditions.

3.6.2 Compliance

The Contractor shall comply with and give notices required by any law, ordinance, rule, regulation, and lawful order of public authorities bearing on performance of the Work.

3.6.3 Responsibility

If the Contractor performs Work that it knows, or should have known, is contrary to any law, statute, ordinance, building code, rule or regulation, the Contractor shall assume full responsibility for such Work and shall bear the attributable cost of correction or Project delay. If the Contractor wrongfully causes damage to the Work or property of any separate contractor, the Contractor shall upon due notice promptly attempt to settle with such other contractor by agreement, or otherwise to resolve the dispute. If such separate contractor sues the District on account of any damage alleged to have been caused by the Contractor, the District shall notify the Contractor who shall defend such proceedings at the Contractor's expense, and if any judgment or award against the District arises therefrom the Contractor shall pay or satisfy it and shall reimburse the District for all attorneys' fees and court costs which the District has incurred.

The Contractor shall properly locate all buildings and other improvements off site or on site, and shall furnish all engineering required for such work, including the location and identification of bench marks, markers, property lines, lines and grades. The Contractor shall check floor elevations and grades against data shown on the drawings, and shall report any discrepancies to the Architect before laying out the work.

Where work of one trade joins or is on other work, there shall be no discrepancy when said is completed. In engaging one kind of work with another, marring or damaging same will not be permitted. Should improper work of any trade be covered by another that results in damage or

defects, the whole work affected shall be made good by the Contractor without expense to the District.

The Contractor shall consult the other Contractors on the project, if any, and the Architect, regarding the installation of such other Contractor's work before starting the various phases of his work, in order to avoid the possibility of the removal of his work to permit others to install their work.

Assistance required by the Architect in obtaining measurements or information on the work shall be furnished fully and efficiently by the Contractor.

3.7. CONTRACTOR'S CONSTRUCTION SCHEDULES

3.7.1 Requirements

The Contractor, promptly after being awarded the Contract, shall prepare and submit for the District's and the Architect's information the construction schedule for the Work. The schedule shall not exceed the time limits under the Contract Documents and shall comply with all of the scheduling required by the Specifications. The Contractor, within ten (10) working days after being awarded the Contract, shall prepare and submit for the District's and Architect's information and approval, an estimated progress schedule for the Work. The schedule format shall be Graphic Critical Path Method as specified in the Specifications and or Standard Specifications.. The progress schedule shall be related to the entire project to the extent required by the Contract documents, and shall provide for the expeditious and practicable execution of the work. Contractor shall be obligated to perform the Work in accordance with the schedule, and any deviation from the schedule must first be approved by the Architect and the District.

The progress schedule shall be as follows:

1. Requirements included:
 - a) Procedures for Preparation and Submittal of Construction Progress Schedules and Periodical Updating.
 - b) Before commencing work, the Contractor shall submit a complete plan and schedule of his proposed operations to the Architect for approval. In Preparation of this plan and schedule, the Contractor shall make due allowance for and include the following:
 - 1) Preparation of equipment and material submittals for review.
 - 2) Architect review of each submittal.
 - 3) Delivery lead times for equipment.
2. Format:
 - a) Schedule format shall be Graphic Critical Path Method (CPM)
 - b) The graphic schedule shall be revised and resubmitted monthly for review and approval by Architect and District and be kept reasonably current.
 - c) Schedule: Schedule shall break down major trades, such as carpentry, millwork, concrete work, plumbing, electrical and heating and ventilation, to indicate rough and finish work. List all

subcontractors, show time of material and equipment submittal for Architect's review.

- d) Monitoring: Schedule shall be monitored monthly to reflect changes.
- e) Scale and Spacing: To provide space for notations and revisions.

3. Content:

- a) Show complete sequence of construction by activity, with dates for beginning and completion of each element of construction.
- b) Identify each item by major Specification section number.
- c) Identify work of separate stages or separate floors, and other logically grouped activities.
- d) Show accumulated percentage of completion of each item, and total percentage of Work completed, as of the first day of each month.
- e) Provide separate schedule of submittal dates for shop drawings, product data, and samples, including District furnished products and dates reviewed submittals will be required from Architect. Show decision dates for selection of finishes.
- f) Show dates for when District-furnished products are required.
- g) Show all proposed shutdowns of utilities for review and approval of District. Information shall include location and duration of intended shutdown.
- h) Use a Critical Path Method (CPM), time scaled network diagram showing continuous flow from left to right, computer generated with a software program of Primavera Project Planner or Sure Track.
- i) Demonstrate adequate planning for the work including a practical plan to complete the work within the Contract Time.
- j) Identify all work activities which constitute the critical path.
- k) Identify all other major work activities, including but not limited to, equipment, materials, building elements, items requiring District's prior approval, submittals, and review of submittals, system test dates, scheduled over time, dates for District furnished items, dates for access to specific sites, dates for District furnished utilities, connection and relocation of existing utilities, and connection to and/or penetration of existing structures.
- l) Indicate planned mobilization of materials, equipment and work force.
- m) Indicate planned sequence of early operations or procurement, including submittals.
- n) A minimum of three days shall be allowed for District's review of all submittals.
- o) Indicate all dependencies and logic between activities.
- p) Provide a brief description of each work activity, and duration in days, and identifying the trades performing the work.
- q) Not provide for completion of the work required under these contract documents either sooner than, or later than, the contractual completion date set forth in these Contract Documents.

4. Revisions to Schedules:
 - a) Indicate progress of each activity to date of submittal, and projected completion date of each activity.
 - b) Identify schedule activities modified since previous submittal, major changes in scope, and other identifiable changes, including approved time extensions, as well as time extensions which are requested and awaiting approval. Show how the changes impact the critical path schedule and indicate if time is added to the completion of the project. Submittal of schedule information is a prerequisite to entitlement of time extensions.
 - c) Provide narrative report to define problem areas, anticipated delays, and impact on Schedule. Report corrective action taken, or proposed, and its effect.
5. Submittals:
 - a) Submit initial Schedules within ten (10) working days after date of Agreement. After review, resubmit required revised data within ten (10) working days.
 - b) Submit two opaque reproductions and one reproducible transparency.
 - c) District or District's representative will review the proposed progress schedule for compliance with these Contract Documents. If contractor's proposed progress schedule does not comply with the requirements of these Contract Documents, it may be returned to Contractor for revisions necessary to bring the proposed progress schedule into compliance with the Contract Documents. Should Contractor fail or refuse for any reason to properly and timely submit to District, Contractor's proposed progress schedule, Contractor agrees it thereby waives any claim it may have then or that may arise in the future for delay, acceleration, impact, inefficiency, or the like no matter how characterized.
6. Distribution:
 - a) Distribute copies of reviewed Schedules to job site file, subcontractors, suppliers, and other concerned entities.
 - b) Instruct recipients to promptly report, in writing, problems anticipated by projections shown in Schedules.

3.7.2 Failure to Meet Requirements

Failure of the Contractor to provide proper schedules as required by this paragraph may, at the sole discretion of District, constitute grounds to withhold, in whole or in part, progress payments to the Contractor.

3.7.3 Schedule Float Time

The Contractor acknowledges and agrees that District shall not be liable for any costs of delay to any schedule except to the extent that District causes delay beyond the Contract Time. Contractor acknowledges and agrees that Schedule Float shall not be for the exclusive use or benefit of either

the Contractor or the District. Available Schedule Float (including any difference in negative float between a delayed activity and the most delayed activity if the project is delayed) may be appropriated by either party without thereby creating a compensable delay for the other party or affecting the right of the appropriating party to recover actual or liquidated damages for any delay by the other party.

3.8. DOCUMENTS AND SAMPLES AT THE SITE

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

3.9. SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES

3.9.1 Submittals defined

3.9.1.1 Shop Drawings

The term “shop drawings” as used herein means drawings, diagrams, schedules, and other data, which are prepared by Contractor, Subcontractors, manufacturers, suppliers, or distributors illustrating some portion of the Work, and includes: illustrations; fabrication, erection, layout and setting drawings; manufacturer’s standard drawings; schedules; descriptive literature, instructions, catalogs, and brochures; performance and test data including charts; wiring and control diagrams; and all other drawings and descriptive data pertaining to materials, equipment, piping, duct and conduit systems, and methods of construction as may be required to show that the materials, equipment, or systems and their position conform to the requirements of the Contract Documents. The Contractor shall obtain and submit with the shop drawings all seismic and other calculations and all product data from equipment manufacturers. “Product data” as used herein are illustrations, standard schedules, performance charts, instructions, brochures, diagrams, and other information furnished by the Contractor to illustrate a material, product, or system for some portion of the Work. As used herein, the term “manufactured” applies to standard units usually mass-produced, and “fabricated” means items specifically assembled or made out of selected materials to meet individual design requirements. Shop drawings shall: establish the actual detail of all manufactured or fabricated items, indicate proper relation to adjoining work, amplify design details of mechanical and electrical systems and equipment in proper relation to physical spaces in the structure, and incorporate minor changes of design or construction to suit actual conditions.

3.9.1.2 Samples

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

3.9.1.3 Contractor's Responsibility

Contractor shall obtain and shall submit all required shop drawings and samples in accordance with Contractor's "Schedule for Submission of Shop Drawings and Samples" as required in the Specifications with such promptness as to cause no delay in its own Work or in that of any other contractor or subcontractor but in no event later than ninety (90) calendar days after the execution of the Contract. No extensions of time will be granted to Contractor or any Subcontractor because of its failure to have shop drawings and samples submitted in accordance with the Schedule. Each Subcontractor shall submit all shop drawings, samples, and manufacturer's descriptive data for the review of the District, the Contractor, and the Architect through the Contractor. By submitting shop drawings, product data, and samples, the Contractor or submitting party (if other than Contractor) represents that it has determined and verified all materials, field measurements, catalog numbers, related field construction criteria, and other relevant data in connection with each such submission, and that it has checked, verified, and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents. At the time of submission, any deviation in the shop drawings, product data, or samples from the requirements of the Contract Documents shall be described in a transmittal accompanying the submittal. However, submittals shall not be used as a means of requesting a substitution, the procedure for which is defined in paragraph 3.9.4, "Substitutions." Review by District and Architect shall not relieve the Contractor or any Subcontractor from its responsibility in preparing and submitting proper shop drawings in accordance with the Contract Documents. Contractor shall stamp, sign, and date each submittal indicating its representation that the submittal meets all of the requirements of the Contract Documents. Any submission, which in Architect's opinion is incomplete, contains numerous errors, or has been checked only superficially will be returned un-reviewed by the Architect for resubmission by the Contractor.

3.9.1.4 Extent of Review

In reviewing shop drawings, the Architect will not verify dimensions and field conditions. The Architect will review and approve shop drawings, product data, and samples for aesthetics and for conformance with the design concept of the Work and the information given in the Contract Documents within 30 days of the Architect's receipt of said shop drawings, product data and sample submittal. Provided, however, the case of large or complex submittals, such as, but not limited to, structural steel shop drawings, mechanical equipment, electrical equipment and special system components, the Architect may require additional review time. The Contractor shall breakdown critical submittals into separate packages so as to expedite the review process of each package. The coordination and prioritization of the overall set of submittals shall be the responsibility of the Contractor. The Architect's review shall neither be construed as a complete check nor relieve the Contractor, Subcontractor, manufacturer, fabricator, or supplier from responsibility for any deficiency that may exist or from any departures or deviations from the requirements of the Contract Documents unless the Contractor has, in writing, called the Architect's attention to the deviations at the time of submission. The Architect's review shall not relieve the Contractor or Subcontractors from responsibility for errors of any sort in shop drawings or equipment and material schedules, for proper fitting of the Work, or from the necessity of furnishing any Work required by the Contract Documents, which may not be indicated on shop drawings when reviewed. Contractor and Subcontractors shall be solely responsible for any quantities, which may be shown on the shop drawings.

3.9.2 Drawing Submission Procedure

3.9.2.1 Transmittal Letter and Other Requirements

All shop drawings shall be properly identified with the name of the Project and dated, and each lot submitted must be accompanied by a letter of transmittal referring to the name of the Project and to the Specification section number for identification of each item clearly stating in narrative form, as well as “clouding” on the submissions, all qualifications, departures, or deviations from the Contract Documents, if any. Shop drawings, for each section of the Work, shall be numbered consecutively, and the numbering system shall be retained throughout all revisions. All Subcontractor submissions shall be made through the Contractor. Each drawing shall have a clear space for the stamps of Architect and Contractor. Only shop drawings required to be submitted by the Contract Documents shall be reviewed.

3.9.2.2 Copies Required

Each submittal shall include one (1) legible, reproducible sepia and five (5) legible prints of each drawing, including fabrication, erection, layout and setting drawings, and such other drawings as required under the various sections of the Specifications until final acceptance thereof is obtained. Digital submissions of drawings and other materials may be accepted upon the written approval of both the District and Architect. Subcontractor shall submit copies, in an amount as requested by the Contractor, of: manufacturers’ descriptive data for materials, equipment, and fixtures, including catalog sheets showing dimensions, performance, characteristics, and capacities; wiring diagrams and controls; schedules; all seismic calculations and other calculations; and other pertinent information as required.

3.9.2.3 Corrections

The Contractor shall make any corrections required by Architect and shall resubmit as required by Architect the required number of corrected copies of shop drawings or new samples until approved. Contractor shall direct specific attention in writing or on resubmitted shop drawings to revisions other than the corrections required by the Architect on previous submissions. Professional services required for more than one (1) re-review of required submittals of shop drawings, product data, or samples are subject to charge to the Contractor pursuant to paragraph 4.4.

3.9.2.4 Approval Prior to Commencement of Work

No portion of the Work requiring a shop drawing or sample submission shall be commenced until the submission has been reviewed by District and approved by Architect unless specifically directed in writing by the District. All such portions of the Work shall be in accordance with approved shop drawings and samples.

3.9.3 Sample Submissions Procedure

3.9.3.1 Samples Required

In case a considerable range of color, graining, texture, or other characteristics may be anticipated in finished products, a sufficient number of samples of the specified materials shall be furnished by the Contractor to indicate the full range of characteristics, which will be present in the finished products; and products delivered or erected without submittal and approval of full range samples shall be subject to rejection. Except for range samples, and unless otherwise called for in the various sections of the Specifications, samples shall be submitted in duplicate. All samples shall be marked, tagged, or otherwise properly identified with the name of the submitting party, the name of the Project, the purpose for which the samples are submitted, and the date and shall be

accompanied by a letter of transmittal containing similar information, together with the Specification section number for identification of each item. Each tag or sticker shall have clear space for the review stamps of Contractor and Architect.

3.9.3.2 Labels and Instructions

Samples of materials, which are generally furnished in containers bearing the manufacturers' descriptive labels and printed application instructions, shall, if not submitted in standard containers, be supplied with such labels and application instructions.

3.9.3.3 Architect's Review

The Architect will review and, if appropriate, approve submissions and will return them to the Contractor with the Architect's stamp and signature applied thereto, indicating the appropriate action in compliance with the Architect's standard procedures.

3.9.3.4 Record Drawings and Annotated Specifications

The Contractor will prepare and maintain on a current basis an accurate and complete set of Record Drawings showing clearly all changes, revisions, and substitutions during construction, including, without limitation, field changes and the final location of all mechanical equipment, utility lines, ducts, outlets, structural members, walls, partitions, and other significant features, and Annotated Specifications showing clearly all changes, revisions, and substitutions during construction. A copy of such Record Drawings and Annotated Specifications will be delivered to District in accordance with the Schedule prepared by Contractor. In the event of a specification that allows Contractor to elect one of several brands, makes, or types of material or equipment, the annotations shall show which of the allowable items the Contractor has furnished. The Contractor will update the Record Drawings and Annotated Specifications as often as necessary to keep them current but no less often than weekly. The Record Drawings and Annotated Specifications shall be kept at the Site and available for inspection by the District and the Architect. On completion of the Contractor's portion of the Work and prior to Application for Final Payment, the Contractor will provide one complete set of Record Drawings and Annotated Specifications to the District, certifying them to be a complete and accurate reflection of the actual construction conditions of the Work. The Contractor must update the record drawings as work progresses. At the end of each month the Architect, and project inspector shall, review the record drawings. If the records are incomplete, or incorrect, an appropriate amount of dollars, equivalent to the cost of uncovering the work to determine the locations of piping and the like, may be deducted from the next progress payment. The deducted sum will be withheld until the record drawings are updated and/or corrected.

3.9.3.5 Equipment Manuals

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

to the Contractor, who shall assemble these manuals for all divisions of the Work, review them for completeness, and submit them to the District through the Architect.

3.9.3.6 District's Property

All shop drawings and samples submitted shall become the District's property.

3.9.4 Substitutions

3.9.4.1 One Product Specified

Unless the Specifications state that no substitution is permitted, whenever in the Contract Documents any specific article, device, equipment, product, material, fixture, patented process, form, method, or type of construction is indicated or specified by name, make, trade name, or catalog number, with or without the words "or equal," such specification shall be deemed to be used for the purpose of facilitating description of material, process, or article desired and shall be deemed to be followed by the words "or equal." Contractor may, unless otherwise stated, offer any material, process, or article, which shall be substantially equal or better in every respect to that so indicated or specified and will completely accomplish the purpose of the Contract Documents. When specified brands or kinds of material are called for, they are mentioned merely as standards and the Contractor has the option of using any other brand of equal quality if approved by the Architect. Any materials named in the Specifications, or which may be substituted, must, if so desired by the Architect be tested or examined for compliance with the project requirements at the expense of Contractor.

Any material specified by reference to the number, symbol, or title of a specified standard such as a Commercial Standard, a Federal Specification, a trade association standard, or other similar standards, shall comply with the requirements in the latest approved revision thereof and any amendments or supplements thereto in effect on the date of Notice to Contractors, except as limited to type, class, or grade, or modified in such reference.

The standards referred to, except as modified in the Specifications, shall have full force and effect as though printed in these Specifications. These standards are not furnished to bidders, for the reason that the manufacturers and trades involved are assumed to be familiar with their requirements.

Where it is required in the Specifications that materials, products, processes, equipment or the like be installed or applied in accordance with manufacturers' instructions, directions, or specifications, it shall be construed to mean that said application or installation shall be in strict accordance with the printed instructions furnished by the manufacture of the materials considered for use under conditions similar to those at the job site.

3.9.4.2 Two or More Products Specified

When two or more acceptable products are specified for an item of the Work, the choice will be up to the Contractor. Contractor shall utilize the same product throughout the Project. If the required notice is not provided and an "or equal" substitution is requested, the District, at its sole discretion, may refuse to consider the substitution unless the product specified is no longer commercially available. If the District allows the substitution to be proposed despite the lack of proper notice, the Contractor will be invoiced by the District for the professional fees incurred by the Architect or Architect's consultants in reviewing the proposed substitution.

3.9.4.3 Substitution Request Form

Requests for substitutions of products, materials, or processes other than those specified must be made on the Substitution Request form available from the District within thirty-five (35) calendar days of the execution of the established date for the start of construction stated in the Notice to Proceed. Any Requests submitted after the thirty-five (35) days will not be considered. A Substitution Request must be accompanied by evidence as to whether or not the proposed substitution: is equal in quality and serviceability to the specified item; will entail no changes in detail and construction of related work; will be acceptable in consideration of the required design and artistic effect; will provide no cost disadvantage to District; and will require no excessive or more expensive maintenance, including adequacy and availability of replacement parts. The burden of proof of these facts shall be upon the Contractor. The Contractor shall furnish with its request all drawings, specifications, samples, performance data, calculations, and other information as may be required to assist the Architect and the District in determining whether the proposed substitution is acceptable. The final decision shall be the District's. The written approval of the District, consistent with the procedure for Change Orders, shall be required for the use of a proposed substitute material. District may condition its approval of the substitution upon delivery to District of an extended warranty or other assurances of adequate performance of the substitution. All risks of delay due to the Division of the State Architect's, or any other governmental agency having jurisdiction, approval of a requested substitution shall be on the requesting party.

3.9.4.4 List of Manufacturers and Products Required

The Subcontractor shall prepare and submit to the Contractor within thirty (30) days of execution of the Subcontract comprehensive lists, in quadruplicate, of the manufacturers and products proposed for the Project, including information on materials, equipment, and fixtures required by the Contract Documents, as may be required for Contractor's or Architect's preliminary approval. Approval of such lists of products shall not be construed as a substitute for the shop drawings, manufacturer's descriptive data, and samples, which are required by the Contract Documents, but rather as a base from which more detailed submittals shall be developed for the final review of the Contractor and the Architect.

3.9.5 Deferred Approvals

Deferred approvals shall be submitted and processed pursuant to the requirements of Division 1 of the Specifications. Deferred approval items may require longer or multiple reviews. The Contractor shall apply skill and knowledge to expedite the deferral approval items from preparation to final approval. The Contractor shall schedule the project activities in order to avoid critical path delays as a result of the deferred approval process. All risks of delay due to the Division of the State Architect's, or any other governmental agency having jurisdiction, approval of a deferred approval shall be on the requesting party.

3.9.6 Conformance With Codes and Standards

All work and materials shall be in full accordance with the latest adopted standards and regulations of the State Fire Marshal; the California Building Code; Title 24 of the California Administrative Code; the California Electrical Code; the California Plumbing Code; American With Disabilities Act; and all other applicable codes, laws, or regulations. Nothing in these Contract Documents is to be construed to permit work not conforming to these requirements. Contractor agrees that

immediately upon signing of the contract, Contractor will diligently review the Contract Documents and determine if any work described or inferred within the Contract Documents is not in conformance with these requirements. Should Contractor discover work within the Contract Documents not in conformance with these requirements, Contractor agrees to immediately notify Architect in writing of said non-conformance, and to not proceed with non-conforming work. When the work detailed in the Contract Documents differs from governing codes, it is understood and agreed that the Contract Sum is based upon the more expensive standard.

3.9.7 Noise

At existing school sites or when construction activity extends into the period when school is occupied, the contractor shall minimize construction noise and disallow radio, music and other auditory distractions that will disrupt teaching in a classroom. When tests are given in a school, the contractor may be asked to reschedule work to disallow disruption in the classroom.

3.9.8 Smoking and Alcoholic Beverages

Smoking, drugs and alcoholic beverages of any kind are not allowed on school grounds at any time.

3.10. CUTTING AND PATCHING

3.10.1 Scope

The Contractor shall be responsible for cutting, fitting, or patching required to complete the Work or to make its parts fit together properly.

3.10.2 Consent

The Contractor shall not damage or endanger a portion of the Work or fully or partially completed construction of the District or separate contractors by cutting, patching, or otherwise altering such construction, or by excavation. The Contractor shall not cut or otherwise alter such construction by the District or a separate contractor except with written consent of the District and of such separate contractor; such consent shall not be unreasonably withheld. The Contractor shall not unreasonably withhold from the District or a separate contractor the Contractor's consent to cutting or otherwise altering the Work. All cutting shall be done promptly, and all repairs shall be made as necessary.

3.10.3 Structural Members

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

3.10.4 Subsequent Removal

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

3.11. CLEANING UP

3.11.1 Contractor's Responsibility

The Contractor shall keep the Site and surrounding area free from accumulation of waste material or rubbish caused by operations under the Contract. The Site shall be maintained in a neat and orderly condition. All crates, cartons, paper, and other flammable waste materials shall be removed from Work areas and properly disposed of at the end of each day. The Contractor shall remove from and about the Site the waste materials, rubbish, tools, construction equipment, machinery, and materials no longer required for the Work. At completion of work, remove all marks, stains, fingerprints, dust, dirt, and paint drippings from all surfaces. Wash tile, plumbing and other fixtures clean. Clean and polish all hardware and other unpainted metals. Remove all temporary labels, tags and paper coverings. Cleaning, polishing, sealing, waxing and all other such finish operations indicated on the Drawings or required in the Specifications shall be taken to indicate the required condition at the time of acceptance of all work under the Contract.

Before final acceptance, employ professional window cleaners to clean all plastic and glass surfaces and mirrors of putty, paint materials, stains and dirt, without scratching or injuring the plastic and glass. Leave the work bright, clean and polished.

3.11.2 Failure to Cleanup

If the Contractor fails to clean up as provided in the Contract Documents, the District may do so, and the cost thereof shall be invoiced to the Contractor and deducted from the next progress payment. Each Subcontractor shall have the responsibility for the cleanup of its own Work. If the Subcontractor fails to clean up, the Contractor may do so and back-charge the Subcontractor.

3.11.3 Construction Buildings

When directed by the District or the Architect, Contractor and Subcontractor shall dismantle temporary structures, if any, and remove from the Site all construction and installation equipment, fences, scaffolding, surplus materials, rubbish, and supplies belonging to Contractor or Subcontractor. If the Contractor does not remove the tools, equipment, machinery, and materials within fifteen (15) days after completion of its Work, then they shall be deemed abandoned, and the District can dispose of them for its own benefit in whatever way it deems appropriate.

3.12. ACCESS TO WORK

The Contractor shall provide the District, the Architect, and the Inspector, access to the Work in preparation and progress wherever located.

3.13. ROYALTIES AND PATENTS

3.13.1 Payment and Indemnity

The Contractor shall pay all royalties and license fees. The Contractor shall defend suits or claims of infringement of patent rights and shall hold the District and the Architect harmless from loss on account thereof but shall not be responsible for such defense or loss when a particular design, process, or product of a particular manufacturer is required by the Contract Documents. However, if the Contractor has reason to believe the required design, process, or product is an infringement of a patent, the Contractor shall be responsible for such loss unless such information is promptly furnished to the Architect.

3.13.2 Review

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

3.14. **OVERLOADING**

3.14.1 The Contractor Shall Determine Safe Loading

The Contractor shall determine safe loading capacities and shall not overload any structure beyond its safe capacity during construction or remodeling.

In addition to assuming full responsibility for bodily injury resulting from any such overloading, the Contractor shall repair to the Architect's satisfactory or reimburse the District for the cost of repairing damage resulting therefrom.

ARTICLE 4 ADMINISTRATION OF THE CONTRACT

4.1. **ARCHITECT**

4.1.1 Modification

Duties, responsibilities, and limitations of authority of the Architect as set forth in the Contract Documents shall not be restricted, modified, or extended without written consent of the District and Architect which shall not be unreasonably withheld.

4.1.2 Termination

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

4.2. **ARCHITECT'S ADMINISTRATION OF THE CONTRACT**

4.2.1 Status

The Architect will provide administration of the Contract as described in the Contract Documents and will be the District's representative during construction, until final payment is due. The Architect will advise and consult with the District. The Architect will have authority to act on behalf of the District only to the extent provided in the Contract Documents, unless otherwise modified in writing in accordance with other provisions of the District/Architect Agreement. The Architect will have all responsibilities and power established by law including California Code of Regulations, Title 24.

4.2.2 Site Visits

The Architect will visit the Site at intervals necessary in the judgment of the Architect or as otherwise agreed by the District and the Architect in writing to become generally familiar with the progress and quality of the completed Work and to determine in general if the Work is being performed in a manner indicating that the Work, when completed, will be in accordance with the Contract Documents. The Architect's design consultants may also visit the Site as necessary in the

judgment of the Architect. However, neither the Architect, nor its consultants, will be required to make exhaustive or continuous on-site inspections to check quality or quantity of the Work. On the basis of its on-site observations, the Architect will keep the District informed of the progress of the Work.

4.2.3 Limitations of Construction Responsibility

The Architect shall not have control over, charge of, or be responsible for construction means, methods, techniques, schedules, sequences or procedures, fabrication, procurement, shipment, delivery, receipt, installation, or for safety precautions and programs in connection with the Work, since these are solely the Contractor's responsibility under the Contract Documents. The Architect shall not be responsible for the Contractor's, Subcontractors', material or equipment suppliers', or any other person's schedules or failure to carry out the Work in accordance with the Contract Documents. The Architect shall not have control over or charge of acts or omissions of the Contractor, Subcontractors, their agents or employees, or any other persons or entities performing or supplying portions of the Work. The Contractor shall not be relieved of obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Architect in the Architect's administration of the Contract Documents, or by tests, inspections, or approvals required or performed by persons other than the Contractor. The Architect's duties shall not extend to the receipt, inspection, and acceptance on behalf of the District of furniture, furnishings, and equipment at the time of their delivery to the premises and installation. This shall not be construed to change the Architect's authority or responsibility relative to Section 4-333 and 4-341 of Title 24, Part 1 California Code of Regulations.

4.2.4 Communications Facilitating Contract Administration

Except as otherwise provided in the Contract Documents or when direct communications are warranted by special circumstances, the District and the Contractor shall communicate through the Architect. Where direct communication is necessary between the District and the Contractor, the Architect shall be promptly informed, and shall receive copies of all written communications. Communications by and with the Architect's consultants shall be through the Architect. Communications by and with Subcontractors and material or equipment suppliers shall be through the Contractor.

4.2.5 Payment Applications

Pursuant to Article 9, based on the Architect's observations, the Contractor's Applications for Payment, and the Inspector's approval, the Architect will review and make recommendations to the District regarding the amounts due the Contractor on the Certificates for Payment.

4.2.6 Rejection of Work

In addition to the rights, duties, and obligations of the Inspector under this Article, the Architect may recommend to the District that the District reject Work which does not conform to the Contract Documents. Whenever the Architect considers it necessary or advisable to achieve the intent of the Contract Documents, the Architect may recommend to the District that the District require additional inspection or testing of the Work in accordance with paragraph 13.5.5, whether or not such Work is fabricated, installed, or completed. However, neither this authority of the Architect nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Architect to the Contractor, Subcontractors, material and equipment suppliers, their agents or employees, or other persons performing portions of the Work.

4.2.7 Change Orders

The Architect will prepare Change Orders and Construction Change Directives and may authorize minor changes in the Work as provided in paragraph 7.1.2.

4.2.8 Warranties Upon Completion

The Architect in conjunction with the Inspector will conduct field reviews of the Work to determine the date of completion, shall receive and forward to the District for the District's review and records written warranties and related documents required by the Contract and assembled by the Contractor, and will issue a final Certificate for Payment when the Architect believes the Work has been completed in compliance with the requirements of the Contract Documents. The handling by the Architect of such warranties, maintenance manuals, or similar documents shall not diminish or transfer to the Architect any responsibilities or liabilities required by the Contract Documents of the Contractor or other entities, parties, or persons performing or supplying the Work.

The Architect will conduct a field review of the Contractor's comprehensive list of items to be completed or corrected (final punch list) and one (1) follow-up field review if required. The cost incurred by the District for further field reviews or the preparation of further punch lists by the Architect shall be invoiced to the Contractor and deducted from the final payment.

4.2.9 Interpretation

The Architect will interpret and decide matters concerning performance under, and requirements of, the Contract Documents on written request of either the District or the Contractor. Should it appear that the work to be done, is not sufficiently detailed or explained in the Contract Documents, or in the event of any doubt or question arising respecting the true meaning of the Contract Documents, the Contractor shall apply to the Architect for such further explanations as may be necessary, and the Architect shall render his or her decisions thereon. The Contractor shall review any Requests for Information (RFI's) or Design Clarifications/ Verification Requests [DCVR's] submitted by subcontractors prior to submission to the Architect to determine whether such RFI's and DCVR's are already clearly and unambiguously answered in the Contract Documents. Contractor represents to District and Architect, that by submission of an RFI or DCVR, Contractor has familiarized himself with the RFI or DCVR, and thoroughly reviewed the Contract Documents, and determined that the RFI or DCVR pertains to an unforeseen condition or circumstance that is not described in the Contract Documents, that there is a conflict or discrepancy in the Contract Documents, or there is an omission in the Contract Documents. In the event any RFI and/or DCVR is clearly answered or inferable from the Contract Documents, Contractor agrees to pay the Architect and District the reasonable cost for their time and expenses associated with reviewing RFI's and DCVR's which are already clearly answered or inferable from the Contract Documents. In the event of a disagreement over such compensation, the judgment of the District's construction representative shall prevail. The Architect's response to such request will be made with reasonable promptness, while allowing sufficient time in the Architect's professional judgment, to permit adequate review and evaluation of request.

4.2.10 Additional Instructions

4.2.10.1 Architect's Interpretations and Decisions

Interpretations and decisions of the Architect will be consistent with the intent of and reasonably inferable from the Contract Documents and will be in writing or in the form of drawings. When making such interpretations and decisions, the Architect will endeavor to secure faithful

performance by both the District and the Contractor, and will not show partiality to either. The Architect will not be liable for the result of interpretations or decisions so rendered in good faith. The Work shall be executed in conformity with, and the Contractor shall do no Work without, approved drawings, Architect's clarifying instructions, and/or submittals.

4.2.10.2 Typical Parts and Sections

Whenever typical parts or sections of the Work are completely detailed on the Drawings, and other parts or sections which are essentially of the same construction are shown in outline only, the complete details shall apply to the Work which is shown in outline.

4.2.10.3 Dimensions

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

4.3. **INSPECTOR OF RECORD**

4.3.1 General

One or more project inspectors employed by the District and approved by the Division of the State Architect will be assigned to the Work in accordance with the requirements of Title 24 of the California Code of Regulations. The Inspector(s) duties will be as specifically defined in Title 24. Whenever the Contractor arranges to work at night or any time when work is conducted other than the normal 40-hour week, or to vary the period during which work is carried on each day the Contractor shall give the District a minimum of 48-hours' notice so that inspection may be provided. Additional inspection costs incurred because of overtime or night work shall be paid by the District and backcharged to the Contractor.

Authorized representatives and agents of the State of California or the federal government shall be permitted to inspect all work, materials, payrolls, records, and shall be given access to the Site at all times for such inspection.

4.3.2 Inspector's Duties

All Work shall be under the observation of or with the knowledge of the Inspector. The Inspector shall have free access to any or all parts of the Work at any time. The Contractor shall furnish the Inspector such information as may be necessary to keep the Inspector fully informed regarding progress and manner of work and character of materials. Such observations shall not, in any way, relieve the Contractor from responsibility for full compliance with all terms and conditions of the Contract, or be construed to lessen to any degree the Contractor's responsibility for providing efficient and capable superintendence. The Inspector is not authorized to make changes in the drawings or specifications nor shall the Inspector's approval of the Work and methods relieve the Contractor of responsibility for the correction of subsequently discovered defects, or from its obligation to comply with the Contract Documents.

4.3.3 Inspector's Authority to Reject or Stop Work

The Inspector shall have the authority to reject work that does not comply with the provisions of the Contract Documents. In addition, the Inspector may stop any Work which poses a probable

risk of harm to persons or property. The Contractor shall instruct its employees, Subcontractors, material and equipment suppliers, etc., accordingly. The absence of any Stop Work order or rejection of any portion of the Work shall not relieve the Contractor from any of its obligations pursuant to the Contract Documents. The Inspector shall comply with the inspection card duties required under sections 4-330 through 4-344, Title 24 of the California Code of Regulations and DSA Procedure 13-01.

4.3.4 Inspector's Facilities

Within seven (7) calendar days after notice to proceed, the Contractor shall provide the Inspector with the temporary facilities as required under the Specifications.

4.3.5 Contractor Inspection Card Obligations

The Contractor acknowledges and agrees to comply with all DSA inspection and notification requirements as they apply to general contractors including, but not limited to, the requirements of 24 Cal. Code Regs., Part 1, section 4-330 through 4-344 and DSA Procedure PR 13-01. The Contractor agrees that compliance with these provisions requires that notification of each and every aspect of the Work be provided to the Inspector at least 48 hours in advance and may result in certain Work not proceeding until Inspector has received notification and has approved that Work on form DSA 152. Any subsequent construction activities that cover up the unapproved work will be subject to a "stop work order" and are subject to removal or remediation.

4.4. RESPONSIBILITY FOR ADDITIONAL CHARGES INCURRED BY THE DISTRICT FOR PROFESSIONAL SERVICES

If at any time prior to the completion of the requirements under the Contract Documents, through no fault of its own, the District is required to provide or secure additional professional services for any reason by any act of the Contractor, the Contractor shall be invoiced by the District for any costs incurred for any such additional services, which costs shall be deducted from the next progress payment. Such invoicing shall be independent from any other District remedies. If payments then or thereafter due to the Contractor are not sufficient to cover such amounts, the Contractor shall pay the difference to the District. Additional services shall include, but shall not be limited to, the following:

- A. Services made necessary by the default of the Contractor.
- B. Services made necessary due to the defects or deficiencies in the Work of the Contractor.
- C. Services required by failure of the Contractor to perform according to any provision of the Contract Documents.
- D. Services in connection with evaluating substitutions of products, materials, equipment, Subcontractors proposed by the Contractor, and making subsequent revisions to drawings, specifications, and providing other documentation required (except for the situation where the specified item is no longer manufactured or available).
- E. Services for evaluating and processing claims submitted by the Contractor in connection with the Work outside the established Change Order process.
- F. Services required by the failure of the Contractor to prosecute the Work in a timely manner in compliance within the specified time of completion.

- G. Services in conjunction with the testing, adjusting, balancing and start-up of equipment other than the normal amount customarily associated for the type of Work involved.
- H. Services in conjunction with more than one (1) re-review of required submittals of shop drawings, product data, and samples.

4.5. CLAIMS AND DISPUTES

A Claim is a demand or assertion by one of the parties seeking, as a matter of right, adjustment or interpretation of Contract terms, payment of money, extension of time, or other relief with respect to the terms of the Contract. The term "Claim" also includes other disputes and matters in question between the District and the Contractor arising out of or relating to the Contract Documents. Claims must be made by written notice. The responsibility to substantiate Claims shall rest with the party making the Claim. This Contract does not recognize the term potential claim.

4.5.1 Decision of Architect

Claims, including those alleging an error or omission by the Architect, shall be referred initially to the Architect for action as provided in paragraph 4.6. A decision by the Architect, as provided in paragraph 4.6.4, shall be required as a condition precedent to submitting the Claim for resolution pursuant to Section 4.7, and is required for all Claims between the Contractor and the District related to matters arising prior to the date final payment is due, regardless of whether such matters relate to execution and progress of the Work, or the extent to which the Work has been completed. The decision by the Architect in response to a Claim shall not be a condition precedent to submitting the Claim for resolution pursuant to Section 4.7, in the event: the position of Architect is vacant; the Architect has not received evidence or has failed to render a decision within agreed time limit; the Architect has failed to take action required under paragraph 4.6.4 within thirty (30) calendar days after the Claim is made, forty-five (45) calendar days have passed after the Claim has been referred to the Architect; or the Claim relates to a stop notice Claim.

4.5.2 Time Limit on Claims

Claims by either party must be made within ten (10) calendar days after occurrence of the event giving rise to such Claim or within ten (10) calendar days after the claimant first recognizes the condition giving rise to the Claim, whichever is later. Claims must be made by written notice. If an initial claim has been implemented by Change Order, the Change Order will be considered full and final compensation and no additional claim will be considered. The failure of the Contractor to provide the required Notice shall constitute an express waiver of any right to assert such claim, whether affirmatively or defensively.

4.5.3 Personal Certification of All Claims

PERSONAL CERTIFICATION OF ALL CLAIMS: must be submitted with all claims in the following format on Contractor's letterhead:

I, _____, BEING THE _____ (MUST BE AN OFFICER) OF _____ (GENERAL CONTRACTOR), DECLARE UNDER PENALTY OF PERJURY UNDER THE LAWS OF THE STATE OF CALIFORNIA AND DO PERSONALLY CERTIFY AND ATTEST THAT: I HAVE THOROUGHLY REVIEWED THE ATTACHED CLAIM FOR ADDITIONAL COMPENSATION AND/OR EXTENSION OF TIME, AND

KNOW ITS CONTENTS, AND SAID CLAIM IS MADE IN GOOD FAITH; THE SUPPORTING DATA IS TRUTHFUL AND ACCURATE; THAT THE AMOUNT REQUESTED ACCURATELY REFLECTS THE CONTRACT ADJUSTMENT FOR WHICH THE CONTRACTOR BELIEVES THE DISTRICT IS LIABLE; AND, FURTHER, THAT I AM FAMILIAR WITH CALIFORNIA PENAL CODE SECTION 72 AND CALIFORNIA GOVERNMENT CODE SECTION 12650-12655, ET SEQ, PERTAINING TO FALSE CLAIMS, AND FURTHER KNOW AND UNDERSTAND THAT SUBMISSION OR CERTIFICATION OF A FALSE CLAIM MAY LEAD TO FINES, IMPRISONMENT AND/OR OTHER SEVERE LEGAL CONSEQUENCES.

4.5.4 Continuing Contract Performance

Pending final resolution of a Claim pursuant to Section 4.7, or by litigation, unless otherwise agreed to in writing, the Contractor shall proceed diligently with performance of the Contract, and the District shall continue to make any undisputed payments in accordance with the Contract. Contractor hereby waives, for itself and all Subcontractors, any and all rights of rescission or work stoppage based on District's failure to pay for disputed items included in or to be included in any Claim.

4.5.5 Claims for Concealed or Unknown Conditions

4.5.5.1 Trenches or Excavations Less Than Four Feet Below the Surface

If conditions are encountered at the Site which are subsurface or otherwise concealed physical conditions, which differ materially from those indicated in the Contract Documents, or unknown physical conditions of an unusual nature, which differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, then notice by the observing party shall be given to the other party promptly before conditions are disturbed and in no event later than twenty-one (21) calendar days after first observance of the conditions. The Architect will promptly investigate such conditions, and if they differ materially and cause an increase or decrease in the Contractor's cost of, time required for, or performance of any part of the Work, will recommend an equitable adjustment in the Contract Sum, Contract Time, or both. If the Architect determines that the conditions at the Site are not materially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified, the Architect shall so notify the District and the Contractor in writing, stating the reasons. Claims by either party in opposition to such determination must be made within ten (10) calendar days after the Architect has given notice of the decision. If the District and the Contractor cannot agree on an adjustment in the Contract Sum or the Contract Time, the adjustment shall be referred to the Architect for initial determination, subject to other proceedings pursuant to paragraph 4.6.

4.5.5.2 Trenches or Excavations Greater Than Four Feet Below the Surface

Pursuant to Public Contract Code section 7104, when any excavation or trenching extends greater than four feet below the surface:

The Contractor shall promptly, and before the following conditions are disturbed, notify the District in writing, of any:

Material that the Contractor believes may be material that is hazardous waste, as defined in section 25117 of the Health and Safety Code, that is required to be removed to a Class I, Class II, or Class III disposal site in accordance with the provisions of existing law.

Subsurface or latent physical conditions at the Site differing from those indicated by the Contract Documents.

Unknown physical conditions at the site of any unusual nature, different materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract.

The District shall promptly investigate the conditions, and if it finds that the conditions do materially so differ, or do involve hazardous waste, and cause a decrease or increase in the Contractor's cost of, or the time required for, performance of any part of the work will issue a change order under the procedures described in the Contract.

In the event that a dispute arises between the District and the Contractor whether the conditions materially differ, or involve hazardous waste, or cause a decrease or increase in the Contractor's cost of, or time required for, performance of any part of the work, the Contractor shall not be excused from any scheduled completion date provided for by the Contract, but shall proceed with all work to be performed under the Contract. The Contractor shall retain any and all rights provided either by Contract or by law which pertain to the resolution of disputes and protests between the contracting parties.

4.5.6 Claims for Additional Cost

If the Contractor wishes to make Claim for an increase in the Contract Sum, written notice as provided herein shall be given before proceeding to execute the affected Work. Each Claim for additional cost must include any claim for additional time and its associated costs. Prior notice is not required for claims relating to an emergency endangering life or property arising under paragraph 10.4.1. If the Contractor believes additional cost is involved for reasons, including, but not limited to the following: a written interpretation from the Architect, an order by the District to stop the Work where the Contractor was not at fault, a written order for a minor change in the Work issued by the Architect, failure of payment by the District, termination of the Contract by the District, the District's suspension of the Work, or other reasonable grounds, a claim shall be filed in accordance with the procedure established herein.

4.5.7 Claims for Additional Time

4.5.7.1 Notice and Extent of Claim

If the Contractor wishes to make a claim for an increase in the Contract Time, written notice and substantiating schedule related data as provided herein shall be given. The Contractor's claim shall include the cost associated with the extension and effect of delay on progress of the Work. In the case of a continuing delay, only one (1) claim is necessary.

4.5.7.2 Adverse Weather Claims

If adverse weather conditions are the basis for a claim for additional time, such claim shall be documented by data substantiating that weather conditions were abnormal for the period of time, could not have been reasonably anticipated, and had an adverse effect on the Project Critical path. Adverse weather conditions shall be considered only as those conditions that exceed the average annual number of rain days and rain quantities for the county where the work is located as established by the Annual Local Climatological Summary and NOAA National Technical Memorandum NWS WR-65 (Revised) as published by the United States Government, National Weather Service, National Climate Center, Asheville, North Carolina.

4.5.7.3 No Reservation Allowed

In no event will the Contractor be allowed to reserve its rights to assert a claim for time extension later than as required by paragraph 4.5.2 unless the District agrees in writing to allow such reservation.

4.5.8 Delay in the Work – Timely Extension

4.5.8.1 The Contractor shall at all times employ such force, plant, materials, and tools as will be sufficient to prosecute the Work at not less than the rates fixed under the terms of the Contract and to complete the Work or thereof within the time limits fixed therein. If the Contractor refuses or fails to prosecute the Work, or any separable part thereof, with such diligence as will ensure the completion within the time specified in the Contract, or any extension thereof, or fails to complete said work within such time, the District may exercise the termination provisions set forth below.

4.5.8.2 Excusable Delays. Excusable delays shall be delays in the Contractor's work due to Force Majeure such as war, insurrection, riot, acts of the public enemy, fire, earthquake, flood, casualty, epidemic, quarantine, restriction, strike, lockout, freight embargo, lack of transportation, or archaeological occurrences as described in Section 13.10, weather of an unusually severe nature, governmental actions or restrictions, injunction, or acts of God, beyond the Contractor's control, or by delay authorized by the District, or by any cause which the District shall decide to justify the delay. Once the site development work is completed or substantially completed, the Contractor will not generally be granted time extensions for weather conditions which are normal conditions for the time of year in the area where the Project is located according to the U.S. Weather Bureau Records. Except as provided in Section 4.5.8.4 below, in the event of an excusable delay, the time of completion shall be extended for such reasonable time as the District may decide. The Contractor's right to an extension of time for an excusable delay is expressly subject to Contractor's giving written notice of such claim within the time periods required by Section 4.5.7. Failure to give such notice shall be construed as a waiver of such right. It is understood and agreed that extensions of time and auditable costs directly related to an excusable delay shall be the Contractor's sole and exclusive remedy for said excusable delay.

4.5.8.3 The Contractor and the District understand and agree that the Contract time for the completion of this Project is a very important part of the Contract. Extensions of time will only be granted as provided above when events actually cause the Contractor to be delayed in the performance of the progress of the work. When acts or omissions occur which could cause delay, the Contractor will take all reasonable means in order to be able to continue to work as scheduled without any delay, or as short a delay as possible. Additionally, if inclement

weather causes accumulation of standing water on the work site or other conditions which might cause delay, the Contractor shall take all measures reasonably necessary to permit work to continue as quickly as possible.

4.5.8.4 Unexcused delays shall be delays in the Contractor's work due to acts or neglect of the Contractor, its employees, subcontractors or those under it by contract or otherwise. In the event of an unexcused delay, the Contractor expressly agrees that it shall not be entitled to either an extension of time or recovery of its costs.

4.5.8.5 A request for an extension of time, or the granting of an extension of time, shall not constitute a basis for any claim against the District for additional compensation or damages unless caused by the District or another contractor employed by the District.

4.5.9 Injury or Damage to Person or Property

If either party to the Contract suffers injury or damage to person or property because of an act or omission of the other party, any of the other party's employees or agents, or others for whose acts such party is legally liable, written notice of such injury or damage, whether or not insured, shall be given to the other party within a reasonable time not exceeding ten (10) days after first observance. The notice shall provide sufficient detail to enable the other party to investigate the matter. If a claim for additional cost or time related to this claim is to be asserted, it shall be made as provided in paragraphs 4.5.6 or 4.5.7.

4.6. **RESOLUTION OF CLAIMS AND DISPUTES**

4.6.1 Architect's Review

The Architect will review claims and take one or more of the following preliminary actions within ten (10) days of receipt of a claim: request additional supporting data from the claimant; submit a schedule to the parties indicating when the Architect expects to take action; reject the claim in whole or in part, stating reasons for rejection; recommend approval of the claim by the other party; or suggest a compromise. The Architect may also, but is not obligated to, notify the surety, if any, of the nature and amount of the claim.

4.6.2 Documentation if Resolved

If a claim has been resolved, the Architect will prepare or obtain appropriate documentation.

4.6.3 Actions if Not Resolved

If a claim has not been resolved, the party making the claim shall, within ten (10) days after the Architect's preliminary response, take one or more of the following actions: submit additional supporting data requested by the Architect; modify the initial claim; or notify the Architect that the initial claim stands.

4.6.4 Architect's Written Decision

If a claim has not been resolved after consideration of the foregoing and of other evidence presented by the parties or requested by the Architect, the Architect will notify the parties in writing that the Architect's decision will be made within seven (7) days. Upon expiration of such time period, the Architect will render to the parties its written decision relative to the claim, including any change in the Contract Sum or Contract Time or both. The Architect may, but is not obligated to, notify the surety and request the surety's assistance in resolving the controversy.

4.7. SUBMISSION OF CLAIM TO DISTRICT

4.7.1 District Review Of Unresolved Claims

To the extent that the Contractor disputes the Architect's Written Decision issued pursuant to paragraph 4.6.4, or to the extent the Architect fails to issue a timely written decision, the Contractor may file a written claim, as defined by Public Contract Code section 9204(c)(1), with the District including reasonable documentation to support the claim. Upon receipt of the claim, the District shall conduct a reasonable review of the claim, and within a period not to exceed 45 days, the District shall provide the Contractor with a written statement identifying what portion of the claim is disputed and what portion is undisputed. The time in which the District must provide a written statement may be extended by mutual agreement of the parties as specified by Public Contract Code section 9204(d)(1)(C). The District shall pay any undisputed portion of the claim within 60 days after issuance of its written statement.

4.7.2 Meet And Confer Regarding Unresolved Claims

If the Contractor disputes the District's written statement issued pursuant to paragraph 4.7.1 or if the District fails to issue a timely written response, the Contractor may demand in writing an informal conference to meet and confer for settlement of the issues in dispute. Upon receipt of a demand in writing sent by registered mail or certified mail, return receipt requested, the District shall schedule a meet and confer conference within 30 days for settlement of the dispute. The meet and confer conference shall be attended by senior executives of the parties who have authority to settle the controversy. Within 10 business days following the conclusion of the meet and confer conference, the District shall provide the Contractor with a written statement identifying the portion of the claim that remains in dispute and the portion that is undisputed. The District shall pay any undisputed portion of the claim within 60 days after it issues its written statement.

4.7.3 Mediation

If the Contractor disputes, in writing, any portion of the District's written statement as issued under paragraph 4.7.2, the disputed items shall be submitted to nonbinding mediation according to the provisions of Public Contract Code section 9204(d)(2), and any costs of mediation shall be allocated as set forth in that section. Upon receipt of a claim, the District and the Contractor may agree to waive, in writing, mediation.

4.7.4 Failure to Respond or Pay

If the District fails to timely respond to a claim from the Contractor or otherwise fails to meet the time requirements of Public Contract Code section 9204, the claim shall be deemed rejected in its entirety. Additionally, amounts not timely paid in the manner required by Public Contract Code section 9204 shall bear interest at 7 percent per annum.

4.7.5 Subcontractor Claims

If a subcontractor or a lower tier subcontractor lacks legal standing to assert a claim against the District because privity of contract does not exist, the Contractor may present to the District a claim on behalf of the subcontractor or lower tier subcontractor pursuant to Public Contract Code section 9204(d)(5).

4.8. ALTERNATE DISPUTE RESOLUTION OF CLAIMS OF \$375,000 OR LESS

4.8.1 Claims Less Than \$375,000

Notwithstanding any other provision herein but after compliance with the provisions of Public Contract Code section 9204 as set forth in paragraph 4.7, claims of \$375,000 or less shall be resolved pursuant to the alternative dispute resolution procedures set forth in Public Contract Code section 20104 *et seq.* "Claim" for this purpose means a separate demand by the Contractor for a time extension, payment of money or damages arising from work done by or on behalf of the Contractor pursuant to the Contract, for which payment is expressly provided, or the Contractor is otherwise entitled to, or an amount the payment of which is disputed by the District.

4.8.2 Submission of Claims Less than \$375,000

The Contractor shall submit its claim of \$375,000 or less to the District in writing, within the time frames established under paragraph 4.5.2, but no later than before the final payment is made. The District shall respond within the time provided by statute. If the Contractor disagrees with the response or the District fails to respond within the time permitted, the Contractor shall notify the District of the disagreement in writing within fifteen (15) days from the date of the response or expiration of the time permitted to respond and demand a meet-and-confer conference. The District shall schedule a meet-and-confer conference within thirty (30) days of the demand. The meet and confer conference shall be attended by senior executives of the parties who have authority to settle the controversy. If not resolved at the meet-and-confer conference, the Contractor may initiate a civil action as set forth in Public Contract Code section 20104 *et seq.*, including but not limited to compliance with applicable Government Code provisions.

4.8.3 Time Limits Not Extended

Nothing in subdivision (a) of Public Contract Code section 20104.2 shall extend the time limit or supersede the notice requirements provided in this Contract for filing claims by the Contractor.

4.9. DISPUTE RESOLUTION OF CLAIMS IN EXCESS OF \$375,000

As a condition precedent to the initiation of litigation, disputes in excess of a total value of \$375,000 shall first be submitted to the claims procedures set forth in paragraphs 4.5 and 4.7.

ARTICLE 5 SUBCONTRACTORS

5.1. AWARD OF SUBCONTRACTS AND OTHER CONTRACTS FOR PORTIONS OF THE WORK

5.1.1 Assignment or Substitution - Consent of District

In accordance with Public Contract Code sections 4107 and 4107.5, no Contractor whose bid is accepted shall, without the written consent of the District: substitute any person or entity as a Subcontractor in place of the Subcontractor designated in the original bid; permit any such Subcontractor to be assigned or transferred, or allow work to be performed by any person or entity other than the original Subcontractor listed in the original bid; sublet or subcontract any portion of the Work in excess of one-half of one percent (.5%) of the Contractor's total bid as to which its original bid did not designate a Subcontractor. Any assignment or substitution made without the

prior written consent of the awarding authority shall be void, and the assignees shall acquire no rights in the Contract. Any consent, if given, shall not relieve Contractor or its Subcontractors from their obligations under the terms of the Contract Documents.

5.1.2 Grounds for Substitution

No Contractor whose bid is accepted may request to substitute any person or entity as a Subcontractor in place of a Subcontractor listed in the original bid except as provided for in Public Contract Code section 4107.

5.2. SUB CONTRACTUAL RELATIONS

By appropriate agreement, written where legally required for validity, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by terms of the Contract Documents, and to assume toward the Contractor all obligations and responsibilities, which the Contractor, by the Contract Documents, assumes toward the District and the Architect. Each subcontract agreement shall preserve and protect the rights of the District and the Architect under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights, and shall allow to the Subcontractor, unless specifically provided otherwise in the subcontract agreement, the benefit of all rights, remedies, and redress against the Contractor that the Contractor, by the Contract Documents, has against the District. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with Sub-subcontractors.

5.3. CONTINGENT ASSIGNMENT OF SUBCONTRACTS

Each subcontract agreement for a portion of the Work is assigned by the Contractor to the District provided that:

Assignment is effective only after termination of the Contract with the Contractor by the District for cause pursuant to Article 14 and only for those subcontract agreements which the District accepts by notifying the Subcontractor in writing; and

Assignment is subject to the prior rights of the surety, if any, obligated under any bond relating to the Contract.

ARTICLE 6 CONSTRUCTION BY DISTRICT OR BY SEPARATE CONTRACTORS

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

6.1.1 District's Rights

The District reserves the right to perform work related to the Project with the District's own forces, and to award separate contracts in connection with other portions of the Project or other construction or operations on the Site. Upon the election to perform work with its own forces or by separate contracts, the District shall notify the Contractor. If the Contractor claims that delay

or additional cost is involved because of such action by the District, the Contractor shall make such Claim as provided elsewhere in the Contract Documents.

6.1.2 Designation as Contractor

When separate contracts are awarded for different portions of the Project or other construction or operations on the Site, the term "Contractor" in the Contract Documents in each case shall mean the Contractor who executes each separate District/Contractor Agreement.

6.1.3 Contractor Duties

In the event that separate contract are awarded for different portions of the Project or other construction or operations on the Site, the Contractor shall participate with other separate contractors and the District in reviewing their construction schedules when directed to do so. The Contractor shall make any revisions to the construction schedule and Contract Sum deemed necessary after a joint review and mutual agreement. The construction schedules shall then constitute the schedules to be used by the Contractor, separate contractors, and the District until subsequently revised.

6.2. **MUTUAL RESPONSIBILITY**

6.2.1 Delivery and Storage

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

6.2.2 Notice by Contractor

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

6.2.3 Correction of Damage

The Contractor shall promptly remedy damage wrongfully caused by the Contractor to completed or partially completed construction or to property of the District or separate contractors.

6.3. **DISTRICT'S RIGHT TO CLEAN UP**

If a dispute arises among the Contractor, separate contractors, and the District as to the responsibility under their respective contracts for maintaining the premises and surrounding area free from waste materials and rubbish as described in paragraph 3.13, the District may clean up and allocate the cost among those responsible as the Architect determines to be just.

ARTICLE 7 CHANGES IN THE WORK

7.1. CHANGES

7.1.1 No Changes Without Authorization

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

7.1.2 Architect Authority

The Architect will have authority to order minor changes in the Work not involving any adjustment in the Contract Sum, an extension of the Contract Time, or a change which is inconsistent with the intent of the Contract Documents. Such changes shall be effected by written Change Order and shall be binding on the District and the Contractor. The Contractor shall carry out such written orders promptly.

7.2. CHANGE ORDERS ("CO")

A CO is a written instrument prepared by the Architect and signed by the District, the Contractor, the Architect, and the DSA, stating their agreement upon all of the following: (1) A change in the Work; (2) the amount of the adjustment in the Contract Sum, if any; and (3) the extent of the adjustment in the Contract Time, if any.

7.3. CONSTRUCTION CHANGE DIRECTIVES ("CCD")

7.3.1 Authorized

The District may by CCD, without invalidating the Contract, order changes in the Work within the general scope of the Contract consisting of additions, deletions, or other revisions including changes to the Contract Sum and Contract Time.

7.3.2 Use to Direct Change

A CCD shall be used in the absence of agreement on the terms of a CO.

7.4. REQUEST FOR INFORMATION (“RFI”)

7.4.1 Definition

An RFI is a written request prepared by the Contractor asking the Architect to provide additional information necessary to clarify an item which the Contractor feels is not clearly shown or called for in the drawings or specifications, or to address problems which have arisen under field conditions.

7.4.2 Scope

The RFI shall reference all the applicable Contract Documents including specification section, detail, page numbers, drawing numbers, and sheet numbers, etc. The Contractor shall make suggestions and/or interpretations of the issue raised by the RFI. Issuance of or response to an RFI does not, *per se*, modify the Contract Cost, Contract Time, or the Contract Documents.

7.4.3 Response Time

The Architect will respond to a RFI within fourteen (14) calendar days after receiving such request. If the Architect’s response results in a change in the Work, then such change shall be effected by a written CO or CCD. If the Architect cannot respond to the RFI within fourteen (14) calendar days, the Architect shall notify the Contractor, with a copy to the Inspector and the District, of the amount of time that will be required to respond.

7.4.4 Costs Incurred

The Contractor shall reimburse the District for any costs incurred for professional services, which shall be deducted from the next progress payment, if an RFI requests an interpretation or decision of a matter where the information sought is equally available to the party making such request.

7.5. REQUEST FOR PROPOSAL (“RFP”)

7.5.1 Definition

An RFP is a written request prepared by the Architect asking the Contractor to submit to the District and the Architect an estimate of the effect of a proposed change on the Contract Price and the Contract Time.

7.5.2 Scope

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

7.6. CHANGE ORDER REQUEST (“COR”)

7.6.1 Definition

A COR is a written request prepared by the Contractor asking the District and the Architect to incorporate a proposed change called for in an RFP or a claim per paragraph 7.7.6 into a CO.

7.6.2 Changes in Price

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

7.6.3 Changes in Time

A COR shall also include any additional time required to complete the Project. Any additional time requested shall not be the number of days to make the proposed change, but must be based upon fragments demonstrating the impact to the Project Schedule as defined in Specifications.

7.7. COST OF CHANGE ORDERS

7.7.1 Scope

Within ten (10) calendar days or such lesser period of time as may be required by District after a request is made for a change that impacts the Contract Sum or the Contract Time, the Contractor shall provide to the District and the Architect in writing an estimate of the effect of the proposed CO upon the Contract Price and the actual cost of construction, which shall include a complete itemized cost breakdown of all labor and material showing actual quantities, hours, unit prices, wage rates, required for the change, and the effect upon the Contract Time of such CO. Changes may be made by District by an appropriate written CO, or, at the District's option, such changes shall be implemented immediately upon the Contractor's receipt of an appropriate written CCD.

7.7.2 Determination of Cost

The amount of the increase or decrease in the Contract Price resulting from a CO, if any, shall be determined in one or more of the following ways as applicable to a specific situation, at the District's sole option:

- (1) Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;
- (2) Unit prices stated in the Contractor's original bid, the Contract Documents, or subsequently agreed upon between the District and the Contractor;
- (3) Cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or
- (4) By cost of labor and materials and percentage thereof as overhead and profit.

7.7.3 Lump Sum Proposal

If the District elects to have the Change in the Work performed on a lump sum basis, such election shall be based on a lump sum proposal which shall be submitted by the Contractor within ten (10) calendar days of the District's request therefor. Request for a lump sum proposal shall not be deemed an election to have the work performed on a lump sum basis. The Contractor's proposal shall be itemized and segregated by labor and materials for the various components of the change (no aggregate labor total will be acceptable) and shall be accompanied by signed proposals of any subcontractors which will perform any portion of the change, and of any persons who will furnish materials or equipment for incorporation therein. The proposal shall also include the contractor's estimate of the time required to perform said changes or additional work.

The portion of the proposal relating to labor, whether by the Contractor's forces or the forces of any of its Subcontractors, may include reasonably anticipated gross wages of Job Site labor, including foremen, who will be directly involved in the Change in the Work (for such time as they will be so involved), plus payroll costs (including premium costs of overtime labor, if overtime is

anticipated, Social Security, federal or State unemployment insurance taxes and fringe benefits required by collective bargaining agreements entered into by the Contractor or any Subcontractor in connection with such labor) and up to fifteen percent (15%) of such anticipated gross wages, but not payroll costs, as field and home office overhead, and profit for the Contractor or any Subcontractor, as applicable (said overhead and profit to include all supervision except foremen). But in no case will the aggregate mark-up for the Contractor and Subcontractor total more than 15% of the direct material costs, and 5% of the equipment rental costs, as defined above. These costs shall not include charges for listed equipment or major tools with a new cost of \$500.00 or less. No time charges shall be allowed except for equipment actually used for the proper and efficient performance or completion of the authorized change in the Work.

The portion of the proposal relating to materials may include the reasonably anticipated direct costs to the Contractor or its Subcontractors for materials to be purchased for incorporation in the Change in the Work, plus transportation and applicable sales or use taxes and up to fifteen percent (15%) of said direct material costs as overhead and profit for the Contractor or any Subcontractor (said overhead and profit to include all small tools). The lump sum proposal may further include the Contractor's and any Subcontractors' reasonably anticipated rental costs in connection with the Change in the Work (either actual rates or discounted local published rates), plus up to five percent (5%) thereof as overhead and profit for the Contractor or any Subcontractors, as applicable. The lump sum proposal may not include charges for listed equipment or major tools with a new cost of \$500.00 or less. If any of the items included in the lump sum proposal are covered by the unit prices contained in the Contract Documents, the District may, if it requires the Change in the Work to be performed on a lump sum basis, elect to use the unit prices in lieu of the similar items included in the lump sum proposal in which event an appropriate deduction will be made in the lump sum amount prior to the application of any allowed overhead and profit percentages. No overhead and profit shall be applied to any unit prices.

The lump sum proposal may include up to six percent (6%) of the amount which the Contractor will pay to any of its Subcontractors for the Change in the Work as a commission to the Contractor.

7.7.4 Labor and Material

If the District elects to have the Change in the Work performed on the basis of the cost of labor and materials the following requirements shall apply:

1. Daily Reports by Contractor.
 - a) General: At the close of each working day, the Contractor shall submit a daily report to the Inspector, on forms approved by the District, together with applicable delivery tickets, listing all labor, materials, and equipment involved for that day, the location of the Work, and for other services and expenditures when authorized concerning extra work items. An attempt shall be made to reconcile the report daily, and it shall be signed by the Inspector and the Contractor. In the event of disagreement, pertinent notes shall be entered by each party to explain points which cannot be resolved immediately. Each party shall retain a signed copy of the report. Reports by subcontractors or others shall be submitted through the Contractor.

- b) Labor: Show names of workers, classifications, and hours worked.
- c) Materials: Describe and list quantities of materials used.
- d) Equipment: Show type of equipment, size, identification number, and hours of operation, including, if applicable, loading and transportation.e) Other Services and Expenditures: Describe in such detail as the District may require.

2. Basis for Establishing Costs.

- a) Labor will be the actual cost for wages prevailing locally for each craft or type of workers at the time the extra work is done, plus employer payments of payroll taxes and insurance, health and welfare, pension, vacation, apprenticeship funds, and other direct costs resulting from federal, State, or local laws, as well as assessments or benefits required by lawful collective bargaining agreements. The use of a labor classification, which would increase the extra work cost, will not be permitted unless the Contractor establishes the necessity for such additional costs. Labor costs for equipment operators and helpers shall be reported only when such costs are not included in the invoice for equipment rental.
- b) Materials shall be at invoice or lowest current price at which such materials are locally available and delivered to the Site in the quantities involved, plus sales tax, freight, and delivery.

The District reserves the right to approve materials and sources of supply or to supply materials to the Contractor if necessary for the progress of the Work. No markup shall be applied to any material provided by the District.

- c) Tool and Equipment Rental. No payment will be made for the use of tools which have a replacement value of \$500 or less.

Regardless of ownership, the rates to be used in determining equipment rental costs shall not exceed listed rates prevailing locally at equipment rental agencies or distributors at the time the work is performed.

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

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

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

- d) Other Items. The District may authorize other items which may be required on the extra work. Such items include labor, services, material, and equipment which are different in their nature from those required by the Work, and which are of a type not ordinarily available from the Contractor or any of the Subcontractors. Invoices covering all such items in detail shall be submitted with the request for payment.
- e) Invoices. Vendors' invoices for material, equipment rental, and other expenditures shall be submitted with the COR. If the request for payment is not substantiated by invoices or other documentation, the District may establish the cost of the item involved at the lowest price which was current at the time of the Daily Report.
- f) Overhead. Overhead, including direct and indirect costs, shall be submitted with the COR and include: home office overhead, off-Site supervision, CO preparation/negotiation/research, time delays, project interference and disruption, additional guaranty and warranty duration, on-site supervision, additional temporary protection, additional temporary utilities, additional material handling costs, and additional safety equipment costs but at no time shall the combined profit and overhead exceed fifteen percent (15%) of the total cost.

7.7.5 No Overhead and Profit

No overhead and profit will be paid by the District on account of a change in the Work except as specifically provided in sections 7.7.3 and 7.7.4. Overhead and profit shall be deemed to include all costs and expenses which the Contractor or any of its subcontractors may incur in the performance of the change in the Work and which are not otherwise specifically recoverable by them pursuant to said sections.

7.7.6 No Cost for Deleted Work

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

7.7.7 Accounting Records and Books

Contractor shall maintain books, records and accounts of all costs incurred in connection with the Project in accordance with generally accepted accounting principles and practices. The District and its authorized representatives shall have the right to audit the books, records and accounts of the Contractor under any of the following conditions:

1. The Contract is terminated for any reason in accordance with the provisions of the Contract Documents in order to arrive at equitable termination costs;
2. In the event of a disagreement between the Contractor and the District over the amount due the Contractor under the terms of the Contract;
3. To check or substantiate any amounts invoiced or paid which are required to reflect the costs of the Contractor, or the Contractor's efficiency or effectiveness under this Contract or in connection with extras, changes, claims, additions, backcharges, or others, as may be provided for in this contract; and/or
4. If it becomes necessary to determine the District's rights and the Contractor's obligations under the Contract or to ascertain facts relative to any claim against the Contractor which may result in a charge against the District;
5. To determine any difference in cost occasioned by a permissible substitution;
6. For any other reason in the District's reasonable judgment.

If any of the conditions 1 through 6 are satisfied, Contractor shall provide the District (or its representative), unlimited, reasonable access during working hours to the Contractor's books and records under the conditions stated above. The District's audit rights shall be liberally construed in the District's favor.

The Contractor, from the effective date of final payment or termination hereunder, shall preserve and make available to the District for review for a period of three (3) years thereafter, at all reasonable times at the office of the Contractor (but without any charge to the District), all Contractor's books, records, documents, photographs, micro-photographs, and other evidence bearing on the costs and expenses of the Contract under the Contract and relating to the work hereunder. Such preservation and right of review shall (without limitation) extend to Contractor's estimate for the Project (include all calculations and take-offs) and any budget prepared thereon.

7.7.8 Project Records Preservation

The District's right to audit and the preservation of records shall terminate at the end of three (3) years after the date final payment is made or termination of the Contract. The Contractor shall include the provisions of sections 7.7.7 through 7.7.8 in all subcontracts issued by Contractor and shall require the same to be inserted by all lower tier Subcontractors in their subcontracts, for any portion of the work. Should Contractor fail to include this clause in any such contract or lower tier contract, or otherwise fail to insure the District's rights hereunder, Contractor shall be liable to the District for all costs, expenses and attorney's fees which the District may have to incur obtaining or attempting to obtain an audit or inspection of or the restoration of records which otherwise have been available to the District from said persons under this clause. Such audit may be conducted by the District or its authorized representative.

7.7.9 Project Records Termination

The District's right to audit and the preservation of records shall terminate at the end of three (3) years after the date final payment is made or termination of the Contract. The Contractor shall

include the provisions of sections 7.7.7 through 7.7.8 in all subcontracts issued by Contractor and shall require the same to be inserted by all lower tier Subcontractors in their subcontracts, for any portion of the work. Should Contractor fail to include this clause in any such contract or lower tier contract, or otherwise fail to insure the District's rights hereunder, Contractor shall be liable to the District for all costs, expenses and attorney's fees which the District may have to incur obtaining or attempting to obtain an audit or inspection of or the restoration of records which otherwise have been available to the District from said persons under this clause. Such audit may be conducted by the District or its authorized representative.

7.7.10 Discounts, Rebates, and Refunds

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

ARTICLE 8 LEGAL RELATIONS AND RESPONSIBILITY

8.1. COMPLIANCE WITH LAWS – PERMITS, REGULATIONS, TAXES

The Contractor is an independent contractor and shall, at the Contractor's sole cost and expense, comply with all laws, rules, ordinances and regulations of all governing bodies having jurisdiction over the Work, pay at its expense all construction related taxes including but not limited to manufacturers' taxes, sales taxes, use taxes, processing taxes, and all Federal and State taxes, insurance and contributions for social security and unemployment which are measured by wages, salaries or any remuneration paid to the Contractor's employees, whether levied under existing or subsequently enacted laws, rules or regulations. The Contractor shall also pay, at its expense, all property tax assessments on materials or equipment used until acceptance by the District. If any discrepancy or inconsistency is discovered in the Plans or Specifications, or in the Contract in relation to any such law, rule, ordinance, regulation, order or decree, the Contractor shall forthwith report the same to the Architect in writing. It shall also protect, defend and indemnify the District and all of the District's officers, agents, and servants against any claim or liability arising from or based upon the violation of any such law, rule, ordinance, regulation, order or decree, whether by the Contractor himself or by his employees. Particular attention is called to the following:

8.1.1 Without limitation, materials furnished and performance by the Contractor hereunder shall comply with Safety Orders of the Division of Industrial Safety, State of California, Federal Safety regulations of the Bureau of Labor, Department of Labor; and any other applicable Federal regulations.

8.1.2 The Contractor, upon request, shall furnish evidence satisfactory to the District and the Architect that any or all of the foregoing obligations have been or are being fulfilled. The Contractor warrants to the District that it is licensed by all applicable governmental bodies to perform the Contract and will remain so licensed throughout the progress of the Work,

and that it has, and will have, throughout the progress of the Work, the necessary experience, skill and financial resources to enable performance under the Contract.

8.1.3 The Contractor is required to insure that material safety data sheets (MSDS's) for any material requiring a material safety data sheet pursuant to any Federal or State law are available in a readily accessible place on the Project premises. The Contractor is also required to insure (i) the proper labeling of any substance brought onto the Project premises by the Contractor or any subcontractors, and (ii) that the person(s) working with the material, or within the general area of the material, are appropriately informed about the hazards of the substance and follow proper handling and protection procedures.

8.1.4 The Contractor is required to comply with the provisions of California Health and Safety Code section 25249 *et seq.* (Proposition 65), which requires the posting and giving of notice to persons who may be exposed to any chemical known to the State of California to cause cancer.

8.1.5 The Contractor shall comply in all respects with all applicable prevailing wage requirements as required by State Law.

8.1.6 Contractor shall comply with and shall ensure that all subcontractors comply with District's contract employee fingerprint requirements through the Department of Justice prior to employee(s) beginning work on the Project. Contractor must contact District Facility Department for the necessary forms.

8.2. PREVAILING WAGE

8.2.1 The Contractor shall forfeit as penalty to the District the amount specified by law for each calendar day or portion thereof for each worker (whether employed by the Contractor or any Subcontractor) paid less than the stipulated prevailing rates for any work done under the Contract in violation of the provisions of the Labor Code and in particular, Section 1775 which is incorporated herein by reference. Copies of the current schedules for prevailing wages are on file in the District's office, and the contents of those schedules are included herein as if set forth in full.

8.2.2 Pursuant to Labor Code section 1725.5. No contractor or subcontractor may be listed on a bid proposal for a public works project unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5. No contractor or subcontractor may be awarded a contract for public work on a public works project unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5. This project is subject to compliance monitoring and enforcement by the Department of Industrial Relations.

8.2.3 The District will not recognize any claims for additional compensation because of the payment of the wages set forth in these General Conditions. The possibility of wage increases is one of the elements to be considered by the Contractor in determining its proposal, and will not under any circumstances, other than delays caused by the District, the Architect, or the District's agents, be considered as the basis of a claim against the District.

8.2.4 The Contractor agrees to follow the instructions of the District's labor compliance officer (if applicable) until notified otherwise in writing by the District.

8.2.5 Contractor agrees that the Work is subject to monitoring and enforcement of prevailing wage requirements by the Division of Labor Standards Enforcement as set forth in Chapter 1 of Part 7 of Division 2 of the California Labor Code (commencing at section 1720) and the accompanying regulations at Subchapter 4.5 of Chapter 8 of Division 1 of Title 8 of the California Code of Regulations (commencing at section 16450). The Contractor and each subcontractor performing any portion of the Work shall comply with California prevailing wage laws. The Director of the Department of Industrial Relations of the State of California has determined the general prevailing rate of wages of per diem wages in the locality in which the work is to be performed for each craft or type of worker needed to execute the Contract. Copies of the applicable prevailing wage rate determinations are made available to the Contractor and Subcontractor at the Pre-Job Conference Meeting. The Contractor shall make the posting required by California Code of Regulations, Title 8, section 16451(d) at each job site, printed on 8 1/2" X 11" paper or larger. It shall be mandatory upon the Contractor and upon any Subcontractor under him or her, to pay not less than the said specified prevailing rates of wages to all workers employed by them under the Contract.

8.3. PREVAILING WAGE RECORDS

8.3.1 The Work is subject to monitoring and enforcement of prevailing wage requirements by the Department of Industrial Relations and the following provisions will apply:

Contractor and subcontractors shall maintain and furnish to the Department of Industrial Relations, a certified copy of each weekly payroll (but no less often than monthly), with a statement of compliance signed under penalty of perjury. Such certified payroll reports in PDF form shall be transmitted electronically to the Department of Industrial Relations at <http://www.dir.ca.gov/Public-Works/Certified-Payroll-Reporting.html>. The provisions of Labor Code section 1776 are incorporated herein by reference.

8.3.1.1 The District and the Department of Industrial Relations shall review, including by way of job site inspections, and, if appropriate, audit payroll records to verify compliance with the public works requirements of the Labor Code. The Department of Industrial Relations will notify the Contractor or Subcontractor(s), as appropriate) of any noncompliance, in order for all such Contractor or Subcontractor(s) to correct the noncompliance.

8.3.1.2 The District shall withhold payments when payroll records are delinquent or inadequate.

8.3.1.3 The District shall withhold payments equal to the amount of underpayment and applicable penalties when, after investigation, it is established that underpayment has occurred.

8.3.1.4 The District shall cooperate with the Department of Industrial Relations and DLSE in any investigation of suspected violations of prevailing wage requirements.

8.3.1.5 As directed by the Labor Commissioner, the District shall withhold Contract payments equal to the payments due or estimated to be due to the Contractor or Subcontractors whose payroll records are delinquent or inadequate, plus any additional amount that the Labor Commissioner has reasonable cause to believe may be needed to cover a back wage and penalty assessment against such Contractor or Subcontractors. The Contractor shall be required to withhold payments to a Subcontractor whose payroll records are delinquent or inadequate until the Labor Commissioner provides notice that the Subcontractor has cured such delinquency or deficiency.

8.3.1.6 These payroll records shall be made available to the District's representatives. These records shall be maintained during the course of the Work. The Contractor and all subcontractors shall make the certified payroll records available for inspection by District representatives upon request and shall permit such representatives to interview employees during the work hours on the job site.

8.3.1.7 The Contractor shall be held entirely responsible for the prompt resolution of all non-compliances with the prevailing wage laws, including those pertaining to all subcontractors and any lower tier subcontractors.

8.3.1.8 The Project will not be accepted as complete by the District nor final payment made until all items of non-compliance are corrected or until appropriate provision is made by depository agreement to assure the ultimate resolution and payment of any back wages that may be found due.

8.3.1.9 A pre-construction conference shall be conducted before commencement of the Work with the Contractor and subcontractors at which time the prevailing wage requirements will be reviewed and agreed to by all parties.

8.3.2 Labor Discrimination

Attention is directed to Section 1735 of the Labor Code, which reads as follows:

"A contractor shall not discriminate in the employment of persons upon public works on any basis listed in subdivision (a) of Section 12940 of the Government Code, as those bases are defined in Sections 12926 and 12926.1 of the Government Code, except as otherwise provided in Section 12940 of the Government Code. Every contractor for public works who violates this section is subject to all the penalties imposed for a violation of this chapter."

8.3.3 Eight-Hour Day Limitation

8.3.3.1 In accordance with the provisions of the Labor Code, and in particular, Sections 1810 to 1815 thereof, inclusive, incorporated herein by reference, eight hours labor shall constitute a day's work, and no worker in the employ of said Contractor, or any Subcontractor, doing or contracting to do any part of the work contemplated by the Contract, shall be required or permitted to work more than eight (8) hours in any one calendar day and forty (40) hours in any one calendar week in violation of those provisions; provided that subject to Labor Code Section 1815, a worker may perform work in excess of either eight (8) hours per day or forty

(40) hours during any one week upon compensation for all hours worked in excess of eight (8) hours per day or forty (40) hours during any one week at not less than one and one-half times the basic rate of pay.

8.3.3.2 The Contractor and each Subcontractor shall also keep an accurate record showing the names and actual hours worked of all workers employed by them in connection with the Work. This record shall be open at all reasonable hours to the inspection of the District, State and Federal officers and agents. It is hereby further agreed that, except as provided in (a) above, the Contractor shall forfeit as a penalty to the District the sum of twenty-five dollars (\$25) for each worker employed in the performance of the Contract by the Contractor or by any of its Subcontractors for each calendar day during which such worker is required or permitted to labor more than eight (8) hours in and one calendar day and forty (40) hours in any one calendar week in violation of Sections 1810 through 1815.

8.3.4 Compliance with State Requirements for Employment of Apprentices.

8.3.4.1 The Contractor's attention is directed to Section 1777.5 of the Labor Code. Provisions of said Section pertaining to employment of registered apprentices are hereby incorporated by reference into these Specifications. As applicable, the Contractor or any Subcontractor employed by the Contractor in the performance of the Work shall take such actions as necessary to comply with the provisions of Section 1777.5.

8.3.5 Costs for After Hours Inspections

If the work done after hours is required by the Contract Documents to be done outside the Contractor's or the Inspector's regular working hours, the costs of any inspections, if required to be done outside normal working hours, shall be borne by the District.

If the District allows the Contractor to do work outside regular working hours for the Contractor's own convenience, or the Contractor otherwise elects to perform the work outside of regular working hours, the costs of any inspections required outside regular working hours shall be invoiced to the Contractor by the District and deducted from the next progress payment.

8.4. PROGRESS AND COMPLETION

8.4.1 Time of the Essence

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

8.4.2 No Commencement without Insurance

The Contractor shall not knowingly, except by agreement or instruction of the District, in writing, commence operations on the Site or elsewhere prior to the effective date of insurance required by Article 11 to be furnished by the Contractor. The date of commencement of the Work shall not be changed by the effective date of such insurance.

8.4.3 Expeditious Completion

The Contractor shall proceed expeditiously with adequate forces and shall achieve Completion within the Contract Time.

ARTICLE 9 PAYMENTS AND COMPLETION

9.1. CONTRACT SUM

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

9.2. COST BREAKDOWN

9.2.1 Required Information

On forms approved by the District, the Contractor shall furnish the following:

Within ten (10) calendar days of the award of the Contract, a detailed breakdown of the Contract Price ("Schedule of Values") for each Project or Site;

Within ten (10) calendar days of the award of the Contract, a schedule of estimated monthly payment requests (cash flow) due the Contractor showing the values and construction time of the various portions of the Work to be performed by it and by its Subcontractors or material and equipment suppliers containing such supporting evidence as to its correctness as the District may require;

Five (5) calendar days prior to the submission of a pay request, an itemized breakdown of work done for the purpose of requesting partial payments;

Within ten (10) calendar days, the name, address, telephone number, fax number, license number, and classification of all of its Subcontractors and of all other parties furnishing labor, material, or equipment for its Contract, along with the amount of each such subcontract or the price of such labor, material, and equipment needed for its entire portion of the Work.

9.2.2 District Approval Required

The District shall review all submissions received pursuant to paragraph 9.2.1 in a timely manner. All submissions must be approved by the Inspector, Architect, and District, in that order, before becoming the basis of any payment.

9.3. APPLICATIONS FOR PAYMENT

9.3.1 Procedure

On or before the fifth (5th) day of each calendar month during the progress of the portion of the Work for which payment is being requested, the Contractor shall submit to the Architect an itemized Application for Payment for operations completed in accordance with the Schedule of Values. Such application shall be notarized, if required, and supported by the following or such portion thereof as Architect requires:

The amount paid to the date of the Application to the Contractor, to all its Subcontractors, and all others furnishing labor, material, or equipment for its Contract;

The amount being requested with the Application for Payment by the Contractor on its own behalf and separately stating the amount requested on behalf of each of the Subcontractors and all others furnishing labor, material, and equipment under the Contract;

The balance that will be due to each of such entities after said payment is made; A certification that the Record Drawings and Annotated Specifications are current; The additions to and subtractions from the Contract Price and Time;

A summary of the retention (each Application shall provide for retention, as set out in Article 9.6, of the amount due until completion of the Work of the Contractor and Final Acceptance thereof by District);

Material invoices, evidence of equipment purchases, rentals, and other support and details of cost as the District may require from time to time;

The percentage of completion of the Contractor's Work by line item; and

A statement showing all payments made by the Contractor for labor and materials on account of the Work covered in the preceding Application for Payment.

9.3.2 Purchase of Materials and Equipment

As the Contractor is required to order, obtain, and store materials and equipment sufficiently in advance of its Work at no additional cost or advance payment from District, to assure that there will be no delays, payment by the District for stored material shall be made only in unusual circumstances where the Architect specifically recommends, and District specifically approves, the payment in writing. If payments are to be made on account of materials and equipment not incorporated in the Work, but delivered and suitably stored at the Site or at some other location agreed upon in writing by the District, the payments shall be conditioned upon submission by the Contractor, Subcontractor, or vendor of bills of sale and such other documents satisfactory to the Architect and the District to establish the District's title to such materials or equipment free of all liens and encumbrances, and otherwise protect the District's interest, including, without limitation, provision of applicable insurance and transportation to the Site. All stored items shall be inventoried, specified by identification numbers (if applicable), released to the District by sureties of the Contractor and the Subcontractor and, if stored off-Site, stored only in a bonded warehouse.

9.3.3 Warranty of Title

The Contractor warrants that title to all Work covered by an Application for Payment will pass to the District no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Payment all Work for which Certificates for Payment have been previously issued and payments received from the District shall, to the best of the Contractor's knowledge, information, and belief, be free and clear of liens, claims, security interests, or encumbrances in

favor of the Contractor, Subcontractors, material and equipment suppliers, or other persons or entities making a claim by reason of having provided labor, materials, and equipment relating to the Work.

9.4. REVIEW OF PROGRESS PAYMENT

9.4.1 District Approval

The Architect will, within seven (7) days after receipt of the Contractor's Application for Payment, either approve such payment or notify the Contractor in writing of the Architect's reasons for withholding approval in whole or in part as provided in paragraph 9.5.1.

9.4.2 Architect's Review

The review of the Contractor's Application for Payment by the Architect is based on the Architect's observations at the Site and the data comprising the Application for Payment that the Work has progressed to the point indicated and that, to the best of the Architect's knowledge, information, and belief, the quality of the Work is in accordance with the Contract Documents. The foregoing representations are subject to an evaluation of the Work for conformance with the Contract Documents, to results of subsequent tests and inspections, to minor deviations from the Contract Documents correctable prior to completion, and to specific qualifications expressed by the Architect. The issuance of a Certificate for Payment will further constitute a representation that the Contractor is entitled to payment in the amount certified. However, the review by the Architect will not be a representation that the Architect has:

- A. Made exhaustive or continuous on-site inspections to check the quality or quantity of the Work;
- B. Reviewed construction means, methods, techniques, sequences, or procedures;
- C. Reviewed copies of requisitions received from Subcontractors, material and equipment suppliers, and other data requested by the District to substantiate the Contractor's right to payment; or
- D. Made an examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

9.5. DECISIONS TO WITHHOLD PAYMENT

9.5.1 Reasons to Withhold Payment

The District may decide to withhold payment in whole, or in part, to the extent reasonably necessary to protect the District if, in the District's opinion, the representations to the District required by paragraph 9.4.2 cannot be made. The District may withhold payment, in whole, or in part, to such extent as may be necessary to protect the District from loss because of:

Defective Work not remedied;

Stop notices filed, unless the Contractor at its sole expense provides a bond or other security satisfactory to the District in the amount of at least one hundred twenty-five percent (125%) of the claim, in a form satisfactory to the District, which protects the District against such claims;

Liquidated damages assessed against the Contractor;

Reasonable doubt that the Work can be completed for the unpaid balance of any Contract Price or by the completion date;

Damage to the District, another contractor, or subcontractor;

Unsatisfactory prosecution of the Work by the Contractor;

Failure to store and properly secure materials;

Failure of the Contractor to submit on a timely basis, proper and sufficient documentation required by the Contract Documents, including, without limitation, monthly progress schedules, shop drawings, submittal schedules, Schedule of Values, product data and samples, proposed product lists, executed change orders, and verified reports;

Failure of the Contractor to maintain record drawings;

Erroneous estimates by the Contractor of the value of the Work performed, or other false statements in an Application for Payment;

Unauthorized deviations from the Contract Documents; or

Failure of the Contractor to prosecute the Work in a timely manner in compliance with established progress schedules and completion dates.

9.5.2 Written Reasons for Withholding Provided

Upon request of the Contractor whose payment is deferred, the Contractor will be given a written copy of District's reasons for withholding payment.

9.5.3 Payment After Cure

When the grounds for declining approval are removed, payment will be made for amounts withheld because of them. No interest shall be due on any Retainage or amounts withheld due to the failure of the Contractor to perform in accordance with the terms and conditions of the Contract Documents.

9.6. PROGRESS PAYMENTS

9.6.1 Payments to Contractor

Within thirty (30) days after approval of the Request for Payment, Contractor shall be paid a sum equal to ninety five percent (95%) of the value of the Work performed up to the last day of the previous month, less the aggregate of previous payments. The value of the Work completed shall be an estimate only, no inaccuracy or error in said estimate shall operate to release the Contractor, or any bondsman, from damages arising from such Work or from enforcing each and every provision of this Contract, and the District shall have the right subsequently to correct any error made in any estimate for payment.

The Contractor shall not be entitled to have any payment requests processed, or be entitled to have any payment made for work performed, so long as any lawful or proper direction given by the District concerning the Work, or any portion thereof, remains uncompleted. At any time after fifty percent (50%) of the Work has been completed, if the District, by action of its governing body, finds that satisfactory progress is being made, the Contractor may request, and District may make any of the remaining payments in full for actual work completed or may withhold any amount up to five percent (5%) thereof as the District may find appropriate based on the Contractor's progress. Such amount shall hereafter be referred to as "retainage". Under this Contract, the Contractor has the option of permissible substitution of securities as provided for in section 22300 of the Public Contract Code.

9.6.2 Payments to Subcontractors

No later than ten (10) days after receipt, pursuant to Business and Professions Code section 7108.5, the Contractor shall pay to each Subcontractor, out of the amount paid to the Contractor on account of such Subcontractor's portion of the Work, the amount to which said Subcontractor is entitled, reflecting percentages actually retained from payments to the Contractor on account of such Subcontractor's portion of the Work. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to Sub-subcontractors in a similar manner.

9.6.3 Percentage of Completion or Payment Information

The District will, on request, furnish to a Subcontractor, if practicable, information regarding percentages of completion or amounts applied for by the Contractor, and action taken thereon by the District, on account of portions of the Work done by such Subcontractor.

9.6.4 No Obligation of District for Subcontractor Payment

The District shall have no obligation to pay, or to see to the payment of, money to a Subcontractor except as may otherwise be required by law.

9.6.5 Payment to Suppliers

Payment to material or equipment suppliers shall be treated in a manner similar to that provided in paragraphs 9.6.2, 9.6.3 and 9.6.4.

9.6.6 Payment Not Constituting Approval or Acceptance

An approved Request for Payment, a progress payment, or partial or entire use or occupancy of the Project by the District shall not constitute acceptance of work not in accordance with the Contract Documents.

9.7. COMPLETION OF THE WORK

9.7.1 Close-Out Procedures

When the Contractor considers that the Work, or a portion thereof which the District agrees to accept separately, is complete, the Contractor shall prepare and submit to the District a comprehensive list of minor items to be completed or corrected (Punch List). The Contractor and/or its Subcontractors shall proceed promptly to complete and correct items on the list. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

Upon receipt of the Contractor's list, the District will make an inspection to determine whether the Work, or designated portion thereof, is complete. If the District's inspection discloses any item, whether or not included on the Contractor's list, is not completed in accordance with the requirements of the Contract Documents, the Contractor shall, before District's issuance of the Notice of Completion, complete or correct such item. The Contractor shall then submit a request for an additional inspection by the District to determine Completion. When the Work, or designated portion thereof, is complete, the District will prepare a Notice of Completion which shall establish the date of Completion, establish the responsibilities of the District and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance, and fix the time within which the Contractor shall finish all items on the list accompanying the Notice of Completion. Warranties required by the Contract Documents shall commence on the date of Completion of the Work, or designated portion thereof, unless otherwise provided in the Notice of Completion. The Notice of Completion shall be submitted to the District and the Contractor for their written acceptance of responsibilities assigned to them in such Notice.

9.7.2 Costs of Multiple Inspections

More than two (2) requests of the District to make inspections required under paragraph 9.7.1 shall be considered an additional service of Architect, and all subsequent costs will be invoiced to Contractor and withheld from remaining payments.

9.8. **PARTIAL OCCUPANCY OR USE**

9.8.1 District's Rights

The District may occupy or use any completed or partially completed portion of the Work at any stage. The District and the Contractor shall agree in writing to the responsibilities assigned to each of them for payments, security, maintenance, heat, utilities, damage to the Work, insurance, the period for correction of the Work, and the commencement of warranties required by the Contract Documents. When the Contractor considers a portion complete, the Contractor shall prepare and submit a Punch List to the District as provided under paragraph 9.7.1.

It is understood and agreed that the District shall have the right to occupy the building or use the improvement contemplated by the Contract prior to the completion of the entire work, and that such occupancy or use shall not operate as an acceptance of any part of the work, nor shall the Contractor be entitled to, or make demand for, additional compensation or extension of time because of such occupancy

In case that the Contractor has not completed the work and the contract time, including authorized time extensions, has expired, the District reserves the right to occupy any portion of the Work at any time before completion and while work is in progress. In the event of such occupancy, the Contractor shall provide, without additional cost to the District, suitable protection by means of fencing, barriers, posted signs or other method as required to prevent persons other than those directly connected with the Work from entering remaining areas where continuing Work is being conducted, vehicles are operating, or materials are stored.

Occupancy by the District prior to final acceptance shall not be deemed to constitute a waiver of existing claims in behalf of the District or Contractor against each other. If the Contractor fails to complete all of the project in the time frame agreed upon, including any approved time extensions,

the Contractor shall not enter into any occupied areas to complete the Work until after those areas are vacated each day by district personnel and or students.

The metered cost of electricity, water, fuel, etc., for the occupied portion and the cost of operating the heating and air conditioning systems for the occupied portion will be borne by the Contractor until final completion.

Use and occupancy by the District prior to final acceptance shall not relieve the Contractor of his responsibility to provide and maintain all insurance and bonds required of the Contractor under the contract until the Final Completion of the Work.

9.8.2 Inspection Prior to Occupancy or Use

Immediately prior to such partial occupancy or use, the District, the Contractor, and the Architect shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work.

9.8.3 No Waiver

Unless otherwise agreed upon, partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of the Work not complying with the requirements of the Contract Documents.

9.9. COMPLETION AND FINAL PAYMENT

9.9.1 Final Inspection

Upon receipt of Contractor's written notice that all of the Punch List items have been fully completed and the Work is ready for final inspection and acceptance, Architect will inspect the Work and will submit to Contractor and District a final inspection report noting the work, if any, required in order to complete the Work in accordance with the Contract Documents.

Upon completion of the Work contained in the final inspection report, the Contractor shall so notify the Architect, who will again inspect such Work. If the Architect finds the Work contained in such final inspection report acceptable under the Contract Documents and, therefore, the Work fully completed, it will so notify Contractor, who shall then submit to the Architect its final Application for Payment.

Upon receipt and approval of such final Application for Payment, the Architect will issue a final Certificate of Payment stating that to the best of its knowledge, information, and belief, and on the basis of its observations, inspections, and all other data accumulated or received by the Architect in connection with the Work, such Work has been completed in accordance with the Contract Documents. The District will thereupon inspect such Work and either accept the Work as complete or notify the Architect and the Contractor in writing of reasons why the Work is not complete.

Within ten (10) days after the date of completion of the Project, the District will file in the Office of the County Recorder, a Notice of Completion of the Work herein agreed to be done by the Contractor. On the expiration of thirty-five (35) days after the recordation of such Notice of Completion, the difference between said final estimate and all payments theretofore made to the Contractor shall be due and payable to the Contractor, subject to any requirements concerning the furnishings of a maintenance bond, and excepting only such sum or sums as may be withheld or

deducted in accordance with the provisions of the Contract. All prior certifications upon which partial Payments may have been made, being merely estimates, shall be subject to correction in the final certificate.

9.9.2 Retainage

The retainage, less any amounts disputed by the District or which the District has the right to withhold, will be paid after approval of the District of the Architect's Certificate of Payment referred to in paragraph 9.9.1, after the satisfaction of the conditions set forth in paragraph 9.9, and within sixty (60) calendar days after the acceptance of the Work and recording of the Notice of Completion by District. No interest shall be due or paid on any retainage, or on any amounts withheld due to a failure of the Contractor to perform, in accordance with the terms and conditions of the Contract Documents, except as provided to the contrary in any Escrow Agreement between the District and the Contractor pursuant to Public Contract Code section 22300.

9.9.3 Procedures for Application for Final Payment

The Application for Final Payment shall be accompanied by the same details as set forth in paragraph 9.3, and in addition, the following conditions must be fulfilled:

A full and final waiver or release of all stop notices in connection with the Work shall be submitted by Contractor, including a release of stop notice in recordable form, together with (to the extent permitted by law) a copy of the full and final waiver of all stop notices or a stop notice release bond from a surety acceptable to the District as defined by the Contract Documents, including a release of stop notice in recordable form, in connection with the Work obtained by Contractor from each person to receive a payment thereunder, which waivers of stop notice shall be in a form as approved by District.

The Contractor shall have made, or caused to have been made, all corrections to the Work which are required to remedy any defects therein, to obtain compliance with the Contract Documents or any requirements of applicable codes and ordinances, or to fulfill any of the orders or directions of District required under the Contract.

Each Subcontractor shall have delivered to the Contractor all written guarantees, warranties, applications, and bonds required by the Contract Documents for its portion of the Work.

The Contractor shall deliver to the Architect all certificates, warranties, final reports, approvals and DSA documents along with reproducible final Record Drawings and Annotated Specifications showing the Contractor's Work "as built," with the Contractor's certification of the accuracy of the Record Drawings and Annotated Specifications, all guarantees, and operation and maintenance instructions for equipment and apparatus.

Architect shall have issued a Final Certificate of Payment.

The Contractor shall have delivered to the District all manuals and materials required by the Contract Documents.

The Contractor shall have removed, or caused to be removed, all waste materials and rubbish from and about the Site, as well as all tools, construction equipment, machinery, surplus material, scaffolding equipment, and any other similar materials of the Contractor or any subcontractor,

shall have cleaned, or caused to be cleaned, all glass surfaces, and shall have left the Work broom-clean, except as otherwise provided in the Contract Documents.

9.10. SUBSTITUTION OF SECURITIES

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

Securities eligible for investment under this section shall include those listed in Government Code section 16430, bank or savings and loan certificates of deposit, interest-bearing, demand-deposit accounts, standby letters of credit, or any other security mutually agreed to by the Contractor and the District.

The Contractor shall be the beneficial District of any securities substituted for monies withheld and shall receive any interest thereon.

The escrow agreement used for the purposes of this Section shall be provided by the District.

ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY

10.1. SAFETY PRECAUTIONS AND PROGRAMS

10.1.1 Contractor Responsibility

The Contractor shall have responsibility for initiating, maintaining, and supervising all safety precautions and programs in connection with the performance of the Contract. Each Contractor shall designate a responsible member of its organization whose duties shall include loss and accident prevention, and who shall have the responsibility and full authority to enforce the program. This person shall attend meetings with the representatives of the various Subcontractors employed to ensure that all employees understand and comply with the programs.

10.1.2 First-Aid Supplies at Site

The Contractor will provide and maintain at the Site first-aid supplies for minor injuries.

10.2. SAFETY OF PERSONS AND PROPERTY

10.2.1 The Contractor

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

- A. Employees on the Work and other persons who may be affected thereby;
- B. The Work, material, and equipment to be incorporated therein, whether in storage on or off the Site, under the care, custody, or

- control of the Contractor or the Contractor's Subcontractors or Sub-subcontractors; and
- C. Other property at the Site or adjacent thereto such as trees, shrubs, lawns, walks, pavement, roadways, structures, and utilities not designated for removal, relocation, or replacement in the course of construction.
 - D. Upon request by the district the contractor shall provide material sheets and data sheets, Material Safety Data Sheets (MSDS) on all products and/or components used on this project.

10.2.2 Contractor Notices

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

10.2.3 Safety Barriers and Safeguards

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

10.2.4 Use or Storage of Hazardous Material

When use or storage of explosives, other hazardous materials or equipment, or unusual methods are necessary for execution of the Work, the Contractor shall exercise utmost care and carry on such activities under supervision of properly qualified personnel. The Contractor shall notify the District any time that explosives or hazardous materials are expected to be stored on Site. Location of storage shall be coordinated with the District and local fire authorities.

10.3. PROTECTION OF WORK AND PROPERTY

10.3.1 Protection from Elements

The Contractor and Subcontractors shall continuously protect the Work, the District's property, and the property of others, from damage, injury, or loss arising in connection with operations under the Contract Documents. The Contractor and Subcontractors shall make good any such damage, injury, or loss, except such as may be solely due to, or caused by, agents or employees of the District.

10.3.2 Protection for Elements

The Contractor will remove all mud, water, or other elements as may be required for the proper protection and prosecution of its Work. The Contractor shall at all times provide heat, coverings, and enclosures necessary to maintain adequate protection against weather so as to preserve the Work, materials, equipment, apparatus, and fixtures free from injury or damage.

10.3.3 Shoring and Structural Loading

The Contractor shall not impose structural loading upon any part of the Work under construction or upon existing construction on or adjacent to the Site in excess of safe limits, or loading such as to result in damage to the structural, architectural, mechanical, electrical, or other components of

the Work. The design of all temporary construction equipment and appliances used in construction of the Work and not a permanent part thereof, including, without limitation, hoisting equipment, cribbing, shoring, and temporary bracing of structural steel, is the sole responsibility of the appropriate Contractor. All such items shall conform with the requirements of governing codes and all laws, ordinances, rules, regulations, and orders of all authorities having jurisdiction. The Contractor shall take special precautions, such as shoring of masonry walls and temporary tie bracing of structural steel work, to prevent possible wind damage during construction of the Work. The installation of such bracing or shoring shall not damage or cause damage to the Work in place or the Work installed by others. Any damage which does occur shall be promptly repaired by the Contractor at no cost to the District.

10.3.4 Subcontractor Enforcement of Rules

Contractor shall ensure all Subcontractors enforce the District's and the Contractor's instructions, laws, and regulations regarding signs, advertisements, fires, smoking, the presence of liquor, and the presence of firearms by any person at the Site.

10.3.5 Site Access

The Contractor and the Subcontractors shall use only those ingress and egress routes designated by the District, observe the boundaries of the Site designated by the District, park only in those areas designated by the District, which areas may be on or off the Site, and comply with any parking control program established by the District such as furnishing license plate information and placing identifying stickers on vehicles.

10.3.6 Protection of Materials

The Contractor and the Subcontractors shall receive, count, inspect for damage, record, store, and protect construction materials for the Work and promptly send to the Contractor evidence of receipt of such materials, indicating thereon any shortage, change, or damage (failure to so note shall constitute acceptance by the Subcontractor of financial responsibility for any shortage).

10.4. **EMERGENCIES**

10.4.1 Emergency Action

In an emergency affecting the safety of persons or property, the Contractor shall take any action necessary, at the Contractor's discretion, to prevent threatened damage, injury, or loss. Additional compensation or extension of time claimed by the Contractor on account of an emergency shall be determined as provided in Article 7.

10.4.2 Accident Reports

The Contractor shall promptly report in writing to the District all accidents arising out of or in connection with the Work, which caused death, personal injury, or property damage, giving full details and statements of any witnesses. In addition, if death, serious personal injuries, or serious property damages are caused, the accident shall be reported immediately by telephone or messenger to the District.

10.5. **HAZARDOUS MATERIALS**

10.5.1 Discovery of Hazardous Materials

In the event the Contractor encounters or suspects the presence on the Site material reasonably believed to be asbestos, polychlorinated biphenyl (PCB), or any other material defined as being hazardous by section 25249.5 of the California Health and Safety Code, which has not been rendered harmless, the Contractor shall immediately stop Work in the area affected and report the condition to the District and the Architect in writing, whether or not such material was generated by the Contractor or the District. The Work in the affected area shall not thereafter be resumed, except by written agreement of the District and the Contractor, if in fact the material is asbestos, polychlorinated biphenyl (PCB), or other hazardous material, and has not been rendered harmless. The Work in the affected area shall be resumed only in the absence of asbestos, polychlorinated biphenyl (PCB), or other hazardous material, or when it has been rendered harmless by written agreement of the District and the Contractor.

10.5.2 Hazardous Material Work Limitations

In the event that the presence of hazardous materials is suspected or discovered on the Site, the District shall retain an independent testing laboratory to determine the nature of the material encountered and whether corrective measures or remedial action is required. The Contractor shall not be required pursuant to Article 7 to perform any Work in the affected area of the Site relating to asbestos, PCB, or other hazardous material, until any known or suspected hazardous material has been removed, or rendered harmless, or determined to be harmless by District, as certified by an independent testing laboratory and/or approved by the appropriate government agency.

ARTICLE 11 INSURANCE, INDEMNITY, AND BONDS

11.1. CONTRACTOR'S LIABILITY INSURANCE

11.1.1 Insurance Requirements

Contractor shall procure and maintain, at its own expense, for the duration of the Contract 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, Subcontractors, or Sub-Subcontractors. The cost of such insurance shall be included in the Contractor's Proposal.

11.1.1.1 Neither the Contractor nor any Subcontractors shall commence any work until all required insurance has been obtained at their own expense. Such insurance must have the approval of the District as to limit, form, and amount, and shall be placed with insurers with a current A.M. Best's rating of no less than A:VII.

11.1.1.2 Any insurance bearing on adequacy of performance shall be maintained after completion of the Project for the full guarantee period.

11.1.1.3 Prior to execution of the Contract, the Contractor shall furnish the District with original endorsements effecting coverage for all policies required by the Contract. The Contractor shall not permit any Subcontractor identified in the Designation of Subcontractors form to commence work on this project until such Subcontractor has furnished the District with original endorsements effecting coverage for all insurance policies required by the Contract. The endorsements shall be signed by a person authorized by the insurer to bind coverage

on its behalf. The endorsements are to be on forms mutually agreed to between Contractor and its insurers and the District. The District may require the Contractor or any Subcontractor to furnish complete certified copies of all insurance policies effecting the coverage required by the Contract.

11.1.1.4 All of the Contractor's policies shall contain an endorsement providing that written notice shall be given to the District at least thirty (30) calendar days prior to termination, cancellation, or reduction of coverage in the policy.

11.1.1.5 Any policy or policies of insurance that the Contractor elects to carry as insurance against loss or damage to its construction equipment and tools shall include a provision therein providing a waiver of the insurer's right to subrogation against the District and the Architect.

11.1.1.6 The requirements as to the types, limits, and the District's approval of insurance coverage to be maintained by the Contractor are not intended to and shall not in any manner limit or qualify the liabilities and obligations assumed by the Contractor under the Contract.

11.1.1.7 In addition to any other remedy the District may have, if the Contractor or any of the subcontractors fails to maintain the insurance coverage as required in this Section, the District may obtain such insurance coverage as is not being maintained, in form and amount substantially the same as required herein, and the District may deduct the cost of such insurance from any amounts due or which may become due the Contractor under this Contract.

11.1.1.8 The Contractor and all Subcontractors shall, at their expense, maintain in effect at all times during the performance of work under the Contract not less than the following coverage and limits of insurance, which shall be maintained with insurers and under forms of policy satisfactory to the District. The maintenance by the Contractor and all Subcontractors of the following coverage and limits of insurance is a material element of this Contract. The failure of the Contractor or any Subcontractor to maintain or renew coverage or to provide evidence of renewal may be treated by the District as a material breach of this Contract.

11.1.2 Worker's Compensation and Employer's Liability Insurance

11.1.2.1 Worker's Compensation

The Contractor and all Subcontractors shall maintain insurance to protect the Contractor or subcontractor from all claims under Worker's Compensation and Employer's Liability Acts, including Longshoremen's and Harbor Workers' Act. Such coverage shall be maintained, in type and amount, in strict compliance with all applicable State and Federal statutes and regulations. The Contractor shall execute a certificate in compliance with Labor Code Section 1861, on the form provided in the General Construction Provisions. If an injury occurs to any employee of the Contractor or any of the Subcontractors for which the employee or its dependents, in the event of its death, may be entitled to compensation from the District under the provisions of the said Acts, or for which compensation is claimed from the District, there will be retained out of the sums due the Contractor under this Contract, an amount sufficient to cover such compensation as fixed by said Acts, until such compensation is paid or it is determined that no compensation is due. If the

District is required to pay such compensation, the amount so paid will be deducted and retained from such sums due, or to become due, the Contractor.

11.1.3 Commercial General and Automobile Liability Insurance

11.1.3.1 The Contractor shall maintain in effect at all times during the performance of the work hereunder not less than the following coverages and limits of Commercial General and Automobile Liability insurance:

- (i) **Form and Amount.** Coverage for commercial general liability and automobile liability shall be at least as broad as the following: (1) Insurance Services Office (ISO) Commercial General Liability Coverage (Occurrence Form CG 00 01 04 13); (2) Insurance Services Office (ISO) Business Auto Coverage (Form CA 00 01 63 01 Symbol 1). The amount of insurance coverage shall not be less than \$5,000,000.00 per occurrence with an aggregate no less than two (2) times the required per occurrence limit applying to bodily injury, personal injury, and property damage, or any combination of the three. Any deductibles must be declared to and approved by the District. At the option of the District, either: the insurer shall reduce or eliminate such deductibles as respects the entity, its officers, officials, employees and volunteers; or the Contractor shall procure a bond guaranteeing payment of losses and related investigations, claim administration expenses, and defense expenses.

11.1.3.2 Subcontractors shall maintain in effect at all times during the performance of the work hereunder not less than the following coverages and limits of Commercial General and Automobile Liability insurance:

- (i) **Form and Amount.** Coverage for commercial general liability and automobile liability shall be at least as broad as the following: (1) Insurance Services Office (ISO) Commercial General Liability Coverage (Occurrence Form CG 00 01 04 13); (2) Insurance Services Office (ISO) Business Auto Coverage (Form CA 00 01 03 10 Symbol 1). The amount of insurance coverage shall not be less than \$1,000,000.00 per occurrence with an aggregate no less than two (2) times the required per occurrence limit applying to bodily injury, personal injury, and property damage, or any combination of the three. Any deductibles must be declared to and approved by the District. At the option of the District, either: the insurer shall reduce or eliminate such deductibles as respects the entity, its officers, officials, employees and volunteers; or the subcontractor shall procure a bond guaranteeing payment of losses and related investigations, claim administration expenses, and defense expenses.

11.1.3.3 The Contractor's commercial general and automobile liability insurance coverage shall include the following:

- (i) ISO CG 20 10 07 04 additional insured endorsement, or equivalent, naming the District and District's officers, employees, and agents, each as additional insureds with respect to any potential liability arising out of the performance of any work under the Contract, and providing that such insurance is primary insurance as respects the interests of the District and District's officers, employees, and agents and that any other insurance, risk pool membership, or other liability protection maintained by the District is excess to the insurance required hereunder, and will not be called upon to contribute to any loss unless and until all limits available under the contractor's and subcontractor's insurance policy/policies have been paid;
- (ii) No exclusion of coverage for suits by the District against the Contractor for otherwise covered risks;
- (iii) Broad Form Property Damage, Personal Injury, Contractual Liability, Protective Liability, and Completed Operations coverages, and elimination of any exclusion regarding loss or damage to property caused by explosion or resulting from collapse of buildings or structures or damage to property underground, commonly referred to by insurers as the "XCU" hazards;
- (iv) ISO CG 20 37 07 endorsement or equivalent naming the District and the District's officers, employees and agents, each as additional insureds under the Broad Form Property Damage and Completed Operations coverage for any potential covered liability arising from the Contract.
- (v) The Contractor's insurance shall contain a provision or endorsement stating that such insurance, subject to all of its other terms and conditions, applies to the liability assumed by the Contractor under the Contract, including, without limitation, that set forth in Section 11.4 Indemnity and Litigation Costs;
- (vi) Provision or endorsement stating that any failure to comply with reporting or other provisions of the policies, including breaches of warranties, shall not affect coverage provided to the District, its officers, officials, employees, or volunteers; and
- (vii) The insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability.

11.1.3.4 Builder's Risk or Installation Floater "All-Risk" Insurance. Before commencement of the Work, the Contractor shall submit written evidence that it has obtained for the period of the Contract, Builder's Risk "All-Risk" Completed Value Insurance and/or Inland Marine "All-Risk" Installation Floater Insurance, as may be applicable, upon the entire project which is the subject of the Contract, including completed work and work in progress. The policy or policies of insurance shall name the Contractor and the District as insureds as their

respective interests may appear, and shall include an insurer's waiver of subrogation rights in favor of each. Such insurance may have a deductible clause, but the amount of the deductible shall be subject to the approval of the District. The Builder's Risk policy will exclude coverage for earthquake and flood and the risk of loss of these casualties shall not be borne by the Contractor.

11.2. CONSENT OF INSURER FOR PARTIAL OCCUPANCY OR USE

Partial occupancy or use in accordance with Article 9 shall not commence until the insurance company providing property insurance has consented to such partial occupancy or use by endorsement or otherwise. The District and the Contractor shall take reasonable steps to obtain consent of the insurance company and shall, without mutual consent, take no action with respect to partial occupancy or use that would cause cancellation, lapse, or reduction of the insurance.

11.3. OTHER INSURANCE

The Contractor shall provide all other insurance required to be maintained under applicable laws, ordinances, rules, and regulations.

11.4. INDEMNITY AND LITIGATION COST

11.4.1 To the fullest extent permitted by law, the Contractor shall defend, indemnify, and hold harmless the District, Architect, Architect's consultants, the Inspector of Record, the State of California, and their respective agents, employees, officers, and directors, from and against claims, damages, losses, and expenses (including, but not limited to attorneys' fees and costs including fees of consultants) arising out of or resulting from: performance of the Work (including, but not limited to) the Contractor's or its Subcontractor's use of the Site; the Contractor's or its Subcontractor's construction of the Project, or failure to construct the Project, or any portion thereof; the use, misuse, erection, maintenance, operation, or failure of any machinery or equipment including, but not limited to, scaffolds, derricks, ladders, hoists, and rigging supports, whether or not such machinery or equipment was furnished, rented, or loaned by any of the Indemnities; or any act, omission, negligence, or willful misconduct of the Contractor or its Subcontractors or their respective agents, employees, material or equipment suppliers, invitees, or licensees but only to the extent caused in whole or in part by the acts or omissions of the Contractor, its Subcontractors, anyone directly or indirectly employed by any of them, or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss, or expense is caused in part by a party indemnified thereunder. This indemnity shall imply no reciprocal right of the Contractor in any action on the Contract pursuant to California Civil Code Section 1717 or Section 1717.5. To the fullest extent legally permissible, this indemnity, defense and hold harmless agreement by the Contractor shall apply to any and all acts or omissions, whether active or passive, on the part of the Contractor or its agents, employees, representatives, or Subcontractor's agents, employees and representatives, resulting in claim or liability, irrespective of whether or not any acts or omissions of the parties to be indemnified hereunder may also have been a contributing factor to the liability, except such loss or damage which was caused by the active negligence, the sole negligence, or the willful misconduct of the District.

11.4.2 In any and all claims against the District and District's officers, employees and agents by any employee of the Contractor, any Subcontractor, anyone directly or indirectly

employed by any of them, or anyone for whose acts any of them may be liable, the indemnification obligation under this Section shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the Contractor or any Subcontractor under Workers' Compensation statutes, disability benefit statutes or other employee benefit statutes.

11.5. COMPLIANCE

In the event of the failure of any contractor to furnish and maintain any insurance required by this Article 11, the Contractor shall be in default under the Contract. Compliance by Contractor with the requirement to carry insurance and furnish certificates or policies evidencing the same shall not relieve the Contractor from liability assumed under any provision of the Contract Documents, including, without limitation, the obligation to defend and indemnify the District and the Architect.

11.6. WAIVER OF SUBROGATION

The Contractor waives (to the extent permitted by law) any right to recover for damages to the Work, any part thereof, or any and all claims arising by reason of any of the foregoing, but only to the extent that such damages and/or claims are covered by property insurance and only to the extent of such coverage (which shall exclude deductible amounts) by insurance actually carried by either the District, or any Contractor.

The provisions of this Section are intended to restrict the Contractor's recovery against insurance carriers only to the extent of such coverage and waive fully and for the benefit of the District, any rights and/or claims which might give rise to a right of subrogation in any insurance carrier. The Contractor shall obtain in all policies of insurance carried by it, a waiver by the insurance companies thereunder of all rights of recovery by way of subrogation for any damages or claims covered by the insurance.

11.6.1 Surety Qualification

Only bonds executed by admitted Surety insurers as defined in Code of Civil Procedure section 995.120 shall be accepted. Surety must be a California-admitted surety and listed by the U.S. Treasury with a bonding capacity in excess of the Project cost.

ARTICLE 12 UNCOVERING AND CORRECTION OF WORK

12.1. UNCOVERING OF WORK

12.1.1 Uncovering Work for Required Inspections

If a portion of the Work is covered contrary to the Inspector's request, the Architect's request, or to requirements specifically expressed in the Contract Documents, it must, if required in writing by the Inspector or the Architect, be uncovered for the Inspector's or the Architect's observation and be replaced at the Contractor's expense without change in the Contract Sum or Time.

12.1.2 Costs for Inspections not Required

If a portion of the Work has been covered which the Inspector or the Architect has not specifically requested to observe prior to its being covered, the Inspector or the Architect may request to see

such Work, and it shall be uncovered by the Contractor. If such Work is in accordance with the Contract Documents, costs of uncover and replacement shall, by appropriate Change Order, be charged to the District. If such Work is not in accordance with Contract Documents, the Contractor shall pay such costs unless the condition was caused by the District or a separate contractor, in which event the District shall be responsible for payment of such costs to the Contractor.

12.2. CORRECTION OF WORK

12.2.1 Correction of Rejected Work

The Contractor shall promptly correct the Work rejected by the Inspector or the District upon recommendation of the Architect or failing to conform to the requirements of the Contract Documents, whether observed before or after Completion and whether or not fabricated, installed, or completed. The Contractor shall bear costs of correcting the rejected Work, including additional testing, inspections, and compensation for the Inspector's or the Architect's services and expenses made necessary thereby.

12.2.2 One-Year Warranty Corrections

If, within one (1) year after the date of Completion of the Work or a designated portion thereof, or after the date for commencement of warranties established under paragraph 9.7.1, or by terms of an applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of written notice from the District to do so unless the District has previously given the Contractor a written acceptance of such condition. This period of one (1) year shall be extended with respect to portions of the Work first performed after Completion by the period of time between Completion and the actual performance of the Work. The obligation under this paragraph shall survive acceptance of the Work under the Contract and termination of the Contract. The District shall give such notice promptly after discovery of the condition.

12.2.3 Removal of Nonconforming Work

The Contractor shall remove from the Site portions of the Work which are not in accordance with the requirements of the Contract Documents and are not corrected by the Contractor or accepted by the District.

12.2.4 District's Rights if Contractor Fails to Correct

If the Contractor fails to correct nonconforming Work within a reasonable time, the District may correct it in accordance with paragraph 2.3. In addition, if the Contractor does not proceed with correction of such nonconforming Work within the time fixed by written notice from the Inspector or the District through the Architect, the District may remove it and store the salvageable materials or equipment at the Contractor's expense. If the Contractor does not pay costs of such removal and storage within ten (10) calendar days after written notice, the District may upon ten (10) additional days written notice sell such material or equipment at auction or at private sale and shall account for the proceeds thereof, after deducting costs and damages that should have been borne by the Contractor, including compensation for the Architect's services and expenses made necessary thereby. If such proceeds of sale do not cover costs which the Contractor should have borne, the Contractor shall be invoiced for 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 District.

12.2.5 Cost of Correcting the Work

The Contractor shall bear the cost of correcting destroyed or damaged construction of the District or separate contractors, whether completed or partially completed, caused by the Contractor's correction or removal of the nonconforming Work.

12.2.6 No Time Limitation

Nothing contained in this section 12.2 shall be construed to establish a period of limitation with respect to other obligations which the Contractor might have under the Contract Documents. Establishment of the time period of one (1) year as described in paragraph 12.2.2 relates only to the specific obligation of the Contractor to correct the Work and has, for example, no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, or 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 it is found at any time before or after completion of the Work that the Contractor has varied from the Contract Documents in materials, quality, form, finish, or in the amount or value of the materials or labor used, the Architect shall make a recommendation: that all such improper work should be removed, remade, and replaced, that all work disturbed by these changes be made good at the Contractor's expense, and that the District deduct from any amount due Contractor that sum of money equivalent to the difference in value between the Work performed and that called for by the Drawings and Specifications. The Architect shall determine such difference in value. The District, at its option, may pursue either course unless correction is required by law.

ARTICLE 13 MISCELLANEOUS PROVISIONS

13.1. GOVERNING LAW

The Contract shall be governed by the law of the place where the Project is located.

13.2. SUCCESSORS AND ASSIGNS

The District and the Contractor respectively bind themselves, their partners, successors, assigns, and legal representatives to the other party hereto and to partners, successors, assigns, and legal representatives of such other party in respect to covenants, agreements, and obligations contained in the Contract Documents. Neither party to the Contract shall assign the Contract as a whole without written consent of the other. If either party attempts to make such an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations under the Contract.

13.3. WRITTEN NOTICE

In the absence of specific notice requirements in the Contract Documents, written notice shall be deemed to have been duly served if delivered in person to the individual, member of the firm or

entity, or to an officer of the corporation for which it was intended, or if delivered at or sent by registered or certified mail to the last business address known to the party giving notice.

13.4. RIGHTS AND REMEDIES

13.4.1 Duties and Obligations Cumulative

Duties and obligations imposed by the Contract Documents and rights and remedies available thereunder shall be in addition to and not a limitation of duties, obligations, rights, and remedies otherwise imposed or available by law.

13.4.2 No Waiver

No action or failure to act by the Inspector, the District, the Architect or the Contractor shall constitute a waiver of a right or duty afforded them under the Contract Documents, nor shall such action or failure to act constitute approval of or acquiescence in a breach thereunder, except as may be specifically agreed in writing.

13.5. TESTS AND INSPECTIONS

13.5.1 Compliance

Tests, inspections, and approvals of portions of the Work required by the Contract Documents will comply with Title 24, and with all other laws, ordinances, rules, regulations, or orders of public authorities having jurisdiction.

13.5.2 Independent Testing Laboratory

The District will select and pay an independent testing laboratory to conduct all tests and inspections. Selection of the materials required to be tested shall be made by the laboratory or the District's representative and not by the Contractor. Any costs or expenses of inspection or testing incurred outside of a fifty (50) mile radius from the Project Site or not located in a contiguous county to the Site, whichever distance is greater, shall be paid for by the District, invoiced by the District to the Contractor, and deducted from the next progress payment.

13.5.3 Advance Notice to Inspector

The Contractor shall notify the Inspector a sufficient time in advance of its readiness for required observation or inspection so that the Inspector may arrange for same. The Contractor shall notify the Inspector a sufficient time in advance of the manufacture of material to be supplied under the Contract Documents which must, by terms of the Contract Documents, be tested in order that the Inspector may arrange for the testing of the material at the source of supply.

13.5.4 Testing Off-Site

Any material shipped by the Contractor from the source of supply, prior to having satisfactorily passed such testing and inspection or prior to the receipt of notice from said Inspector that such testing and inspection will not be required, shall not be incorporated in the Work.

13.5.5 Additional Testing or Inspection

If the Inspector, the Architect, the District, or public authority having jurisdiction determines that portions of the Work require additional testing, inspection, or approval not included under paragraph 13.5.1, the Inspector will, upon written authorization from the District, make

arrangements for such additional testing, inspection, or approval. The District shall bear such costs except as provided in paragraph 13.5.6.

13.5.6 Costs for Retesting

If such procedures for testing, inspection, or approval under paragraphs 13.5.1 and 13.5.2 reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, the Contractor shall bear all costs arising from such failure, including those of re-testing, re-inspection, or re-approval, including, but not limited to, compensation for the Architect's services and expenses. Any such costs shall be paid by the District, invoiced to the Contractor, and deducted from the next progress payment.

13.5.7 Costs for Premature Test

In the event the Contractor requests any test or inspection for the Project and is not completely ready for the inspection, the Contractor shall be invoiced by the District for all costs and expenses resulting from that testing or inspection, including, but not limited to, the Architect's fees and expenses, and the amount of the invoice shall be deducted from the next progress payment.

13.5.8 Tests or Inspections Not to Delay Work

Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work.

13.6. **INTEREST**

Payments due and unpaid under the Contract shall bear interest from the date payment is due at such rate as the parties may agree upon in writing or, in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.

13.7. **TRENCH EXCAVATION**

13.7.1 Trenches Greater Than Five Feet

Pursuant to Labor Code section 6705, if the Contract Price exceeds \$25,000 and involves the excavation of any trench or trenches five (5) feet or more in depth, the Contractor shall, in advance of excavation, submit to the Owner or a registered civil or structural engineer employed by the Owner a detailed plan showing the design of shoring for protection from the hazard of caving ground during the excavation of such trench or trenches.

13.7.2 Excavation Safety

If such plan varies from the Shoring System Standards established by the Construction Safety Orders, the plan shall be prepared by a registered civil or structural engineer, but in no case shall such plan be less effective than that required by the Construction Safety Orders. No excavation of such trench or trenches shall be commenced until said plan has been accepted by the Owner or by the person to whom authority to accept has been delegated by the Owner.

13.7.3 No Tort Liability of Owner

Pursuant to Labor Code section 6705, nothing in this Article shall impose tort liability upon the Owner or any of its employees.

13.7.4 No Excavation Without Permits

The Contractor shall not commence any excavation work until it has secured all necessary permits including the required CAL OSHA excavation/shoring permit. Any permits shall be prominently displayed on the Site prior to the commencement of any excavation.

13.8. ASSIGNMENT OF ANTITRUST AND UNFAIR BUSINESS PRACTICE CLAIMS

13.8.1 Application

In entering into a public works contract or a subcontract to supply goods, services, or materials pursuant to the Contract, the Contractor and all Subcontractors shall offer and agree to assign to the District all rights, title, and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. Sec. 15) or under the Cartwright Act (Chapter 2 (commencing with Section 16700) of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, services or materials pursuant to the public works contract or subcontract. This assignment shall be made and become effective at the time the District tenders final payment to the Contractor, without further acknowledgement by the parties.

13.9. GENERAL CONTRACTOR'S LICENSE NOTICE

CONTRACTORS ARE REQUIRED BY LAW TO BE LICENSED AND REGULATED BY THE CONTRACTORS' STATE LICENSE BOARD. ANY QUESTIONS CONCERNING A CONTRACTOR MAY BE REFERRED TO THE REGISTRAR, CONTRACTORS' STATE LICENSE BOARD, 3132 BRADSHAW ROAD, SACRAMENTO, CALIFORNIA. MAILING ADDRESS: P.O. BOX 26000, SACRAMENTO, CALIFORNIA 95826.

13.10. HISTORICAL, SCIENTIFIC AND ARCHEOLOGICAL DISCOVERIES

13.10.1 All articles of historical or scientific value, including but not limited to coins, fossils, and articles of antiquity that may be uncovered by the General Contractor during the progress of work, shall become District property. Such findings shall be reported immediately to the Architect who will determine the method of removal, where necessary, and the final disposition thereof.

ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT

14.1. SUSPENSION OF WORK

14.1.1 The District may at any time, by notice in writing to the Contractor, suspend any part of the Work for such period of time as may be necessary to prevent improper execution of the Work on the Project by the Contractor, his Subcontractors or agents, and the Contractor shall have no claim for damages or additional compensation on account of any such suspension.

14.1.2 The District may at any time suspend any part or all of the Work upon ten (10) days written notice to the Contractor, who shall thereupon discontinue all work suspended except for all operations to prevent loss or damage to work already executed as may be directed

by the District. Work shall be resumed by the Contractor after such suspension on written notice from the District.

14.1.3 In the event of any suspension of the Work in whole or in part under subsection (b) above, the Contractor shall be entitled to an extension of time wherein to complete the Work to the extent of the delay caused the Contractor thereby and reasonable compensation for all resulting damage such suspension caused.

14.1.4 In the event the entire work shall be suspended by order of the District, as herein above provided, and shall remain so suspended for a period of sixty (60) consecutive days, through no fault of the Contractor, and notice to resume the Work has not been served on the Contractor as herein above provided, the Contractor may, at its option, by written notice to the District, terminate the Contract pursuant to the termination provisions found in the Contract and the District shall have no claim for damages because of such termination of the Contract

14.2. TERMINATION UPON DEFAULT

14.2.1 In the event of any default by the Contractor as described below, the District may, after giving ten (10) days written notice to the Contractor, terminate the Contractor's right to proceed with the Work or any part of the Work in the District's sole discretion. Events of default include:

14.2.1.1 A substantial failure or refusal to prosecute the Work, or any separable part thereof, with such diligence as will ensure the completion within the time specified in the Contract, or any extension thereof, or failure to complete said work within such time;

14.2.1.2 Filing of bankruptcy by the Contractor, or the making of a general assignment for the benefit of its creditors, or appointment of a receiver on account of the Contractor's insolvency without discharge of the receiver within ten (10) days after its appointment;

14.2.1.3 A substantial failure to make prompt payments to Subcontractors or suppliers;

14.2.1.4 A substantial persistent disregard of laws, ordinances, or the instructions of the Architect, or other substantial violation of any provision of the Contract; or

14.2.2 The rights and remedies of the District provided in this Section are in addition to any of the rights and remedies provided by law or under the Contract.

14.2.3 The District agrees that prior to declaring an event of default under subsections 12.3.1.1, 14.3.1.3, or 14.3.1.4, it shall allow the Contractor a period of two weeks commencing from delivery of written notification to the Project Representative as an opportunity to cure.

14.2.4 The Contractor shall have no claim for damages for such termination, nor any claim for anticipated profits on the Work thus dispensed, with unless it is determined that the termination due to default was improper.

14.3. TERMINATION FOR CONVENIENCE

If at any time before completion of the Work, the District determines that it is either impossible or against the interests of the District to complete the Work, or if the Work is stopped by an injunction of a court of competent jurisdiction or by order of any competent authority, the District may, upon ten (10) days written notice to the Contractor, discontinue the Work and terminate the Contract. Upon service of such notice of termination, the Contractor shall discontinue the Work in such manner, sequence, and at such times as described below. The Contractor shall have no claim for damages for such discontinuance or termination, nor any claim for anticipated profits on the Work thus dispensed with, nor any other actually performed up to the time of discontinuance, including any Extra Work ordered by the Architect or the District to be done, nor for any claim for liquidated damages.

Termination of the Contract for convenience and the total compensation payable to the Contractor in the event of termination shall be governed by the following:

14.3.1 The District will issue the Contractor a written notice signed by the District, specifying that the Contract is to be terminated. Upon receipt of said written notice and, except as otherwise directed in writing by the District, the Contractor shall:

14.3.1.1 Stop all Work under the Contract except that specifically directed to be completed prior to Acceptance;

14.3.1.2 Perform Work the District deems necessary to secure the project for termination;

14.3.1.3 Remove equipment from the site of the Work;

14.3.1.4 Take such action as is necessary to protect materials from damage;

14.3.1.5 Notify all Subcontractors and suppliers that the Contract is being terminated and that their contracts or orders are not to be further performed unless otherwise authorized in writing by the District;

14.3.1.6 Provide the District with an inventory list of all material previously produced, purchased or ordered from suppliers for use in the Work and not yet used in the Work, including its storage location, and such other information as the District may request;

14.3.1.7 Dispose of material not yet used in the Work as directed by the District. It shall be the Contractor's responsibility to provide the District with good title to all materials purchased by the District hereunder, including material for which partial payment has been made and with bills of sale or other documents of title for such materials;

14.3.1.8 Subject to the prior written approval of the District, settle all outstanding liabilities and all claims arising out of subcontracts or orders for material terminated hereunder. To the extent directed by the District, the Contractor shall assign to the District all the

right, title and interest of the Contractor under subcontracts or orders for materials terminated hereunder;

14.3.1.9 Furnish the District with the documentation required to be furnished by the Contractor under the provisions of the Contract including, on projects as to which Federal funds are involved, all documentation required under the Federal requirements included in the Contract; and

14.3.1.10 Take such other actions as the District may direct.

14.3.2 Termination of the Contract shall not relieve the Contractor of responsibility for damage to materials except as follows:

14.3.2.1 The Contractor's responsibility for damage to materials for which partial payment has been made and for materials furnished by the District for use in the Work and unused shall terminate when the District certifies that such materials have been stored in the manner and at the locations directed by the District;

14.3.2.2 The Contractor's responsibility for damage to materials purchased by the District subsequent to the issuance of the notice that the Contract is to be terminated shall terminate when title and delivery of such materials has been taken by the District; and

14.3.2.3 When the Architect determines that the Contractor has completed the Work under the Contract directed to be completed prior to termination and such other Work as may have been ordered to secure the Project for termination, the Architect will recommend that the District formally accept the Project, and immediately upon and after such Acceptance by the District, the Contractor will not be required to perform any further Work thereon and shall be relieved of its contractual responsibilities for injury to persons or damage to property which occurs after the formal Acceptance of the Project by the District.

14.3.3 The total compensation to be paid to Contractor shall include the following: (a) all amounts owing to it under the Contract for Work completed in accordance with the Plans and Specification as of the date on which the termination notice is delivered; (b) all amounts owing under the Contract for additional Work performed pursuant to Section 14.4.1 above; (c) any costs incurred by Contractor in canceling orders and contracts relative to this Contract that Contractor had placed or entered into prior to receipt of the cancellation notice and all reasonable costs of demobilization. All records of Contractor and the subcontractors, necessary to determine compensation in accordance with this Section shall be open to inspection or audit by representatives of the District at all times after issuance of the notice that the Contract is to be terminated and for a period of three (3) years, and such records shall be retained for that period.

14.3.4 The provisions of this Section shall be included in all subcontracts.

14.4. RIGHTS OF DISTRICT UPON TERMINATION

14.4.1 In the event the right of the Contractor to proceed with the Work, or any portion thereof, has been terminated because of the fault of the Contractor and the Contractor has

been given ten (10) days' notice to cure such fault and has not done so, the District may take over the Work and prosecute the same to completion by contract or any other method the District deems expedient, and may take possession of and utilize in completing the Work such materials, appliances, equipment and plant as may be on the site of the Work and necessary therefore. In such event, the Contractor and its sureties shall be liable for all damages including costs of managerial and administrative services, architect, legal and other consultant fees, and liquidated damages sustained or incurred by the District in enforcing the provisions of the Contract and in completing or causing to complete the Contract work.

14.4.2 Upon termination, the Contractor shall not be entitled to receive any further payment until the Work is finished. If upon completion of the Work the total cost to the District, including architect, legal and other consultant fees, costs of managerial and administrative services, construction costs, and liquidated damages shall be less than the amount which would have been paid if the Work had been completed by the Contractor in accordance with the terms of the Contract, then the difference shall be paid to the Contractor in the same manner as the final payment under the Contract. If the total cost incurred by the District on account of termination of the Contract and subsequent completion of the Work by the District by whatever method the District may deem expedient shall exceed said amount which the Contractor would otherwise have been paid, the Contractor and his sureties shall be liable to the District for the full amount of such excess expense.

14.4.3 The rights and remedies of the District provided in this Section are in addition to any of the rights and remedies provided by the law or under the Contract.

14.5. FAILURE TO TIMELY COMPLETE THE WORK – LIQUIDATED DAMAGES

14.5.1 Liquidated Damages. It is agreed by the parties to the Contract that time is of the essence. In the event all the Work is not completed before or upon the expiration of the time limit as set in the Contract and/or Progress Schedule, or within any time extensions that may have been granted, damage will be sustained by the District; and that it may be impracticable to determine the actual amount of damage by reason of such delay. Accordingly, it is agreed that the Contractor shall pay to the District as damages the amount set forth in the Supplementary and Special Conditions for each and every day's delay in finishing the Work in excess of the number of days specified. The parties expressly agree that this liquidated damage clause is reasonable under the circumstances existing at the time the Contract was made. The District shall have the right to deduct the amount of liquidated damages from any money due or to become due the Contractor.

14.5.2 Exclusions. Notwithstanding the provisions of subsection 14.6.2, the Contractor shall not be liable for liquidated damages or delays caused by the removal or relocation of utilities when such removal or relocation is the responsibility of the District or the District of the utility under Government Code Section 4215.

END OF SECTION

CONSTRUCTION CONTRACT

THIS CONTRACT made on _____ by and between
ESCALON UNIFIED SCHOOL DISTRICT, hereinafter called either the District or Owner, and
_____ hereinafter called the Contractor.
The District and Contractor may be collectively referred to as the "parties". The parties have mutually covenanted and agreed as follows:

1. THE CONTRACT DOCUMENTS: The complete Contract consists of the following documents:
 - Notice Inviting Bids
 - Instructions to Bidders
 - Accepted Bid
 - Noncollusion Declaration
 - Subcontractor List
 - Bid Bond
 - General Construction Contract
 - Payment Bond
 - Performance Bond
 - Specifications
 - General Conditions
 - Supplementary and Special Conditions, (if any)
 - Drawings
 - Contractor's Certification Regarding Workers' Compensation
 - Addenda

The complete Contract also includes all items listed in the Project Manual and all modifications and amendments thereto. Any and all obligations of the District and the Contractor are fully set forth and described therein.

All of the above documents are intended to cooperate so that any work called for in one and not mentioned in the other or vice versa is to be executed the same as if mentioned in all said documents. The documents comprising the complete contract are sometimes hereinafter referred to as the Contract Documents.

1. THE WORK: (a) The Contractor agrees to furnish all tools, equipment, apparatus, facilities, labor, transportation, and material necessary to perform and complete in a good and workmanlike manner, the INTERIOR IMPROVEMENTS AT DENT E.S. AND EL PORTAL M.S. "Project" as called for, and in the manner designated in, and in strict conformity with, the Drawings and Specifications prepared by Timothy P. Huff & Associates Inc., dba TPH Architects, and adopted by the District, which the Drawings and Specifications are entitled, the INTERIOR IMPROVEMENTS AT DENT E.S. AND EL PORTAL M.S. respectively and which Drawings and Specifications are identified by the

signatures of the parties to this Contract. It is understood and agreed that the tools, equipment, apparatus, facilities, labor, transportation, and material shall be furnished and the work performed and completed as required in the Drawings and Specifications under the sole direction and control of the Contractor, and subject to inspection and approval of the District, or its representatives. The District hereby designates as its representative for the purpose of this Contract the following named person: ☺☺ insert name of architect☺☺, Architect.

2. **CONTRACT PRICE:** The District agrees to pay and the Contractor agrees to accept, in full payment for the work above agreed to be done, the sum of:

(\$ _____) Dollars

for the INTERIOR IMPROVEMENTS AT DENT E.S. AND EL PORTAL M.S. at 1998 Yosemite Avenue and 805 First Street, Escalon, CA, 95320, subject to additions and deductions as provided in the Contract Documents.

3. **COMPLETION DATE:** The Project shall be commenced on the date specified in the Notice to Proceed The total project will be completed within forty five (45) calendar days after the date stated in the Notice to Proceed.
4. **PERMITS; COMPLIANCE WITH LAW:** The Contractor shall, at its expense, obtain all necessary permits and licenses, easements, etc., for the construction of the project, give all necessary notices, pay all fees required by law, and comply with all laws, ordinances, rules and regulations relating to the work and to the preservation of the public health and safety.
5. **INSPECTION BY DISTRICT:** The Contractor shall at all times maintain proper facilities and provide safe access for inspection by the District to all parts of the work, and to the shops wherein the work is in preparation. Where the Specifications require work to be specially tested or approved, it shall not be tested or covered up without timely notice to the District of its readiness for inspection and without the approval thereof or consent thereto by the latter. Should any such work be covered up without such notice, approval, or consent, it must, if required by District, be uncovered for examination at the Contractor's expense.
6. **NOTICE AND SERVICE THEREOF:** Any notice from one party to the other under the Contract shall be in writing and shall be dated and signed by the party giving such notice or by a duly authorized representative of such party. Any such notice shall not be effective for any purpose whatsoever unless served in the following manner, namely, (a) if the notice is given to the District, by personal delivery thereof to the Assistant Superintendent of Business Services of the District, or by depositing the same in the United States mail, enclosed in a sealed envelope, addressed to the District, postage prepaid and certified; (b) If the notice is given to the Contractor, by personal delivery thereof to said Contractor or to its duly authorized representative at the site of the project, or by depositing the same in the United States mail, enclosed in a sealed envelope, addressed to the **Contractor at:**

postage prepaid and certified; and (c) if the notice is given to the surety or any other person, by personal delivery to such surety or other person, or by depositing the same in the United States mail, enclosed in a sealed envelope, addressed to such surety or other person, as the case may be, at the address of such surety or person last communicated by it to the party giving the notice, postage prepaid and certified.

7. **ACCIDENT PREVENTION:** Precaution shall be exercised at all times for the protection of persons (including employees) and property. The safety provisions of applicable laws, building and construction codes shall be observed. Machinery, equipment, and other hazards shall be guarded or eliminated in accordance with the safety provisions of the Construction Safety Orders issued by the Occupational Safety and Health Standards Board of the State of California.
8. **CONTRACTOR'S WARRANTY:** The District shall not, in any way or manner, be answerable or suffer loss, damage, expense or liability for any loss or damage that may happen to said building, work, or equipment or any part thereof, or in, on, or about the same during its construction and before acceptance. Contractor unqualifiedly warrants all work and materials to be free of defects whether performed or installed by it or by any subcontractor or supplier in the project which is the subject of this Contract, unless a lesser quality is expressly authorized in the Drawings and Specifications, in which event Contractor unqualifiedly warrants such lesser quality. Contractor further warrants that the work as performed by Contractor, subcontractor, or supplier will conform with the Drawings and Specifications or any written authorized deviations therefrom.
9. **LIQUIDATED DAMAGES:** **Liquidated damages as provided for in the General Conditions of the Contract shall be in the sum of 1,500.00 for each and every day as defined therein for each different scope of work and each change order that involves a different school site or scope at a school site.**
10. **APPRENTICES:** Contractor agrees to be bound by and comply with the provisions of sections 1777.5 et seq. of the Labor Code in respect to apprentices.
11. **PREVAILING WAGE:** Copies of the prevailing rate of per diem wages as determined by the Director of the Department of Industrial Relations in accordance with Labor Code section 1773 are on file at the District's office, and copies are available for inspection at that office to any interested party on request. Bidders shall be responsible for verifying with the Director of the Department of Industrial Relations that all such copies of the prevailing rate provided by the District are current and accurate. The requirement to pay the wage rate so specified is further detailed in the General Conditions.

By the execution of this Contract, Contractor hereby certifies that he is registered with the California Department of Industrial Relations as required pursuant to Labor Code section 1725.5 (contractor registration).

IN WITNESS WHEREOF, Four (4) identical counterparts of this Contract, each of which shall for all purposes be deemed an original , have been duly executed by the above named parties, on the date noted on the first page of this Contract.

DISTRICT:

By: _____
Signature

Name: _____
Title: _____

CONTRACTOR:

By: _____
Signature

Name: _____
Title: _____

END OF SECTION

**CONTRACTOR'S CERTIFICATE
REGARDING WORKERS' COMPENSATION**

TO: ESCALON UNIFIED SCHOOL DISTRICT

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

Contractor

By: _____

(Business Address)

(Place of Residence)

END OF SECTION

**DECLARATION REGARDING EMPLOYEE FINGERPRINTING
AND CRIMINAL BACKGROUND CHECK
To Be Executed by Bidder and Submitted With Bid**

I, _____, declare as follows:

1. Where the employees will have contact with pupils, the safety of the pupils will be ensured by one or more of the following:
 - a) The installation of a physical barrier, at the expense of the Contractor, at the Work site to limit contact with pupils.
 - b) Continual supervision and monitoring of all employees of Contractor and Subcontractor by an employee of Contractor whom the Department of Justice has ascertained has not been convicted of a violent or serious felony.

I am a duly authorized representative of _____
for the purpose of providing this certification and declare under penalty of perjury and the laws of the State of California that the foregoing is true and correct.

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

Signature

Printed Name/Title

END OF SECTION

**ASBESTOS-FREE MATERIALS CERTIFICATION
(TO BE EXECUTED BY BIDDER AND SUBMITTED WITH BID)**

INTERIOR IMPROVEMENTS AT DENT E.S. AND EL PORTAL M.S.

The undersigned declares that he or she is the person who executed the bid for the INTERIOR IMPROVEMENTS AT DENT E.S. AND EL PORTAL M.S. (hereinafter referred to as the "Project"), and submitted it to the ESCALON UNIFIED SCHOOL DISTRICT (hereinafter referred to as "District") on behalf of:

(hereinafter referred to as the "Contractor")

To the best of my knowledge, information and belief, in completing the Contractor's Work for the Project, no material furnished, installed or incorporated into the Project will contain, or in itself be composed of, any materials listed by the federal or state EPA or federal or state health agencies as a hazardous material.

Any disputes involving the question of whether or not material installed with asbestos-containing equipment is settled by electron microscopy; the cost of any such tests shall be paid by the Contractor.

All work or materials installed by the Contractor which is found to contain asbestos, or work or material installed with asbestos-containing equipment, will be immediately rejected and this work shall be removed and replaced by the Contractor at no additional cost to District.

Decontamination and removal of work found to contain asbestos or work installed with asbestos-containing equipment shall be done only under supervision of a qualified consultant, knowledgeable in the field of asbestos abatement and accredited by the Environmental Protection Agency. The ASBESTOS REMOVAL CONTRACTOR shall be a Cal/OSHA registered contractor qualified in the removal of asbestos and shall be chosen and approved by a Cal/OSHA certified Asbestos Consultant who shall have sole discretion and final determination in this matter. The asbestos consultant shall be chosen and approved by the District who shall have sole discretion and final determination in this matter. The work will be not accepted until asbestos contamination is reduced to levels deemed acceptable by the Asbestos Consultant.

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

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

Name of Contractor (Print or Type)

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/their authorized capacity(ies), and that by his/her/their signatures(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

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

WITNESS my hand and official seal.

Signature _____
Signature of Notary Public

Place Notary Seal Above

END OF SECTION

controlled substance in the workplace, (b) establishing a drug-free awareness program, and (c) requiring that each employee engaged in the performance of the Work of the Contract be given a copy of the statement required by California Government Code § 8355(a) and requiring that the employee agree to abide by the terms of that statement.

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

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

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

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

(Signature)

(Handwritten or Typed Name)

END OF SECTION

**RECYCLED CONTENT CERTIFICATION
(TO BE EXECUTED BY BIDDER AND INCLUDED WITH BID)**

The undersigned declares that he or she is the person who executed the bid for the INTERIOR IMPROVEMENTS AT DENT E.S. AND EL PORTAL M.S. (hereinafter referred to as the "Project"), and submitted it to the ESCALON UNIFIED SCHOOL DISTRICT (hereinafter referred to as "District") on behalf of:

(hereinafter referred to as the "Contractor").

Pursuant to Public Contract Code section 22152, the Contractor shall certify in writing under penalty of perjury, the minimum, if not exact, percentage of post consumer material as defined in the Public Contract Code section 12200, in products, materials, goods, or supplies offered or sold to District. With respect to printer or duplication cartridges that comply with the requirements of Section 12156(e), the certification required by this subdivision shall specify that the cartridges so comply (Public Contract Code § 22152).

Accordingly, I hereby certify that the minimum percentage of post consumer material as defined in the Public Contract Code section 12200, in products, materials, goods, or supplies offered or sold to District in conjunction with this project shall be _____%. I will notify the District in writing in the event this percentage changes.

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

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

(Signature)

(Handwritten or Typed Name)

END OF SECTION

SUBSTITUTIONS

SECTION 01 2500

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Special (or Supplementary) Conditions and Division 1 Specifications Section, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for handling requests for substitutions made after award of the Contract.
- B. All substitutions and Requests for Information (RFI's) that affect Structural Safety, Fire and Life Safety, Access Compliance or Energy (as applicable) shall be submitted to the Division of the State Architect, by the Architect, for review and approval.
- C. Related Sections: The following Sections contain requirements that relate to this Section:
 - 1. Division 1, Section - 013300"Submittals" specifies requirements for submitting the Contractor's construction schedule and the submittal schedule.

1.3 DEFINITIONS

- A. Definitions in this Article do not change or modify the meaning of other terms used in the Contract Documents.
- B. Substitutions: Changes in products, materials, equipment and methods of construction required by the Contract Documents proposed by the Contractor after award of the Contract are considered to be requests for substitutions.
- C. The following are not considered to be requests for substitutions:
 - 1. Substitutions requested during the bidding period and accepted by Addendum prior to award of the Contract are included in the Contract Documents and are not subject to requirements specified in this Section for substitutions.
 - 2. Revisions to the Contract Documents requested by the Owner or the Architect.
 - 3. Specified options of products and construction methods included in the Contract Documents.
 - 4. The Contractor's determination of and compliance with governing regulations and

orders issued by governing authorities.

1.4 SUBMITTALS

- A. Substitution Request Submittal: The Architect will consider requests for substitution if received within thirty five (35) days after commencement of the work. Requests received more than thirty five (35) days after commencement of the work may be considered or rejected at the discretion of the Architect.
1. Submit three (3) copies of each request for substitution for consideration. Submit requests on the "Substitution Request Form" attached.
 2. Identify the product or the fabrication or installation method to be replaced in each request. Include related Specification Section and Drawing numbers.
 3. Provide complete documentation showing compliance with the requirements for substitutions, and the following information as appropriate. Information must be highlighted and project specific.
 - a. Coordination information, including a list of changes or modifications needed to other parts of the work and to construction performed by the Owner and separate contractors, that will be necessary to accommodate the proposed substitution.
 - b. A detailed comparison of significant qualities of the proposed substitution with those of the work specified. Significant qualities may include elements, such as performance, weight, size, durability and visual effect.
 - c. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
 - d. Samples, where applicable or requested.
 - e. A statement indicating the substitution's effect on the contractor's construction schedule compared to the schedule without approval of the substitution. Indicate the effect of the proposed substitution on overall contract time.
 - f. Cost information, including a proposal of the net change, if any in the contract sum.
 - g. The contractors certification that the proposed substitution conforms to requirements in the contract documents in every respect and is appropriate for the application indicated.
 - h. The contractor's waiver of rights to additional payment or time that may subsequently become necessary because of the failure of the substitution to perform adequately.

4. Architect's Action: If necessary, the Architect will request additional information or documentation for evaluation within one (1) week of receipt of a request for substitution. The Architect will notify the Contractor of acceptance or rejection of the substitution within two (2) weeks of receipt of the request, or one (1) week of receipt of additional information or documentation, whichever is later. Acceptance will be in the form of a change order, field order or approved submittal as deemed appropriate by the Architect.

PART 2 - PRODUCTS

2.1 SUBSTITUTIONS

- A. Conditions: The Architect will receive and consider the contractor's request for substitution when one or more of the following conditions are satisfied, as determined by the Architect. The Architect will return the requests without action except to record noncompliance with these requirements.
 1. Extensive revisions to the contract documents are not required.
 2. Proposed changes are in keeping with the general intent of the contract documents.
 3. The request is timely, fully documented, and properly submitted.
 4. The specified product or method of construction cannot be provided within the contract time. The Architect will not consider the request if the product or method cannot be provided as a result of failure to pursue the work promptly or coordinate activities properly.
 5. The request is directly related to an "or equal" clause or similar language in the contract documents.
 6. The requested substitution offers the Owner a substantial advantage, in cost, time, energy conservation, or other considerations after deduction additional responsibilities the Owner must assume. The Owner's additional responsibilities may include compensation to the Architect for redesign and evaluation services, increased cost of other construction by the Owner and similar considerations.
 7. The specified product or method of construction cannot receive necessary approval by the governing authority and the requested substitution can be approved.
 8. The specified product or method of construction cannot be provided in a manner that is compatible with other materials and where the contractor certified that the substitution will overcome the incompatibility.

9. The specified product or method of construction cannot be coordinated with other materials and where the contractor certifies that the proposed substitution can be coordinated.
 10. The specified product or method of construction cannot provide a warranty required by the contract documents and where the contractor certifies that the proposed substitution provides the required warranty.
 11. Where a proposed substitution involves more than one prime contractor, each contractor shall cooperate with the other contractors involved to coordinate the work, provide uniformity and consistency and ensure compatibility of products.
- B. The contractor's submittal and the Architect's acceptance of shop drawings, product data or sample for construction activities not complying with the contract documents do not constitute an acceptable or valid request for substitution, nor do they constitute approval.

PART 3 - EXECUTION

- A. The attached two page form will be reproduced and sequentially numbered by the Contractor for any and all proposed substitutions. No other forms will be accepted.

SUBSTITUTION REQUEST FORM

To: Timothy P. Huff & Associates Inc.
519 McHenry Avenue
Modesto, CA 95354

PLEASE CHECK THE APPROPRIATE BOX BELOW:

- ☐ Substitution Request Prior to Award (During Bid Period)
- ☐ Product or System Substitution
 - ☐ Design Change Substitution
- ☐ Substitution Request After Award of the Contract
- ☐ Product or System Substitution
 - ☐ Design Change Substitution

(Contractor Awarded the Contract for this Project shall assign the numbers below - leave blank if submitted during the Bid Period)

SUBSTITUTION REQUEST # _____

WE HEREBY SUBMIT FOR YOUR CONSIDERATION THE FOLLOWING PRODUCT OR METHOD AS SUBSTITUTION FOR THE SPECIFIED OR DRAWING ITEM FOR THIS PROJECT:

PROJECT: _____

SPECIFIED ITEM: _____

Specification Section #	Page #	Paragraph #	Description
-------------------------	--------	-------------	-------------

- OR -

DRAWING ITEM: _____

Drawing Number	Detail Cut Number	Description
----------------	-------------------	-------------

PROPOSED CREDIT IF ANY: _____

The undersigned requests consideration of the following:

PROPOSED SUBSTITUTION: _____

Attached data includes product description, specifications, drawings, photographs, performance and test data adequate for evaluation of the request; applicable portions of the data are clearly identified.

Attached data also includes a description of changes to the Contract Documents which the proposed substitution will require for its proper installation,

The undersigned certifies: (Modifications by the submitter to the following list is cause for automatic rejection without further review)

1. The proposed substitution does not affect dimensions shown on drawings or code requirements indicated.
2. The undersigned will compensate the Architect at a rate of \$90.00 an hour for review, investigation and comments whether or not the request is approved for changes required to the building design, including engineering design, detailing and construction costs caused by the requested substitution. The Architect is herein defined as any of those firms or individuals listed by reference on the Drawings, including all Consultants identified herein.
3. The proposed substitution will have no adverse affect on other trades, the construction schedule, or specified warranty requirements.
4. Maintenance and service pans will be locally available for the proposed substitution.
5. Attach information for a minimum of three projects where the substitution has been used locally within a 200 mile distance of this project, including names, addresses and telephone numbers of Owners who have accepted this product into their projects.
6. Attach all cost data with explanations if different from Specified or Drawing item, include in that explanation a discussion on a quality of proposed substitution and cost differential.
7. The undersigned will pay for any subsequent changes in incorporating the proposed substitution that were not apparent at the time of approval into the Work, including compensation to the Architect as described in Item 2 above.

The undersigned states that the function, appearance and quality are equivalent or superior to the specified or drawing item.

Submitted By (Bidder, Contractor or Sub-Contractor)

Signature _____

Firm _____

Address _____

Date _____

Telephone _____

Additional Signature required:
(The Contractor if submitted after the Award)

Signature _____

Firm _____

Below is for the use of the Design Consultant only:

☐ Accepted

☐ Accepted as Noted

☐ Not accepted

☐ Received Past Time Period Allowed by Public
Contract Code #3400

By _____

Date _____

Remarks _____

CONTRACTOR'S REQUEST FOR INFORMATION SECTION 012613

PART 1 -GENERAL

1.1 SUMMARY

- A. Section includes general requirements for Contractor's Requests for Information (RFI).
 - 1. Procedure for shop drawings, product data and samples submittals are specified in accordance with Section 013300.
 - 2. Procedure for substitutions are specified in accordance Section 012500.

1.2 CONTRACTOR'S REQUESTS FOR INFORMATION

- A. Submit a Request for Information to the Architect when:
 - 1. An unforeseen condition or constructibility question occurs.
 - 2. Questions regarding information in the Contract Documents arise.
 - 3. Information not found in the Contract Documents is required.
- B. When possible, request such clarification either verbally or in writing at the next scheduled Project meeting.
 - 1. When the RFI is answered at the Project meeting, number the RFI and enter the response into the meeting minutes.
 - 2. When the urgency of the need, or the complexity of the item makes clarification at the next scheduled Project meeting impractical, prepare and submit a formal written RFI to the Architect without delay.
- C. RFI received directly from a subcontractor will be returned to the Contractor unprocessed.
- D. RFI's that affect structural safety, fire and life safety , access compliance or energy (as applicable) shall be submitted to the Division of the State Architect for review and approval.

1.3 SUBMITTAL

- A. Submit RFI's within a reasonable time frame so as not to interfere with, or impede the progress of the Work.
 - 1. Keep the number of RFI's to a minimum.

2. When the number and frequency of RFI's submitted becomes unwieldy, the Architect may require the Contractor to abandon the process and submit requests as either submittal, substitution or requests for change.
 3. When an answer to an RFI has an effect on cost or time, notify the Architect in accordance with the Contract Documents when the RFI is received. Notification shall occur prior to commencing such work, so that the change order process can be initiated.
 4. When submitting an RFI, alert the Architect, in writing, to the time available before the response will cause an impact to the Project.
- B. When submitted in writing, submit the RFI as follows:
1. Submit a legible written request (EMAIL is acceptable) on a standard CSI or AIA preprinted form or another form approved in advance by the Architect. Include the following information:
 - a. Project name, as listed on the Contract Documents, Architect's project number or other identifying number, if any.
 - b. Date.
 - c. Name, address, and telephone of the Contractor.
 - d. Number and title of affected Specification Section or Sections.
 - e. Drawing numbers and detail references, as appropriate.
 - f. Clear, concise explanation of information or clarification requested.
 - g. Blank, lined spaces for Architect's written response.
- C. Each page of each attachment to the RFI shall bear the RFI number in the lower right corner.
- D. Number submitted RFI'S consecutively.
- E. Sign and stamp all RFI forms. RFI from subcontractors or material suppliers shall be submitted through, and be reviewed by the Contractor prior to submittal to the Architect.
- F. Unanswered RFI will be returned with a stamp or notation "NOT REVIEWED".
- G. Prepare and maintain an RFI Log. Update on a weekly basis. Log RFI number, brief description of content or subject discussed, date submitted, and date answered. Keep log current and furnish copy when so requested by the Architect.

- H. Allow a minimum of 5 working days for review and response time; the response time will be increased if more information is required, when the RFI is submitted out-of-sequence, or if in the opinion of the Architect, more time is needed to answer the RFI.

1.4 QUALITY ASSURANCE

- A. Carefully study the Contract Documents to assure that the requested information is not available therein.
 - 1. RFI which requests information available in the Contract Documents may not be answered by the Architect.
 - 2. Before submitting RFI to the Architect, verify that the information requested is not indicated in the Contract Documents, or cannot be determined from a careful review of same.
- B. In all cases where a RFI is issued to request clarification of coordination issues, for example, pipe and duct routing, clearances, specific locations of work shown diagrammatically, and similar items, the Contractor shall fully lay-out a suggested solution using drawings or sketches drawn to scale, and submit same with the RFI. RFI which fails to include a suggested solution will not be answered.
- C. Do not use RFI for the following purpose:
 - 1. To request approval of submittals.
 - 2. To request approval of substitutions.
 - 3. To request changes to the Contract Documents and to confirm action taken by the Contractor for requested changes/substitutions to the Contract Documents.
- D. If the Contractor believes that a clarification by the Architect may result in a change in Contract price, the Contractor shall not proceed with the work indicated by the RFI until a Change Order or other acceptable tracking device is prepared and approved.
 - 1. If the Contractor believes that a clarification by the Architect results in additional cost, the Contractor shall identify in the RFI the basis of the Contractor's bid as it relates to the RFI.
 - 2. Answered RFI shall not be construed as approval to perform extra work.

END OF SECTION

COORDINATION SECTION 013113

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and supervisory requirements necessary for coordinating construction operations including, but not necessarily limited to, the following:
 - 1. General project coordination procedures.
 - 2. Conservation.
 - 3. Coordination drawings.
 - 4. Administrative and supervisory personnel.
 - 5. Cleaning and protection.

1.3 COORDINATION

- A. Coordinate construction operations included in various Sections of these Specifications to assure efficient and orderly installation of each part of the work. Coordinate construction operations included under different Sections that depend on each other for proper sequence installation, connection and operation.
 - 1. Schedule construction operations in the sequence required to obtain the best results where installation of one part of the work depends on installation of other components, before or after its own installation.
 - 2. Coordinate installation of different components to assure maximum accessibility for required maintenance, service and repair.
 - 3. Make provisions to accommodate items scheduled for later installation.
- B. Where necessary, prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports and attendance at meetings.
 - 1. Prepare similar memoranda for the Owner and separate contractors where coordination of their work is required.

- C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and assure orderly progress of the work. Such administrative activities include, but are not limited to the following:
 - 1. Coordination with District requirements.
 - 2. Preparation of schedules.
 - 3. Installation and removal of temporary facilities.
 - 4. Delivery and processing of submittals.
 - 5. Progress meetings.
 - 6. Project closeout activities.
- D. Conservation: Coordinate construction operations to assure that operations are carried out with consideration given to conservation of energy, water and materials.
 - 1. Salvage materials and equipment involved in performance of, but not actually incorporated in, the work.

1.4 SUBMITTALS

- A. Coordination Drawings: Prepare coordination drawings where careful coordination is needed for installation of products and materials fabricated by separate entities. Prepare coordination drawings where limited space availability necessitates maximum utilization of space for efficient installation of different components. Prepare coordination drawings for underground utilities and submit to Architect for review.
 - 1. Show the relationship of components shown on separate shop drawings.
 - 2. Indicate required installation sequences.
 - 3. Submit coordination drawings and comply with requirements contained in Section 01300 "Submittals".
- B. Staff Names: Within fifteen (15) calendar days of commencement of construction operations, submit a list of the Contractor's principal staff assignments, including the superintendent and other personnel in attendance at the project site. Identify individuals and their duties and responsibilities. List their addresses and telephone numbers.
 - 1. Post copies of the list in the project meeting room, the temporary field office, and each temporary telephone.

PART 2 - PRODUCTS (not applicable)

PART 3 - EXECUTION

3.1 GENERAL COORDINATION PROVISIONS

- A. Inspection of Conditions: Require the installer of each major component to inspect both the substrate and conditions under which work is to be performed. Do not proceed until unsatisfactory conditions have been corrected in an acceptable manner.
- B. Coordinate temporary enclosures with required inspections and tests to minimize the necessity of uncovering completed construction for that purpose.

3.2 CLEANING AND PROTECTION

- A. Clean and protect construction in progress and adjoining materials in place, during handling and installation. Apply protective covering where required to assure protection from damage or deterioration at substantial completion.
- B. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to assure operability without damaging effects.
- C. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging or otherwise deleterious exposure during the construction period. Where applicable, such exposures include, but are not limited to the following:
 - 1. Excessive static or dynamic loading.
 - 2. Air contamination or pollution.
 - 3. Solvents or chemicals.
 - 4. Soiling, staining, and corrosion.
 - 5. Bacteria or rodent and insect infestation.
 - 6. Combustion.
 - 7. Electrical current.
 - 8. High-speed operation.
 - 9. Contact between incompatible materials.
 - 10. Destructive testing.
 - 11. Unprotected storage.
 - 12. Improper shipping or handling.
 - 13. Theft or vandalism.

END OF SECTION

CONSTRUCTION SCHEDULES

SECTION 013213

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes:
 - 1. Provide projected construction schedules for all work.
 - 2. Revise periodically as required.
- B. Use the schedules for planning, coordinating and monitoring work under the Contract, including activities of all subcontractors, equipment vendors and suppliers.

1.2 FORM OF SCHEDULES

- A. Prepare Construction Schedule in the form of a Critical Path Method (CPM).
 - 1. Provide diagram showing critical path, and a tabulation of activities.
 - 2. Indicate all significant activities of Project including each trade or operation, submittals of shop drawings, construction of mockups, equipment data, procurement of materials and required approvals, by the Contractor, District where appropriate, Architect, and government agencies.

1.3 SUBMITTALS

- A. Within 15 days after issuance of Notice to Proceed, provide to Architect, for review, 2 copies of a preliminary construction schedule sufficiently complete to indicate sequence of operations and durations performed within the specified Contract time. Should proposed schedule be based upon less time than the maximum time allowed, this fact will not prejudice Contractor's right to time specified.
- B. Within 30 days after issuance of Notice to Proceed, provide the Architect 2 copies of the construction schedule consisting of required functions or activities, tabulation of activities, and critical path.
- C. Submit updated schedule with Application for Payment thereafter until the Project is completed, provide the Architect 2 copies of an updated, reconciled schedule showing work progress.

- D. Submittal of the complete, reconciled, updated schedule must be attached with the request for payment and will be a condition for progress payments.
- E. Prepare and submit revised schedule when:
 - 1. Changes to Contract affect Contract completion time.
 - 2. "Slippage" occurs because of procurement delays, rain, strikes and other delays.
 - 3. Activities are modified from previous submittal.
 - 4. Delay on initial non-critical items is of such magnitude as to change course of critical path.

1.4 PREPARATION OF SCHEDULE

- A. Show sequence of activities planned, their interdependence, and time estimated to perform each activity. In developing schedule, each significant activity shall be represented and identified by number, giving start and finish of each. Clearly indicate the series of activities which determine duration of Project and referred to as "Critical Path."
- B. Tabulation of activities, either manual or machine run, shall be furnished showing the following information for each activity.
 - 1. Designation.
 - 2. Duration.
 - 3. Earliest start time.
 - 4. Latest start time.
 - 5. Earliest finish time.
 - 6. Latest finish time.
 - 7. Identification of activities on critical path.
- C. Based on work flow of activities, tabulation of activities and critical path, prepare schedule to horizontal scale of time accumulated from start to finish of work with calendar dates for events and with percentage of completion directly related to scheduled performance time.
- D. Schedule shall be a composite reflection of exact job requirements needed to carry out all phases of work and to complete work in compliance with Contract Documents.

- E. Provide a narrative report to define:
 - 1. Problem areas, anticipated delays, and impact on the schedule.
 - 2. Corrective action recommended, and its effect.

1.5 REVIEW BY ARCHITECT, AND UPDATING

- A. Submit 2 prints of the schedule for review within stipulated time limit. One print will be returned marked for correction.
- B. After corrections (if required), submit 4 signed copies of construction schedule, marked in color to show current progress, monthly. Mark each activity on which work has been started to show actual progress. Show actual progress by drawing a line to the point on each activity to which work has progressed at the end of reporting period.
- C. During course of Project, any change proposed by Contractor to accepted critical path shall be subject to review by the Architect.

END OF SECTION

SUBMITTALS
SECTION 013300

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division-1 Specification Sections, apply to this Section.
- B. Related Work:
 - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications.

1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements for submittals required for performance of the Work, including:
 - 1. Contractor's construction schedule.
 - 2. Shop Drawings.

1.3 SUBMITTAL PROCEDURES

- A. Coordination: Coordinate preparation and processing of submittals with performance of construction activities. Transmit each submittal sufficiently in advance of performance of related construction activities to avoid delay.
 - 1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals and related activities that require sequential activity.
- B. Processing: Allow sufficient review time so that installation will not be delayed as a result of the time required to process submittals, including time for resubmittals.
 - 1. Allow two weeks for initial review. Allow additional time if processing must be delayed to permit coordination with subsequent submittals. The Architect will promptly advise the Contractor when a submittal being processed must be delayed for coordination.
 - 2. If an intermediate submittal is necessary, process the same as the initial submittal.

3. Allow one week for reprocessing each submittal.
 4. No extension of Contract Time will be authorized because of failure to transmit submittals to the Architect sufficiently in advance of the Work to permit processing.
- C. Submittal Preparation: Place a permanent label or title block on each submittal for identification. Indicate the name of the entity that prepared each submittal on the label or title block. The Contractor shall stamp the submittals acknowledging that they have been reviewed.
- D. Submittal Transmittal: Package each submittal appropriately for transmittal and handling. Transmit each submittal from Contractor to Architect using a transmittal form. Submittals not stamped as listed and received from sources other than the contractor will be returned without action.

1.4 CONTRACTORS CONSTRUCTION SCHEDULE

- A. Bar-Chart Schedule: Prepare a fully developed, horizontal bar-chart type Contractor's construction schedule.
1. Provide a separate time bar for each significant construction activity. Provide a continuous vertical line to identify the first working day of each week. Use the same breakdown of units of the Work as indicated in the "Schedule of Values."
 2. Indicate completion in advance of the date established for Substantial Completion. Indicate Substantial Completion on the schedule to allow time for the Architect's procedures necessary for certification of Substantial Completion.

1.5 SHOP DRAWINGS

- A. Submit newly prepared information, drawn to accurate scale. Highlight, encircle, or otherwise indicate deviations from the Contract Documents. Do not reproduce Contract Documents or copy standard information as the basis of Shop Drawings. Standard information prepared without specific reference to the Project is not considered Shop Drawings.
- B. Shop Drawings include fabrication and installation drawings, setting diagrams, schedules, patterns, templates and similar drawings.
- C. Do not use Shop Drawings without an appropriate final stamp indicating action taken in connection with construction. Architect's action stamp is defined in paragraph 18 of this Section.

1.6 ARCHITECT'S ACTION

- A. Except for submittals for record, information or similar purposes, where action and return is required or requested, the Architect will review each submittal and shop drawing, mark to indicate action taken, and return promptly.
- B. Compliance with specified characteristics is the Contractor's responsibility.
- C. Action Stamp: The Architect will stamp each submittal and shop drawing with a uniform, self-explanatory action stamp. The stamp will be appropriately marked.

END OF SECTION

**TESTING AND INSPECTION
SECTION 014523**

PART 1 - GENERAL

1.1 SUMMARY

- A. Work included: Testing laboratory services and inspections required during the course of construction, as specified herein. The Conditions of the Contract and the other sections of Division 1 apply to this section as fully as if repeated herein.

1.2 TESTING LABORATORY

- A. Testing and inspection will be performed by an independent testing laboratory selected by and paid for by the Owner and approved by the Architect and DSA.
- B. Testing and inspection services which are performed shall be in accordance with requirements of the California Building Code, latest adopted edition, and as specified herein. Testing and inspection services shall verify that work meets the requirements of the Contract Documents.
- C. Test reports shall be signed by a Registered Civil Engineer licensed in the State of California.

1.3 PAYMENTS

- A. Costs of initial testing and inspection, except as specifically modified hereinafter, or specified otherwise in technical sections, will be paid for by the Owner, providing such testing and inspection indicates compliance with the Contract Documents. Initial tests and inspections are defined as the first tests and inspections as hereinafter specified.
- B. In the event a test or inspection indicated failure of a material or procedure to meet requirements of Contract Documents, costs for retesting and reinspection will be paid by the Owner and back charged to the Contractor.
- C. Additional tests and inspections are not herein specified but requested by Owner or Architect, will be paid for by Owner, unless results of such tests and inspections are found to be not in compliance with the Contract Documents, in which case the Owner will pay all costs for initial testing as well as retesting and reinspection and back charge the Contractor.
- D. Costs for additional tests or inspections required because of change in materials being provided or change of source or supply shall be paid by the Contractor direct to the Testing Laboratory.

- E. Costs for work which is required to correct deficiencies shall be borne by the Contractor.
- F. Cost of testing which is required solely for the convenience of Contractor in his scheduling and performance of work shall be borne of the Contractor.

PART 2 - PRODUCTS

2.1 **TESTING SERVICES**

- A. The Owner's representative may require that testing be performed to determine that materials meet specified requirements, such testing may include, but is not necessarily limited to:
 - 1. Post Installed Anchors.

END OF SECTION

TEMPORARY FACILITIES
SECTION 015000

PART 1 - GENERAL

1.1 SUMMARY

- A. Furnish required temporary facilities as shown or specified herein plus such facilities as required for proper performance of the Contract. Locate temporary facilities where directed and maintain in a safe and sanitary condition at all times until completion of the Contract. The Conditions of the Contract and the other sections of Division 1 apply to this section as fully as if repeated herein.

1.2 QUALITY ASSURANCE

- A. Comply with governing regulation and utility company regulations and recommendations. Comply with pollution and environmental protection regulations for use of water and energy, for discharge of wastes and storm drainage from project site, and for control of dust, air pollution and noise.

PART 2- PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 TEMPORARY SANITARY FACILITIES

- A. Provide adequate temporary sanitary conveniences for the use of employees and persons engaged on the work, including subcontractors and their employees, as required by law, ordinances, or regulation of public authorities having jurisdiction.
- B. Maintain sanitary facilities in a clean and sanitary condition during the entire course of the work.

3.2 TEMPORARY WATER

- A. Provide adequate fire protection for the duration of work in accordance with local codes, ordinances and Governing Regulations.
- B. The Contractor shall take necessary precaution to guard against and eliminate possible fire hazards and to prevent damage to construction work, building materials, equipment, and public property. The Contractor shall be responsible for providing, maintaining and enforcing fire protection methods.

3.3 CONSTRUCTION EQUIPMENT

- A. Contractor shall erect, equip, and maintain construction equipment in accordance with applicable statutes, laws, ordinance, rules and regulations of authority having jurisdiction.
- B. Contractor shall provide, maintain and remove upon completion of the work all temporary rigging, scaffolding, hoisting equipment, rubbish chutes, barricades around openings and excavations, ladders, fences and other temporary work as required for all work hereunder.
- C. Temporary work shall conform to requirements of State, County, and local authorities and underwriters which pertain to operation, safety and fire hazard. Contractor shall furnish and install items necessary for conformity with such requirements, whether or not called for under the separate divisions of these specifications.

3.4 FENCES AND BARRICADES

- A. Construct and maintain fences, planking, barricades, lights, shoring, and warning signs as indicated on the drawings and as required by local authorities and State safety ordinances and as required to protect the Owner's property from injury or loss and as necessary for the protection of the public:

3.5 STORAGE

- A. Operations of the contractor, including storage of materials, shall be confined to areas approved. Contractor shall be liable for damage caused by him during such use of property of the Owner or other parties. Contractor shall save the Owner, its officers and agents, and the Architect and his employees free and harmless from liability of any nature or kind arising from any use, trespass, or damage occasioned by his operations on premises of third persons.
- B. Provide lockable storage containers for the security of materials and equipment as deemed appropriate by the Contractor.

3.6 ENVIRONMENTAL PROTECTION

- A. Provide protection, operate temporary facilities and conduct construction in ways and by methods that comply with environmental regulations, and minimize the possibility that air, waterways and subsoil might be contaminated or polluted or that other undesirable effects might result. Use of tools and equipment that produce noise shall comply with OSHA regulations.

3.7 REMOVAL AT COMPLETION

- A. Upon completion of the work, or prior thereto, when so directed by the Architect, Contractor shall remove temporary facilities, structures and installation from the Owner's property. Similarly, return exterior areas utilized for temporary facilities to substantially their original state, or when called for on the drawings, complete the areas as shown or noted. Sanitary facilities shall be properly disinfected and evidence removed from the site.

END OF SECTION

**PROJECT CLOSEOUT
SECTION 017000**

PART 1 - GENERAL

1.1 RELATED DOCUMENTS:

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division-1 Specification sections, apply to the work of this section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for contract closeout including, but not limited to, the following:
 - 1. Inspection procedures
 - 2. Project record documents submittal.
 - 3. Operation and maintenance manual submittal.
 - 4. Submittal of warranties.
 - 5. Final cleaning.
- B. Closeout requirements for specific construction activities are included in the appropriate Sections in Division 2 through 16.

1.3 COMPLETION AND FINAL ACCEPTANCE

- A. Preliminary Procedures: Before requesting inspection for completion complete the following. List exceptions in the request.
 - 1. Advise the Owner of pending insurance changeover requirements.
 - 2. Submit specific warranties, workmanship bonds, maintenance agreements, final certifications, and similar documents.
 - 3. Obtain and submit releases enabling the Owner unrestricted use of the work and access to services and utilities. Include occupancy permits, operating certificates and similar releases.
 - 4. Submit record documents and similar final record information.
 - 5. Deliver tools, spare parts, extra stock and similar items.

6. Make final changeover of permanent locks and transmit keys to the Owner. Advise the Owner's personnel of changeover in security provisions.
 7. Complete startup testing of systems and submit all testing reports and complete instructions of the Owner's operation and maintenance personnel.
 8. Complete final cleanup requirements, including touch up painting.
 9. Touch up and otherwise repair and restore marred, exposed finishes.
- B. Inspection Procedures: On receipt of a request for inspection, the Architect will either proceed with inspection or advise the Contractor of unfilled requirements. The Architect will prepare the certificate of completion following inspection or advise the contractor of construction that must be completed or corrected before the certificate will be issued.
1. The Architect will repeat inspection when requested and assured that the work is substantially complete.
 2. Results of the completed inspection will form the basis of requirements for final acceptance.

1.4 FINAL ACCEPTANCE

- A. Submit the final payment request with final releases and supporting documentation not previously submitted and accepted. Include certificates of insurance for products and completed operations where required.
- B. Submit a copy of the Architect/Engineer's final punch-list of itemized work to be completed or corrected, stating that each item has been completed or otherwise resolved for acceptance and has been endorsed and dated by the Architect/Engineer.

1.5 RECORD DOCUMENT SUBMITTALS

- A. General: Do not use record documents for construction purposes. Protect record documents from deterioration and loss in a secure, fire resistant location. Provide access to record documents for the Architect's reference during normal working hours.
- B. Record Drawings: Maintain a clean, undamaged set of blue or black line white prints of Contract Drawings and Shop Drawings. Mark the set to show the actual installation where the installation varies substantially from the work as originally shown. Mark which drawing is most capable of showing conditions fully and accurately. Where shop drawings are used, record a cross-reference at the corresponding locations on the contract drawings. Give particular attention to concealed elements that would be difficult to measure and record at a later date.
1. Mark record sets with red erasable pencil. Use other colors to distinguish between variations in separate categories of the work.

2. Mark new information that is important to the Owner but was not shown on the contract drawings or shop drawings.
 3. Not related change order numbers where applicable.
 4. Organize record drawing sheets into manageable sets (ie.: plumbing, mechanical and electrical). Bind sets with durable paper cover sheets; print suitable titles, dates and other identification on the cover of each set.
- C. Maintenance Manuals: Organize operation and maintenance data into suitable sets of manageable size (two copies of all information). Bind properly indexed data in individual, heavy duty, two inch (2"), three (3) ring, vinyl covered binders with pocket folders for folded sheet information. Mark appropriate identification on front and spine of each binder. Include the following types of information.
1. Emergency instructions.
 2. Spare parts list.
 3. Copies of warranties.
 4. Wiring diagrams.
 5. Recommended "turn around" cycles.
 6. Inspection procedures.
 7. Shop drawings and product data.
 8. Fixture lamping schedule.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 CLOSEOUT PROCEDURES

- A. Operations and Maintenance Instructions: Arrange for each installer of equipment that requires regular maintenance to meet with the Owner's personnel to provide instruction in proper operation and maintenance. Provide instruction by manufacturer's representatives if installers are not experienced in operation and maintenance procedures. Include a detailed review of the following items:
1. Maintenance manuals.
 2. Record documents.

3. Spare parts and materials.
 4. Tools.
 5. Identification systems.
 6. Control sequences.
 7. Warranties and bonds.
 8. Maintenance agreements and similar continuing commitments.
- B. As part of instruction for operating equipment, demonstrate the following procedures:
1. Startup.
 2. Shutdown.
 3. Emergency operations.
 4. Noise and vibration adjustments.
 5. Safety procedures.
 6. Economy and efficiency adjustments.
 7. Effective energy utilization.

3.2 FINAL CLEANING

- A. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to the condition expected in a normal, commercial building cleaning and maintenance program. Comply with manufacturer's instructions.

END OF SECTION

CUTTING AND PATCHING SECTION 017329

PART 1 - GENERAL

1.1 SUMMARY

- A. Work included: Cutting and patching for this work includes, but is not necessarily limited to:
 - 1. Final patching;
- B. Related work described elsewhere:
 - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications
 - 2. Division 2 Demolition

1.2 JOB CONDITIONS

- A. Dust Control: use all means necessary to control dust on and near the Work and on and near all areas if such dust is caused by the Contractor's operations during performance of the Work or if resulting from the condition in which the Contractor leaves the site.
 - 1. Thoroughly moisten all surfaces as required to prevent being a nuisance to the public, neighbors, and concurrent performance of other work on the site.
- B. Protection: Use all means necessary to protect all materials of this section before, during, and after installation and to protect all objects designed to remain.
 - 1. In the event of damage, immediately make all repairs and replace necessary to the approval of the Architect and at no additional cost to the Owner.

PART 2 - PRODUCTS

2.1 MATERIALS, GENERAL

- A. Use materials identical to existing materials. For exposed surfaces, use materials that visually match existing adjacent surfaces to the fullest extent possible if identical materials are unavailable or cannot be used. Use materials whose installed performance will equal or surpass that of existing materials.

PART 3 - EXECUTION

3.1 INSPECTION

- A. Examine surfaces to be cut and patched and conditions under which cutting and patching is to be performed before cutting. If unsafe or unsatisfactory conditions are encountered, take corrective action before proceeding.
 - 1. Before proceeding, meet at the project site with parties involved in cutting and patching, including mechanical and electrical trades. Review areas of potential interference and conflict. Coordinate procedures and resolve potential conflicts before proceeding.

3.2 PREPARATION

- A. Temporary Support: Provide temporary support of work to cut.
- B. Protection: Protect existing construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of the Project that might be exposed during cutting and patching operations.
- C. Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.
- D. Avoid cutting existing pipe, conduit or ductwork serving the building but scheduled to be removed or relocated until provisions have been made to bypass them.

3.3 PERFORMANCE

- A. General: Employ skilled workmen to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time and complete without delay.
 - 1. Cut existing construction to provide for installation of other components or performance of other construction activities and the subsequent fitting and patching required to restore surfaces to their original condition.
- B. Cutting: Cut existing construction using methods least likely to damage elements retained or adjoining construction. Where possible, review proposed procedures with the original Installer; comply with the original Installer's recommendations.
- C. Patching: Patch with durable seams that are as invisible as possible. Comply with specified tolerances.
 - 1. Where feasible, inspect and test patched areas to demonstrate integrity of the installation.
 - 2. Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.

3.4 CLEANING

- A. Clean areas and spaces where cutting and patching are performed. Completely remove paint, mortar, oils, putty and similar items. Thoroughly clean piping, conduit and similar features before applying paint or other finishing materials. Restore damaged pipe covering to its original condition.

END OF SECTION

CLEANING SECTION 017423

PART 1 - GENERAL

1.1 SUMMARY

- A. Throughout the construction period, maintain the site in a standard of cleanliness as described in this Section.
- B. Related work:
 - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications.
 - 2. In addition to standards described in this Section, comply with requirements for cleaning as described in pertinent other Sections of these Specifications.

1.2 QUALITY ASSURANCE

- A. Conduct daily inspection, and more often if necessary, to verify that requirements for cleanliness are being met.
- B. In addition to the standards described in this Section, comply with pertinent requirements of governmental agencies having jurisdiction.

PART 2 - PRODUCTS

2.1 CLEANING MATERIALS AND EQUIPMENT

- A. Provide required personnel, equipment, and materials needed to maintain the specified standard of cleanliness.

2.2 COMPATIBILITY

- A. Use only the cleaning materials and equipment which are compatible with the surface being cleaned, as recommended by the manufacturer of the material.

PART 3 - EXECUTION

3.1 DUST CONTROL

- A. Take appropriate actions daily to check the spread of dust and dirt to avoid the creation of a nuisance within the construction area (fenced area) and surrounding area. Do not use water

if it results in hazardous or objectionable conditions, such as ice, flooding or pollution. Comply with all dust regulations imposed by local air pollution agencies.

- B. Coordinate all clean up operations outside of the construction are with District through the Inspector.

3.2 PROGRESS CLEANING

A. General:

1. Retain stored items in an orderly arrangement allowing maximum access, not impeding traffic or drainage, and providing required protection of materials.
2. Do not allow accumulation of scrap, debris, waste material, and other items not required for construction of this Work.
3. Daily, and more often if necessary, inspect the site and pick up all scrap, debris, and waste material. Remove such items to the place designated for their storage.
4. At least twice each month, and more often if necessary, completely remove all scrap, debris, and waste material from the job site.
5. Provide adequate storage for all items awaiting removal from the job site, observing requirements for fire protection and protection of the ecology.
6. Weekly, and more often if necessary, inspect all arrangements of materials stored on the site. Re-stack, tidy, or otherwise service arrangements to meet the requirements of subparagraph 3.2-A-1 above.
7. Maintain the site in a neat and orderly condition at all times.

3.3 FINAL CLEANING

- A. "Clean," for the purpose of this Article, and except as may be specifically provided otherwise, shall be interpreted as meaning the level of cleanliness generally provided by skilled cleaners using commercial quality building maintenance equipment and materials.
- B. Prior to completion of the Work, remove from the job site all tools, surplus materials, equipment, scrap, debris, and waste. Conduct final progress cleaning as described in Section 01705, Part 3.2 above.

- C. Site:
 - 1. Unless otherwise specifically directed by the Architect, broom clean paved areas on the site and public paved areas adjacent to the site.
 - 2. Completely remove resultant debris.
- D. Interior Surfaces:
 - 1. Interior:
 - a. Visually inspect interior surfaces and remove all traces of soil, waste materials, smudges and other foreign matter.
 - b. Remove all traces of splashed material from adjacent surfaces.
 - c. Remove paint droppings, spots, stains and dirt from finished surfaces.
 - 2. Glass: Clean inside and outside.
 - 3. Polished Surfaces: To surfaces requiring routine application of buffed polish, apply the polish recommended by the Manufacturer of the material being polished.
 - 4. Tile floors shall be mopped clean.
- E. Schedule final cleaning as approved by the Architect to enable Owner to accept a completely clean Work.

3.4 CLEANING DURING OWNER'S OCCUPANCY

- A. Should the Owner occupy the Work or any portion thereof prior to its completion by the Contractor and acceptance by the Owner, responsibilities for interim and final cleaning shall be as determined by the Architect in accordance with the General Conditions of the Contract.

END OF SECTION

ROUGH CARPENTRY

SECTION 061000

PART 1 -GENERAL

1.1 SUMMARY

- A. Section includes:
 - 1. Wood framing and furring.
 - 2. Plywood sheathing.
 - 3. Wood grounds, nailers and blocking.
 - 4. Rough hardware and fasteners.
 - 5. Miscellaneous accessories required for a complete installation.
- B. Related work:
 - 1. Division 6 for Finish Carpentry.

1.2 DEFINITIONS

- A. Board: Lumber that is less than 2 inches nominal in the lesser dimension and 2 inches nominal or more in the greater dimension.
- B. Dimension lumber: Lumber that is 2 inches nominal or more but less than 5 inches nominal in the lesser dimension.
- C. Exposed framing: Dimension lumber not concealed by other construction and indicated to receive a stained or natural finish.

1.3 SUBMITTALS

- A. Data: Submit wood treatment manufacturer's product data, specifications and instructions for proper use for each type of treated material.
- B. Certificates:
 - 1. For each type of pressure treatment specified, submit a letter from the treating plant indicating chemicals and process used and net amount of preservative retained; and degree of corrosiveness; and stating that all materials meet or exceed the specified requirements.
 - 2. For water-borne preservatives, include statement that moisture content of treated materials was reduced to a maximum of 19 percent for lumber and 15 percent for plywood prior to shipment of wood products to the project site.

1.4 QUALITY ASSURANCE

- A. All wood required to be preservative treated shall bear the quality mark of an inspection agency that maintains continuing supervision, testing and inspection over the quality of the preservative- treated wood. Inspection agencies for preservative-treated wood shall be listed by an accreditation body that complies with the requirements of the American Lumber Standards Treating Wood Program or equal. The quality mark shall be on a stamp or label affixed to the preservative-treated wood and shall include the following information:
 - 1. Identification of treating manufacturer.
 - 2. Type of preservative used.
 - 3. Minimum preservative retention.
 - 4. End use for which the product is treated.
 - 5. AWP standard to which the product was treated.
 - 6. Identity of accredited inspection agency.

1.5 HANDLING

- A. Storage: Keep materials dry.
 - 1. Do not store materials in wet or damp areas.
 - 2. Protect against exposure to weather and contact with damp or wet surfaces.
 - 3. Stack materials to provide for air circulation within and around stacks and under temporary coverings.
 - 4. Protect plywood from moisture by covering with waterproof coverings until the plywood has been covered with a finish material, or the building has been completely enclosed.
 - 5. Protect materials from damage during unloading and storage. Do not use damaged materials, or plywood panels with damaged corners, except after removing damaged portion.
- B. Handling: In accordance with American Wood-Preservers' Association (AWPA) recommendations for storage and protection of pressure-treated wood.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Framing lumber: Unless otherwise indicated, provide S4S, grade-marked Douglas Fir/Larch, manufactured and graded according to West Coast Lumber Inspection Bureau (WCLIB) or Western Wood Products Association (WWPA) rules, of the sizes and grades indicated.
 - 1. Sizes: Sizes indicated are nominal. Actual sizes shall conform to American Lumber Standard Committee (ALSC) publication DOC PS 20.
 - 2. Grading: Provide each piece of lumber factory-marked with grade stamp of inspection agency evidencing compliance with grading rule requirements and identifying grading agency, grade, species, moisture content at time of surfacing, and mill.
 - 3. Season lumber to a moisture content of 19 percent or less and stamp "S-Dry".
- B. Plywood: Unless otherwise indicated, provide grade-stamped Douglas Fir plywood, of the sizes and grades indicated, complying with American Plywood Association (APA) publication US Product Standard PS 1.

2.2 ACCESSORIES

- A. Metal framing accessories: Provide standard galvanized or cadmium-plated steel joist hangers, framing anchors, fasteners and other such connection devices indicated that are acceptable to the authorities having jurisdiction. Use offset and skewed hangers, as required.
- B. Builder's rough hardware: Use fasteners to attach pressure-treated wood that will not corrode due to treatment materials used in the manufacture, present at time of use or when in the presence of moisture. Use hot-dip galvanized fasteners complying with ASTM A 153, or stainless steel fasteners, where carpentry will remain exposed to the weather and where used in roofing assemblies.
 - 1. Nails and staples:
 - a. Size and type complying with the authorities having jurisdiction, unless otherwise indicated.
 - b. Nails to be used with framing accessories shall be those furnished by the manufacturer with the framing accessories.
 - 2. Bolts, washers, lag bolts and wood screws:
 - a. Galvanized or cadmium-plated steel of standard manufacture. b. Anchor bolts: ASTM F 1554.
- C. Adhesive: Basis of design is for products by Franklin International, or equal.
 - 1. Construction adhesive: Titebond Premium Polyurethane Construction Adhesive.

- D. Flashing membrane: As specified in Section 07650.
- E. Sill sealer: Basis of design is for "Triple Guard Energy Sill Sealer" self-adhering closed cell polyethylene foam by the Protecto Wrap Co. or equal.

2.3 PRESERVATIVE TREATED WOOD

- A. Basis of design is for "Preserve" or "Preserve Plus" ACQ wood preservative materials by Chemical Specialties, Inc., Charlotte, NC. Other materials, when approved by the Architect shall be CCA (chromium copper arsenate)-free.
- B. Preservative treatment by pressure process for above ground use:
 - 1. Comply with AWWA U1.
 - 2. Retention: In compliance with AWWA UC3B for lumber and UC3B for plywood except that lumber not in contact with the ground, and continuously protected from liquid water, may be treated with inorganic boron (SBX).
 - 3. Kiln dry after treatment to 19 percent maximum moisture content for lumber and 15 percent for plywood.
 - 4. Application: Treat wood in the following locations:
 - a. Wood cants, nailers, curbs, equipment support bases, blocking, stripping, and similar members in contact with roofing and metal flashings, vapor barriers or waterproofing.
 - b. Wood sills, sleepers, blocking, furring, stripping, and similar concealed members in contact with concrete. Each sill plate piece shall bear stamp of approved agency.
 - c. Wood within 4 inches of grade.
 - d. Decking, fence boards and other wood exposed to weather.
 - 5. Treatment of wood nailers used in conjunction with built-up roofing shall be compatible with the roofing bitumen; oil-based preservatives are not acceptable.

2.4 FIRE-RETARDANT TREATED WOOD

- A. Basis of design is for "D-Biaze" fire retardant by Chemical Specialties, Inc., Charlotte, NC, or equal.
 - 1. Use products for which fire-retardant manufacturer publishes physical properties of treated wood after exposure to elevated temperatures when tested, by a qualified independent testing agency, in compliance with ASTM D 5664 for lumber and ASTM D 5516 for plywood.

2. Use products that do not promote corrosion of metal fasteners.
- B. Fire-retardant treatment by pressure process: AWPAC UCFB for structural lumber and for plywood .
 1. Use exterior type wood for exterior locations.
 2. Use Type A High Temperature (HT) wood for interior locations.
- C. Application: Treat wood in the following locations:
 1. Roof trusses, roof decks and sheathing.
 2. Beams and purlins, architectural millwork and trim.

PRT 3 - EXECUTION

3.1 EXAMINATION

- A. Examine conditions and measurements affecting the work of this Section at site.
- B. Correct conditions detrimental to the proper and timely completion of this work before proceeding with installation.

3.2 PREPARATION

- A. Carefully select all members.
 1. Select individual pieces so that knots and defects will not interfere with placement of bolts, with nailing or when making connections.
 2. Cutout and discard pieces with defects that make the piece unable to serve its intended function.
- B. The Architect may reject lumber for excessive warp, twist, bow, crook, mildew, fungus or mold, as well as for improper cutting or fitting, whether or not it has been installed.

3.3 INSTALLATION

- A. Nailing:
 1. Fasten framing anchors and steel bridging with galvanized special nails furnished with hardware in every nail hole, except where noted to be welded to structural steel supports in which case comply with AWS requirements.
 2. Where possible, nailed joints shall be assembled such that load is acting at right angle to the nail (shear).
 - a. Where nailing at right angle is impossible, toe-nailing at an angle approximately 30- degree to the wood grain is an acceptable method of fastening wood members together.

- b. Penetrated nail points are not allowed in exposed construction.
- B. Screw fasteners: Install wood screws and lag bolts with complete penetration up to head. Bore lead holes approximately 3/4-diameter and same depth as shank; continue holes to a depth equal to length of the screw but with diameter approximately 3/4-thread root.
 - 1. Drill holes in pieces where splitting may occur.
 - 2. Remove split lumber and replace with new members.
- C. Bolted connections:
 - 1. Make bolt holes in wood 1/16 in. larger in diameter than the bolt diameter. After tightening, nick bolt threads to prevent nut loosening.
 - 2. Provide bolts and lag screws with washers under heads and nuts that bear on wood.
 - 3. Where a finish material will be installed over the bolt, recess the bolt head or the nut so that they are recessed or flush with the face of the member being bolted.
 - 4. Tighten bolts and re-tighten shortly before being covered.
- D. Treat field cuts and penetration in pressure-treated lumber in compliance with AWP A M4.

3.4 FRAMING MEMBERS

- A. Erect framing neatly and substantially to best trade standards, including preparatory work for subsequent trades and conditions not actually detailed.
- B. Do not cut or notch structural members, except as indicated or directed by the Architect.
 - 1. Splices are permitted in structural members.
 - 2. Reinforce interrupted members as detailed.
- C. On framing and furring members to receive a finished wall or ceiling, align the finish framing so that finish surface will not vary not more than 1/8-inch from a theoretical plane or surfaces of the room or space, unless more stringent tolerance is specified. Make corners square.
- D. Install joists, lintels, beams and rafters with crown up, unless otherwise noted with cut members making structural contact with bearings or each other for full bearing.
- E. Anchor sills with fasteners of the size and spacing shown.
 - 1. Provide 2 fasteners per piece minimum.
 - 2. Install sill plates on continuous layer of sill sealer.

- F. Extend wall and partition studs and mullions continuously from sill to plate, unless otherwise indicated. Provide double plates unless a lintel replaces the lower member. Stagger plate joints at least 4-feet.
 - 1. Where 2 or more studs are cut, provide header beams over the opening.
 - 2. In stud walls and partitions, extend at least one stud from sill to plate on each side of interior openings and 2 studs on each side of exterior openings. In addition, place one stud trimmer to support each end of lintels over openings.
 - 3. Frame walls and partitions at corners and intersections so that wall material cannot extend from one room to another.
- G. Frame stud partitions, furring or walls containing electrical panels, plumbing, or other pipes to give required clearance for piping and fixtures.
 - 1. Place approved piping in center of plates using a neat hole. Notching is not permitted.
 - 2. Do not place pipes exceeding $\frac{1}{3}$ the plate width in partitions used as bearing or shear walls.
 - 3. Pipes shall not pass through plates less than 5-1/2-inch wide.
- H. Do not shim sills, joists, short studs, trimmers, headers, lintels and other framing members.
- I. Make joints accurately and neatly for a square, tight fit. Remove and replace defective work.

3.5 PLYWOOD SHEATHING

- A. Layout and nail plywood as indicated.
- B. Install plywood with 1/16-inch space between panels for expansion and contraction. Do not force panels in place.
 - 1. Place end joints over supports with face grain running perpendicular to supports except as otherwise shown.
 - 2. Solid block unsupported panel edges where indicated.
- C. Provide minimum 6-inch wide flashing membrane at the perimeter of exterior openings. Membrane must be solidly supported at all locations.
 - 1. Where no solid backing exists to support the flashing membrane, provide either plywood, or tight and solid blocking between studs.
 - 2. Lap in the direction of water flow.

- D. Cover roof sheathing with roofing material as soon as possible after installation. Do not leave exposed to the elements longer than 2 days.

3.6 BLOCKING/FURRING/BRIDGING/NAILERS

- A. Blocking:
 - 1. Solid block joists and rafters over all supports with blocking of the same size and material as the joist or rafter.
 - 2. Provide fire blocking and draft stops where required by the authorities having jurisdiction.
 - 3. Locate other blackings to facilitate installation of finishing materials, fixtures, trim and soffits.
- B. Furring: Provide continuous spaced at 16-inches o.c. maximum.
 - 1. Install furring plumb and level. Shim where necessary to provide a true, even plane suitable to receive the finish required.
 - 2. Attach to concrete and masonry with shot pins in pre-drilled holes.
- C. Bridging:
 - 1. Use nominal 2-inch by 3-inch cross bridging, 2-inch solid bridging or 16-gage galvanized metal bridging.
 - 2. Nail bottom ends of bridging only after sheathing has been nailed.
- D. Nailers: Provide nailers at connections of wood materials, and other finish materials, to concrete, CMU and metal framing.
 - 1. Template and drill nailers to match holes provided in steel framing.
 - 2. Furnishing necessary bolts and washers.

3.7 CLEAN-UP

- A. Dispose of pressure-treated wood in an authorized disposal area.
- B. Do not bury wood of any type on the jobsite.

END OF SECTION

FINISH CARPENTRY
SECTION 062000

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes exposed:
 - 1. Miscellaneous wood trims.
 - 2. Rough and finish hardware for this work.
 - 3. Nailers and blockings for the work of this Section.
- B. Related work:
 - 1. Division 6 for rough carpentry.
 - 2. Division 7 for joint sealers.
 - 3. Division 9 for painting.

1.2 REFERENCES

- A. ALSC, American Lumber Standards Committee: Softwood Lumber Standards.
- B. AWWA, American Wood Preservers' Association.
- C. NFPA, National Forest Products Association.
- D. WCLIB, West Coast Lumber Inspection Bureau, Standard Grading Rules for West Coast Lumber.
- E. WWPA, Western Wood Products Association. F. APA PS-1, Plywood Grading Rules.
- F. WI, Woodwork Institute, Manual of Millwork.

1.3 SUBMITTALS

- A. Shop drawings: Submit shop drawings for the window sills and backpack racks; show at large scale materials, dimensions, profiles, and fabrication details.

1.4 QUALITY ASSURANCE

- A. Installer's qualifications:
 - 1. Firm certified by WI under their "Certified Installer Program" or millwork

manufacturer , or a firm specializing in finish carpentry with 3 years experience in installation of custom millwork similar to that required for this project.

B. Mockup:

1. Before starting production work, assemble a window sill mockup for the Architect's review and approval.
2. Approved mockup will be used as a standard for the Work.

1.5 HANDLING

A. Protection:

1. Protect materials against exposure to weather and contact with damp or wet surfaces.
2. Stack lumber as well as plywood and other panels.
3. Provide for air circulation within and around stacks and under temporary coverings including polyethylene and similar materials.

1.6 PROJECT CONDITIONS

- A. Do not deliver or install interior finish carpentry until building is enclosed and weatherproof, wet work in space is completed and nominally dry, and HVAC system is operating and maintaining temperature and relative humidity at occupancy levels during the remainder of the construction period.

PART 2 - PRODUCTS

2.1 LUMBER

- A. Seasoning: Wood shall be properly kiln-dried according to accepted methods for the thickness and species required in compliance with the reference WI standard.
- B. Species and grade:
1. Concealed nailers and blockings: Douglas Fir conforming to WI section 3 Economy Grade.
 2. For a transparent finish: VGDF conforming to WI Section 3.

2.2 ROUGH HARDWARE

- A. Wood screws, nails and bolts: As selected by the Contractor.
- B. Toothed steel or lead expansion bolt devices for drilled-in-place anchors. Furnish inserts and anchors, as required, to be set into concrete work for anchorage.

2.3 FABRICATION

- A. General:
 - 1. Fabricate finish carpentry to the dimensions, profiles and details shown.
 - 2. Whenever possible, conceal means of fastening various parts and members together in windows. Where exposed nailing is unavoidable, neatly set nails for putty stopping.
- B. Wood trim:
 - 1. Fabricate to profiles and dimensions shown in compliance with WI section 9, Custom Grade requirements.
 - 2. Rout-out the back of trim members to be applied to flat surfaces, except for members with ends exposed in the finished work.

2.4 FINISHING

- A. In preparation for finish, clean woodwork and fill nail holes.
- B. Finish woodwork smoothly dressed, belt-sanded at mill and hand sanded before its installation. Finish surfaces shall be free from open joints, hammer and machine marks, structural defects and surface blemishes.
- C. Backprime woodwork on all surfaces which will be concealed with one coat of wood primer. Schedule delivery to allow time for application and drying of backprime coat before installation of woodwork for those items that have not been backprimed in the shop.

PART 3 - EXECUTION

3.1 EXAMINATION/PREPARATION

- A. Examine conditions and measurements affecting the work of this Section at site.
- B. Verify that detrimental conditions are corrected before proceeding with installation.
- C. Condition woodwork to average prevailing humidity conditions in installation areas prior to installing.

3.2 INSTALLATION

- A. Install work of this Section, plumb, level, with tight, hairline, flush joints. Shim as required using concealed shims.

- B. Cut to fit when not shop-fabricated or shop-cut to exact size. Where woodwork abuts other finished surfaces, scribe and cut for accurate fit. Before making cut-outs, drill pilot holes at corners.

3.3 REPAIRING/CLEANING

- A. Replace finish carpentry damaged beyond satisfactory field repair, as determined by the Architect, with satisfactory work.
- B. Clean exposed surfaces and leave ready to be painted or finished as specified.

END OF SECTION

SEALANTS AND CAULKING

SECTION 079200

PART 1 - GENERAL

1.1 SUMMARY

- A. The work includes the furnishing and installing of all caulking and sealing work required to weatherproof the building, including interior caulking and sealing, as shown and noted on the drawings and specified herein. The conditions of the contract and division 1 apply to this section as fully as if repeated herein.

1.2 SUBMITTALS

- A. Prior to ordering materials or their installation, submit for selection, samples indicating the color range available for each caulking and sealant material intended for installation in exposed locations. Materials installed prior to selection of color will be subject to removal and replacement with approved materials. Color of finished caulking and sealant shall match approved samples.
- B. See section 013000 for number and manner of submittals.

1.3 DELIVERY, STORAGE AND HANDLING

- A. Do not expose caulking and sealants to excessive heat, cold or other conditions that would adversely affect the serviceability of the materials. Do not store caulking and sealants past the shelf-life recommended by the manufacturer.

1.4 JOB CONDITIONS

- A. Apply caulking and sealants only when weather conditions are within the manufacturer's recommended limits for satisfactory installation.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Caulking and Sealant Compounds: Compounds shall be products and manufacturers listed herein or equal products approved in accordance with section 012500.
 - 1. Exterior Vertical Applications: One part low modulus silicone sealant; Dow Corning No. 790, General Electric "Silpruf" or equal.
 - 2. Exterior Horizontal Applications: Two component, self leveling, polyurethane base sealant, Mameco "Vulkem 245", Pecora, "NR200 Urexpan", Sonneborn "Sonolastic Paving Joint Sealer" or equal.

- B. Primers: Primers shall be quick-drying, colorless, non-staining sealer of type of consistency as recommended by the manufacturer of the caulking and sealant material for the particular surfaces to be caulked or sealed.
- C. Packing: Sealant backup and packing for caulking and sealant compounds shall be non-staining resilient material, such as glass fiber rope, or neoprene, butyl, polyurethane, or other open cell foams, compatible with the compound used.

PART 3 - EXECUTION

3.1 INSPECTION

- A. Inspect joint sizes and surfaces prior to start of work. Do not start work until deficiencies or other conditions that would adversely affect performance, installation or quality of the application have been corrected. Start of work constitutes acceptance of joint surfaces.

3.2 SURFACE PREPARATION

- A. Joints and spaces to be caulked or sealed shall be completely cleaned of dirt, dust, mortar, oil, and other foreign materials which might adversely affect the caulking and sealant work. Where necessary, degrease with an approved solvent or commercial degreasing agent. Surfaces shall be thoroughly dry before application of caulking compounds.
- B. If recommended by manufacturer, remove paint and other protective coatings from surfaces to be caulked or sealed prior to priming and caulking or sealant application.
- C. All joints shall be enclosed on three sides. Where grooves for adequate caulking or sealing have not been provided, suitable grooves shall be cleaned out to the depth required or as indicated on drawings and ground to a minimum width of 1/4 inch without damage to the adjoining work. No grinding shall be required on metal surfaces.
- D. Preparation of surfaces to receive caulking or sealant compound shall conform to the compound manufacturer's specifications. Use air pressure or other approved methods to achieve required results. Use masking tape to keep compound off surfaces that will be exposed in the finished work.

3.3 APPLICATION

- A. Caulk and seal around all openings in exterior walls, and other locations shown or required for waterproofing the building. Caulk and seal all other joints as herein specified, shown on drawings, and required to properly complete the building.
- B. Caulking and sealants shall be applied by experienced mechanics using specified materials and proper tools. Preparatory work (cleaning etc.) And application of caulking and sealants shall be as specified herein and in accordance with the manufacturer's printed instruction and recommendations.

- C. Plaster and other porous surfaces, and other surfaces if recommended by the manufacturer, shall be primed before applying caulking and sealants. Primer shall be applied with a brush that will reach all parts of joints to be filled with compound.
- D. Joints and spaces deeper than ½ inch shall be filled with packing as specified to within ½ inch of the surface.
- E. Caulking and sealants shall not be used when they become too jelled to be discharged in a continuous flow from the gun. Modification of compounds by addition of liquids, solvents, or powders will not be permitted.
- F. Compounds shall be applied with guns having proper size nozzles. Sufficient pressure shall be used to fill all voids and joints solid. In caulking and sealing around openings, include entire perimeter of each impracticable, suitable hand tools shall be used.
- G. Caulked and sealed joints shall be neatly pointed on flush surfaces with beading tool and internal corners with eaving tool. Excess material shall be cleanly removed. Caulking and sealant where exposed, shall be free of wrinkles and uniformly smooth. Caulking and sealing shall be complete before final coat of paint are applied.

3.4 MISCELLANEOUS CAULKING AND SEALING WORK

- A. The entire extent of caulking and sealing work is not necessarily fully or individually described herein. Caulking and sealing shall be provided wherever required to prevent light leakage as well as moisture leakage. Refer to drawings for conditions and related parts of the work.

3.5 CLEANING

- A. Clean surfaces of materials adjoining caulked and sealed joints of smears of compound or other soiling due to caulking and sealing application.

END OF SECTION

GYPSUM BOARD SECTION 092000

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes:
 - 1. Gypsum board.
 - 2. Fasteners, joint reinforcing and finishing compound.
- B. Related work:
 - 1. Division 6 for wood framing supporting gypsum board.
 - 2. Division 9 for painting.

1.2 REFERENCES

- A. ASTM C 840, Specification for Installation and Finishing of Gypsum Board.
- B. GA-216, Application and Finishing of Gypsum Board
- C. ASTM E 497, Installing Sound Isolating Lightweight Partitions.

1.3 SUBMITTALS

- A. Data: Submit manufacturer's data for all materials to be used in gypsum board construction

1.4 JOB CONDITIONS

- A. Comply with the gypsum board manufacturer's recommendations and GA "Application and Finishing of Gypsum Board" for temperature limitations and ventilation before, during and after installation of gypsum board.
- B. Protect installed materials from drafts during hot, dry weather.
- C. Illuminate work areas during installation to provide the same or greater level of illumination required to properly perform the work and as will occur in the room or space after the building is in operation.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. US Gypsum Co., Sheetrock Brand Mold Tough Firecode X and Sheetrock Brand Mold Tough VH1 Firecode X.
- B. Georgia Pacific, Toughrock Fireguard X Mold-Guard.

2.2 GYPSUM BOARD

- A. General:
 - 1. Provide boards 5/8 in. thick boards complying with ASTM C 1396 as follows and in maximum lengths available to minimize end butt joints. All interior products must meet CHPS low emitting material standards.
 - 2. Unless otherwise acceptable to the Architect, no end-to-end butt joints are allowed on walls or ceilings less than 12-foot in length or width.
- B. Exposed gypsum board surfaces (Type X): Provide boards with paper face suitable to receive decorative finish, and long edges tapered to receive joint compound.

2.3 ACCESSORIES

- A. Screws: The following sized in compliance with the gypsum board manufacturer's instructions and Code requirements.
 - 1. ASTM C 954 for fastening to supporting studs and furring.
 - 2. ASTM C 1002, 1-1/2" long Type W for gypsum board-to-wood framing and 1" long Type S for gypsum board-to-steel framing. Screws shall be long enough to penetrate into wood framing a minimum of 5/8 inch and through metal framing not less than 1/4 inch.
 - 3. Do not use nails.
- B. Metal trim: Galvanized steel of the types specified hereafter complying with ASTM C 1047.
 - 1. LC-Bead: J-shaped; exposed long flange to receive joint compound; use at exposed panel edges.
 - 2. L-Bead: L-shaped; exposed long leg to receive joint compound; use where indicated.
 - 3. U-Bead: J-shaped; exposed short flange not to receive joint compound; use at exposed panel edges.
 - 4. Expansion (Control) Joint: Use where indicated.
 - 5. Control Joint: USG No. 093 or Goldbond Building Products E-Z Strip.

- C. Joint tape, compound and laminating adhesive: ASTM C 475, low or very low shrinkage, type recommended by the manufacturer, by Hamilton Materials, basis of design, Murco, or one of the gypsum board manufacturers.
 - 1. Taping, and fastener and metal trim concealment: Red Dot Lite.
 - 2. Topping, finish and skim coats: Green Dot Lite.
- D. Spatter coats (orange peel): Sheetrock Brand Wall and Ceiling Spray, or equal.
- E. Sealants: As specified in Section 09820.

PART 3 - EXECUTION

3.1 EXAMINATION/PREPARATION

- A. Examine conditions affecting the work of this Section at site.
- B. Verify framing members straightness and alignment.
- C. Correct conditions detrimental to the proper and timely completion of this work before proceeding with installation.
- D. Before enclosing stud walls, thoroughly clean floor tracks of debris.

3.2 GYPSUM BOARD INSTALLATION - GENERAL

- A. Comply with the applicable provisions of the references standards and the following.
- B. Use only full size boards above door and window openings; joints at corners of heads are not acceptable.
- C. Minimize butt joints and avoid butt joints centered on walls, over protruding studs, and above doors and windows. Avoid abutting end joints in the central area of each ceiling.
- D. Locate both edge or end joints over supports, except in ceiling applications where intermediate supports or gypsum board back blocking is provided behind end joints.
- E. Position adjoining panels so that tapered edges abut tapered edges, and field-cut edges abut field-cut edges and ends.
 - 1. Do not place tapered edges against cut edges or ends.
- F. Stagger vertical joints over different studs on opposite sides of partitions.
- G. Attach gypsum panels to steel studs so that the leading edge or end of each panel is attached to open (unsupported) edges of stud flanges first.

- H. Attach gypsum panels to framing provided at openings and cutouts.
- I. Except where frames are solidly grouted, spot grout hollow metal door frames. Apply spot grout at each jamb anchor clip and immediately insert gypsum panels into frames.
- J. Provide perimeter relief where board abuts structural decks, ceilings, vertical structural elements, or glazed assembly.
- K. Install horizontal boards first. Butt joints between boards loosely. Do not force boards into place. Place tapered or wrapped edges next to one another.
- L. Attach boards to all studs and furring members with power-driven screws securely engaging supporting member, and with fastener heads uniformly depressed not over 1/32-inch below surface of board (except for first layer of multiple layer assembly) without breaking face paper. Maximum screw spacing is to be 12" o.c. or as indicated on Drawings, whichever is less.
- M. After boards have been installed over screws and backing plates, tap boards with a rubber mallet to depress backside of board over heads to eliminate unacceptable bulges.

3.3 SINGLE LAYER APPLICATION

- A. Horizontal surfaces:
 - 1. Install board with long dimension at right angle to supports, with end joints located over supports.
 - 2. Use maximum practical length boards to minimize end joints. Stagger end joints in alternate boards.
- B. Vertical surfaces: Unless otherwise acceptable to the Architect, install board vertically. Use floor-to-ceiling length boards (unless height exceeds 12-foot) with vertical joints located over supports.
 - 1. At high walls, install panels horizontally, unless otherwise indicated or required by fire-resistance-rated assembly.
 - 2. Offset joints at least one stud on opposite sides of partition/walls.
 - 3. Extend gypsum board continuously from finish floor to underside of structure above, except where indicated otherwise on the Drawings.

3.4 ALLOWABLE TOLERANCES

- A. Do not exceed 3/16 inch in 8 feet, and 1/8 inch in 4 feet from plumb, level and flat (all directions) in gypsum board surfaces.
- B. Do not exceed 1/16 inch offset at joints between boards.
- C. Shim boards as necessary to comply with these tolerances.

3.5 FINISHING

- A. Finish gypsum board surfaces with exposed joints, corners and edges reinforced or trimmed in compliance with the following:
 - 1. Level 0: Not used.
 - 2. Level 1: Use in plenum areas above ceilings, in attics, and in areas where the assembly will generally be concealed including behind large tackboards.
 - a. Joints and interior angles shall have tape embedded in joint compound. Surface shall be free of excess joint compound. Tool marks and ridges are acceptable.
 - 3. Level 2: Not used.
 - 4. Level 3: Use in storage and electrical rooms.
 - a. Joints and interior angles shall have tape embedded in joint compound and apply 2 separate coats of joint compound over joints, angles, fastener heads, and accessories. Joint compound shall be smooth and free of tool marks and ridges.
 - 5. Level 4: All other locations.
 - a. Joints and interior angles shall have tape embedded in joint compound and apply 3 separate coats of joint compound over joints, angles, fastener heads, and accessories. Joint compound shall be smooth and free of tool marks and ridges.
- B. General:
 - 1. Fill joints, fastener heads, trim accessory flanges and surface defects with joint compound in compliance with the gypsum board manufacturer's recommendations to obtain a smooth, flush surface.
 - 2. All joints, fastener heads and trim flanges in surfaces which will remain exposed to view in the building, shall be invisible after application of joint tape and compound.

- C. Install trim in single unjointed length, unless length exceeds manufacturer's standard. Attach to gypsum board in compliance with manufacturer's instructions.
 - 1. Install Type CB trim at external corners.
 - 2. Install Type LC trim where gypsum board edges are exposed in the finish work.
 - 3. Install Type CB or LC trim where gypsum board abuts a different material, and the edges are not covered by a finish material.
 - 4. Install control joints as recommended in paragraph 5.6 of the reference standard. Joint locations are subject to the Architect's approval.
- D. Reinforce joints between gypsum boards, and interior corners and angles with tape set in joint compound.
 - 1. Apply skim coat over tape in one application.
 - 2. Where space greater than 1/16 inch occurs between abutting gypsum boards (except at control joints and for concealed layers of multiple layer assemblies), pre-fill joints with joint compound and allow to dry before applying joint tape.
- E. Joint compound:
 - 1. Lap each coat not less than 4 inches over the preceding coat (2 inches on each edge). Width of joint compound on tapered board edges shall be not less than 12 inches; width of joint compound on square board edges not less than 18 inches.
 - 2. Allow at least 24 hours drying time between applications of joint compound.
 - 3. Finish joint compound so that little or no sanding is required. When sanding, use sandpaper or mesh cloth with grit as fine as possible; do not scuff face paper. Remove all sanding dust before painting or applying other finishes.
- F. Leave gypsum board surfaces smooth, undamaged and ready to receive scheduled finishes.

END OF SECTION

ACOUSTICAL CEILINGS

SECTION 095113

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes:
 - 1. Acoustical ceiling panels.

1.2 REFERENCES

- A. Association of the Wall and Ceiling Industries International.

PART 2- PRODUCTS

2.1 ACOUSTICAL UNITS

- A. ACT-1: 24 in. by 48 in. by 15/16 in., fine fissured #1714, white, square edged units from a single production run or the same dye lot, by Armstrong World Industries or equal by USG or Celotex, with an ASTM E 1264 classification of Type III, Form 2, Pattern CD. Panels shall have a flame spread of 25 or less and a smoke developed of 25 or less when tested in accordance with ASTM E 84. Panels shall have a NRC of 0.70, CAC of 40 and a light reflectance of 0.82.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine conditions and measurements affecting the work of this Section at site.
- B. Correct conditions detrimental to the proper and timely completion of this work before proceeding with installation.

3.2 INSTALLATION

- A. General:
 - 1. Install materials in compliance with the Drawings, the Specifications, and their manufacturer's instructions. In case of conflict, the most stringent provisions apply.
 - 2. Comply with ASTM C 636 and E 580, governing regulations and industry standards applicable to this work.

3. Install materials so that the sound insulation of adjacent construction materials and assemblies is not compromised by locally reducing their surface mass, or creating unsealed penetrations.
4. Plan layout to balance border widths at opposite edges of each ceiling area.
5. Avoid use of less than half-width acoustical units wherever possible.
6. Comply with reflected ceiling plans shown on the Contract Drawings.

3.3 ACOUSTICAL UNITS

- A. Match tile for color and pattern by using tile from cartons in the same sequence as manufactured.
- B. Scribe and cut acoustical units for accurate fit at borders and around work which penetrates ceilings. Install with flush, tight joints.
- C. For square-edged units, install units with edges fully hidden from view by flanges of suspension system runners and moldings.
- D. For reveal-edged units on suspension system runners, install units with bottom of reveal in firm contact with top surface of runner flanges.
- E. Paint cut edges of panel remaining exposed after installation; match color of exposed panel surfaces using coating recommended in writing for this purpose by acoustical panel manufacturer.

3.4 CLEANING

- A. Clean soiled acoustical units and their suspension systems in compliance with their manufacturer's instructions.

3.5 FIELD QUALITY CONTROL

- A. Remove and replace units that are damaged or cannot be cleaned, to the Architect's satisfaction.

END OF SECTION

RESILIENT FLOORING AND BASE SECTION 096500

PART 1 - GENERAL

1.1 SUMMARY

- A. The work includes furnishing and installing resilient flooring and base in accordance with the Drawings and as herein specified. The Conditions of Contract and Division 1 apply to this section as fully as if repeated herein.

1.2 RELATED SECTIONS

- A. Section 092000 - Gypsum Board.
- B. Section 097200 - Vinyl Covered Tackboard.

1.3 QUALITY ASSURANCE

- A. Use skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to building site in Manufacturer's original labeled unbroken containers.

1.5 ENVIRONMENTAL CONDITIONS

- A. Do not install materials unless ambient temperature of 70 degrees Fahrenheit is maintained 24 hours prior to and during laying and until all materials have been stored at site for 24 hours at that temperature.
- B. Do not apply materials on wet or damp surfaces.
- C. Defer laying until other work that might cause damage to flooring has been completed.

1.6 SUBMITTALS

- A. Provide complete sets of color selection palettes from manufacturer's standard colors for each product.

PART 2 - PRODUCTS

2.1 **MATERIALS**

- A. Rubber Base
 - 1. Provide 4"high topset base, manufactured by Burke. Color as selected by Architect. Use preformed exterior corners. All product to be Floor Score SCS certified.
- B. Edging Strips:
 - 1. Rubber thickness to match adjacent tile; tapered or bullnose edge. Color as selected by the Architect.

2.2 **OTHER MATERIALS**

- A. Provide other materials, not specifically described but required for a complete and proper installation, as selected by the Contractor subject to the approval of the Architect.

2.3 **EXTRA STOCK**

- A. Provide an additional 10% to the total installed square footage to the District.

PART 3 - EXECUTION

3.1 **CONDITION OF SURFACES**

- A. Examine substrate and conditions under which work is to be performed. Surfaces must be broom-clean, free of coatings that would impair adhesion, smooth and level with no more than 1/4" in 10' variation from level, no abrupt level changes. Do not proceed until unsatisfactory conditions have been corrected. Fill voids with leveling compounds compatible with substrate and new flooring, grind off high spots. Contractor shall properly replace, without additional cost, any work required to correct defects caused by improper or defective subfloor surfaces.
- B. Beginning of installation will imply acceptance of surface by installer.

3.2 **ADHESIVE APPLICATION**

- A. Follow adhesive manufacturer's directions for mixing and applying. Cover surface evenly. Do not exceed working area or time limits recommended by Manufacturer.

3.3 INSTALLATION

- A. Installing Base:
 - 1. Install base where shown on the Drawings.
 - 2. Use factory preformed exterior corners, and job-mitered interior corners. All joints are to be butted tight no gap to exceed 1/32".

3.4 CLEANING AND PROTECTING

- A. Remove scraps, cartons, cans and debris from job site.
- B. Maintain traffic control until five (5) days after installation.
- C. Remove and dispose of kraft paper protection just prior to cleaning.
- D. Clean flooring materials thoroughly and apply wax or finishing material in accordance with manufacturer's recommendations. Polish thoroughly. Delay cleaning and finishing until just prior to occupancy by Owner.

END OF SECTION

**CARPETING
SECTION 096800**

PART 1 - GENERAL

1.1 SUMMARY

- A. The work to be done under this section shall include the labor, materials and services required to install carpet. This shall include the removal and disposal of the existing floor material and proper installation of new carpet in line with this specification.
- B. Related Documents: Job Order List per school site.

1.2 SUBMITTALS

- A. Product Data: Provide data on specified product, describing physical and performance characteristics, sizes, patterns, colors available, and method of installation.
- B. Manufacturer's Installation Instructions: Indicated special procedures and perimeter conditions requiring special attention.
- C. Maintenance Data: Include maintenance procedures, recommendations for maintenance materials and equipment, and suggested schedule for cleaning.
- D. Manufacturer's Carpet Warranty.
- E. Certification and description of reclamation and recycling process per section 1.07 of this document.
- F. Certifications: Manufacturer to submit copies of the following independent laboratory reports showing compliance with requirements per these methods outlined in Part 2 of this document. Submitted results shall represent average results for production goods of the specified style.
 - 1. ASTM E-648: Flooring Radiant Panel.
 - 2. ASTM E-662: Smoke Density.
 - 3. AATCC 134: Electrostatic Propensity.
 - 4. CRI TM-102: Fluorine Analysis.
 - 5. ASTM D-3936: Delamination.
 - 6. Other from methods specified in Part 2.

1.3 QUALITY ASSURANCE

A. Manufacturer Qualifications

1. Company specializing in manufacturing specified carpet with minimum 5 years documented experience.
2. Upon request, manufacturer to provide representative to assist in project start-up and to inspect installation while in process and upon completion. Representative will notify designated contact if any installation instructions are not followed.
3. Single Source Responsibility: Obtain each type of carpet from one source and by a single manufacturer.

B. Installer Qualifications

1. Flooring contractor must be certified by the carpet manufacturer prior to bid.
2. Flooring contractor to be a specialty contractor normally engaged in this type of work and shall have prior experience in the installation of these types of materials.
3. Flooring contractor possessing Contract for the carpet installation shall not sub-contract the labor without written approval of the Project Manager.
4. Flooring contractor will be responsible for proper product installation, including floor testing and preparation, as specified by the carpet manufacture and JOB CONDITIONS herein.
5. Flooring contractor to provide Owner a written installation warranty that guarantees the completed installation to be free from defects in materials and workmanship for a period of one year after job completion.

1.4 DELIVERY, STORAGE & HANDLING

- A. Deliver materials to the site in manufacturer's original packaging listing manufacturer's name, product name, identification number, and related information.
- B. Store in a dry location, between 60 degrees F and 80 degrees F and a relative humidity below 65%. Protect from damage and soiling. Stack carpet rolls horizontally on a flat surface, stacked no higher than two rolls.
- C. Make stored materials available for inspection by the Owner's representative.
- D. Store materials in area of installation for minimum period of 48 hours prior to installation.

1.5 PROJECT CONDITIONS

- A. Sub-floor preparation is to include all required work to prepare the existing floor for installation of the product as specified in this document and Manufacturer's installation instructions.

- B. The maximum amount of moisture evacuation from the floor is 3.0 pounds per 1,000 square feet in 24 hours. This acceptable pH level of substrate is between 7.0 and 9.0. Flooring contractor is responsible for floor testing.
- C. All materials used in sub-floor preparation and repair shall be recommended by the carpet manufacturer and shall be chemically and physically compatible with the carpet system being bid.
- D. Maintain minimum 65 degrees F ambient temperature and 65% Relative Humidity for 72 hours prior to, during, and 48 hours after installation.
- E. Do not install carpet until space is enclosed and weatherproof, wet-work in space is completed and nominally dry, work above ceilings is complete, and ambient temperature and humidity conditions are and will be continuously maintained at values near those indicated for final occupancy.

1.6 EXTRA MATERIALS

- A. Deliver all unused carpet and large scraps to Owner for "attic stock." Dispose of scraps less than 2 square foot in area or less than 8" in width.

1.7 CARPET WARRANTY

- A. Warranty to be sole source responsibility of the Manufacturer. Second source warranties and warranties that involve parties other than the carpet manufacturer are unacceptable.
- B. If the product fails to perform as warranted when properly installed and maintained, the affected area will be repaired or replaced.
- C. The Lifetime warranty shall cover against and specifically define the following:
 - 1. Excessive Surface Wear: More than 15% loss of pile fiber weight.
 - 2. Excessive Static Electricity: More than 3.0 kV per AATCC 134.
 - 3. Resiliency Loss of the Backing: More than 10% loss of backing resiliency.
 - 4. Delamination.
 - 5. Edge Ravel.
 - 6. Zippering.
- D. Tuft Bind warranty in lieu of edge ravel and zippering is not acceptable.

- E. Provide certification and warranty that product is fully or partially recyclable through manufacturer's or aligned partner's currently operational recycling program. Include information regarding the following:
1. The recycling process(es) itself (i.e. separation of components, chopping, melting, pelletizing, etc.)
 2. Portions of the product that will be recycled back into itself.
 - a. name/type of resulting product.
 - b. end-use of resulting product.
 - c. total product recycled content based on total product weight.
 - d. whether resulting product content based on total product weight.
 3. Portions of the product that will be down-cycled
 - a. name/type of resulting product.
 - b. end-use of resulting product.
 - c. total product recycled content based on total product weight.
 - d. whether resulting product is recyclable (fully or partially) or non-recyclable
 4. Portion of the product that will be landfilled and/or incinerated. (NOTE: "Incineration" includes waste-to-energy conversion, extraction of embodied energy; using heat from incineration as a fuel source.)

PART 2 - PRODUCT

2.1 **FIBER**

- A. Nylon Fiber: Antron Legacy, Type 6,6 BCF Nylon.
- B. Blends of Solutia fibers are not allowed. Solutia LXI fibers alone are not allowed.
- C. Durable stain inhibitor should be applied to the fiber during product manufacturing to resist fiber straining and soiling. (Minimum average of three fluorine analyses of a single composite sample per CRI TM-102: 500ppm.)
- D. Fiber to contain carbon-core filament for permanent static control. Topical treatments not allowed.

2.2 **BACKING CHARACTERISTICS**

- A. Thermoplastic vinyl composite.
- B. Primary Backing: Synthetic Woven or Non-Woven.
- C. Pre-Coat (Fusion Coat): Sealant Vinyl.

- D. Secondary Backing: Closed-Cell, Vinyl Cushion backing system.
1. Density (ASTM D-1667): 18.5 lbs/cu ft +/- 5%.
 2. Compression Set (ASTM D-1667): Max 10%.
 3. Compression Deflection (ASTM D-1667): Min 7 psi @25%; Max. 25 psi @ 25%.
 4. Impermeable to moisture and *airflow*.
 5. Provide for a chemically welded seam that is also impermeable to moisture *and airflow*.
 6. 6' Width Roll Good.
- E. Product to be installed with a mill-applied releasable “dry” adhesive system (when/if available from Manufacturer) to securely attach product to sub-floor in compliance with ADA guidelines, Section 4.5.3. Free-lay and stretch-in installations not allowed.

2.3 PERFORMANCE CHARACTERISTICS

- A. Test reports for the following performance assurance testing to be submitted upon request. Submitted results shall represent average results for production good of the referenced style.
- B. Requirements listed below must be met by all products
1. Floor Radiant Panel
ASTM E-648/ NFPA 253: Class I (CRF: 0.45 watts/sq cm or greater)
 2. Federal Flammability
CPSC FF 1-70: Passes
 3. Smoke Density
ASTM E-662/ NFPA 258: ≤450 Flaming Mode
 4. Electrostatic Propensity
AATCC 134 (Step & Scuff): 3.0 kV or less
 5. Static Coefficient of Friction
ASTM C-1028: Passes ADA Guidelines for Accessible Routes (Minimum 0.60)
 6. Delamination of Secondary Backing of Pile Floor Coverings
ASTM D-3936: Minimum 5lbs
 7. Lightfastness
AATCC 16E: ≥4 @ 100 hours
 8. Vetterman Drum
ASTM D-5417: Minimum 3 @ 22,000 cycles
 9. Moisture Barrier
Moisture Penetration by Impact @ 10 psi: No Penetration of backing and seam after 10,000 impacts.
 10. Air Flow Barrier
Air Permeability of Textile Fabrics: No Air Flow (0.0 ft³/min) through backing and seam.
 11. Seam Integrity
Seam to remain intact after 50,000 cycles per Philips Chair Test

12. VOC Chamber Testing
ASTM D-5116: Product inclusive of “dry” adhesive system meets criteria established by the State of Washington Indoor Air Quality Specification for Carpet and/or Carpet & Rug Institute’s (CRI) Indoor Air Quality Carpet Testing Program. If “dry” adhesive (2.02E) not available from manufacturer and “wet” adhesive is used to install the product, carpet and adhesive to meet CRI’s Green Label requirements.

2.4 MANUFACTURING SPECIFICATIONS

- A. Basis for design:
 1. Carpet Tile
 - a. Manufacturer: Kraus
 - b. Collection: Pespective
 - c. Color: Balance
 - d. Construction: Multi-level loop
 2. Walk off Tile
 - a. Manufacturer: EF Contract
 - b. Collection: Access
 - c. Pile Units Per Inch: 8.0
 - d. Color: TBD
 - a. Construction: Textured Loop

2.5 ACCESSORIES

- A. Materials recommended by Manufacturer for patching, priming, chemically welding the seams, etc.
- B. Adhesive: Products to be supplied with a pre-cured, mill-applied or other “dry” adhesive system (2.02E) when available. Otherwise, adhesive should be full spread, extremely low VOC in compliance with CRI Indoor Air Quality Adhesive Testing Program requirements, compatible with materials being adhered, as recommended by the Manufacturer.

PART 3 - EXECUTION

3.1 EXAMINATION/ PREPARATION

- A. Prepare sub-floor to comply with criteria established in Manufacturer’s installation instructions. Use only preparation materials that are acceptable to the Manufacturer.
 1. Remove all deleterious substances from substrate(s) that would interfere with or be harmful to the installation. (*i.e. floor wax*).

- 2. Remove sub-floor ridges and bumps. Fill cracks, joints, holes, and other defects.
- B. Verify that sub-floor is smooth and flat within specified tolerances and ready to receive carpet.
- C. Verify that substrate surface is dust-free and free of substances that would impair bonding of product to the floor.
- D. Verify that concrete surfaces are ready for installation by conduction moisture and pH testing. Results must be within limits recommended by Manufacturer.
- E. There will be no exception to the provisions stated in the Manufacturer's installation instructions.

3.2 INSTALLATION - GENERAL

- A. Install product in accordance with Manufacturer's installation instructions.
- B. Verify carpet match before cutting to ensure minimal variation between dye lots.
- C. Layout carpet and locate seams in accordance with shop drawings.
 - 1. Locate seams in area of least traffic, out of areas of pivoting traffic. *Minimize cross seams.*
 - 2. Do not locate seams perpendicular through door openings.
 - 3. Align run of pile in same direction on adjacent pieces.
 - 4. Locate change of color or pattern between rooms under door centerline.
 - 5. Provide monolithic color, pattern, and texture match within any one area.
- D. Install carpet tight and flat on sub-floor, well-fastened at edges, with a uniform appearance.
- E. Double-cut carpet seams with accurate pattern match. Make cuts serpentine, true, and unfrayed.
- G. Roll with appropriate roller for complete contact of carpet with mill-applied adhesive to sub-floor.
- H. Trim carpet neatly at walls and around interruptions.
- I. Completed carpet is to be smooth and free of bubbles, puckers, and other defects.

3.3 PROTECTING AND CLEANING

- A. Remove excess adhesive and/or seam sealer from floor and wall surfaces without damage.
- B. All rubbish, wrappings, debris, trimmings, etc. to be removed from site and disposed of properly.
- C. Clean and vacuum carpet surfaces using a beater brush/bar commercial vacuum.
- D. After each area of carpet is installed, protect from soiling and damage by other trades.

END OF SECTION

VINYL COVERED TACKBOARD

SECTION 097200

PART 1 - GENERAL

1.1 SUMMARY:

- A. The work includes the furnishing and installing of vinyl covered tackboard wall finish with accessories as shown and noted on the drawings and specified herein. The Conditions of the Contract and Division 1 apply to this section as fully as if repeated herein.

1.2 REFERENCE STANDARDS:

- A. The editions of American Society for Testing and Materials (ASTM) specifications and standards referenced herein, apply to the work only to the extent specified by the reference.
- B. Product must be CHPS 'low emitting material' certified.

1.3 PRODUCT DELIVERY, STORAGE, AND HANDLING:

- A. Store vinyl tackboard inside the building or in other dry weathertight enclosure. Stack flat and off the floor. Do not stack long lengths over shorter lengths.
- B. Store flammable adhesives away from fire, sparks, or smoking areas.

1.4 PROJECT CONDITIONS:

- A. Maintain temperature range between 55 degrees F. and 70 degrees F. for a period extending from 24 hours before installation until the permanent heating system is in operation. Provide ventilation during and following adhesive and joint treatment application. Use temporary air circulators in enclosed areas lacking natural ventilation.

PART 2 - PRODUCTS

2.1 MATERIALS:

- A. Vinyl Tackboard (fiberboard)
 - 1. The base board is a cellulose fiber insulating board which meets or exceeds the physical requirements of ASTM Standard C 208 and Federal Specification LLL-I-535B, Class A. The cloth-backed vinyl used on the face of the board meets or exceeds Federal Specification CCC-W-408A, Type 1. Manufacturer, Chatfield Clarke.

2. Size shall be ½" thick x 4' wide, provide lengths 8', 10' and 12' - provide full height panels with no horizontal joints allowed, except where indicated on the drawings (Edges shall be wrapped and beveled).
3. FIRE HAZARD CLASSIFICATION The finished vinyl surface has a Class III Flame Spread Index (76-200) when tested in accordance with ASTM Standard E 4 (Tunnel Test), maximum smoke density 450.
4. Trim: Provide vinyl covered plastic trim pieces (vinyl to match the wall panels) for outside corner and end cap, and inside corners where necessary. Make every effort to use factory edge on inside corner.

PART 3 - EXECUTION

3.1 VINYL TACKBOARD INSTALLATION:

- A. Note: Where tackboard is installed over gypsum board, the gypsum board does not have to be taped. Stagger joints between gypsum and tackboard.
- B. Project Conditions - Temperature and humidity conditions closely approximating the interior conditions which will exist when the building is occupied, shall be maintained before, during and after the application of the Vinyl Tackboard. Installations shall not be made when the building is excessively cold and damp, or hot and damp.
- C. Conditioning Vinyl Tackboard - All packages or stacks shall be opened and the Vinyl Tackboard placed singly around the room for at least 24 hours before application.
- D. Vinyl Tackboard shall only be installed over a solid gypsum board backing. All holes and notches in the backing shall be filled prior to installation of Vinyl Tackboard. Backing shall be clean and dry prior to installation of Vinyl Tackboard. Vinyl Tackboard shall not be applied over open framing members.
- E. Adhesive Application - To the back side of each piece of Vinyl Tackboard, apply adhesive by either of following methods:
 1. Notched Trowel: Apply adhesive in 4" wide ribbons along the edges and down the middle using a notched trowel with 1/4" deep notches spaced ½" o.c.
 2. Cartridge: Apply adhesive in continuous 1/4" to 3/8" beads starting at one edge of the board and spaced 16" o.c.

Note: Use adhesives that are recommended by the Vinyl Tackboard Manufacturer only. All adhesives must comply with SCAQMD Rule 1168 with less than 50 grams/liter V.O.C. content.

- F. Vinyl Tackboard Application - Place Tackboard vertically against the base wall and hold a minimum of ½" off the floor. Fasten each board with 6d nails spaced 8" o.c. along the top and bottom of each sheet. Clean off any adhesive from vinyl surface immediately with mild soap and water. Wrapped Beveled edge Tackboard shall be temporarily braced at third points to assure proper contact between the solid backing and the Vinyl Tackboard. Temporary bracing shall be done per manufacturers written recommendations. Panels shall not be installed with nails through the face in exposed locations. No horizontal joints will be allowed unless noted on plans. Fiberboard is to be cut straight and true - no more than 1/8" variation in 10 feet. Vertical joints shall be plumb with joints located as indicated on the drawings.
- G. Contractor shall follow manufacturer's written guidelines to assure color texture and pattern match. All vinyl shall be from one continuous production run.

3.2 REPAIR, CLEAN-UP AND PROTECTION:

- A. Vinyl tackboard shall be cleaned with mild soap and water to leave in a clean orderly manner.

END OF SECTION

ACOUSTICAL INSULATION AND SEALANTS
SECTION 098100

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes:
 - 1. Acoustical insulation in interior partitions where indicated.
 - 2. Acoustical sealants and related materials.
 - 3. Supplementary parts and components, such as clips, fasteners, supplementary framing, and other miscellaneous accessories required for a complete installation.
- B. Related work:
 - 1. Division 7 for weather-sealing sealants.

1.2 SUBMITTALS

- A. Submit manufacturer's product data for materials specified below.
- B. Samples: Submit 12-inch square samples of each type of insulation; 12-inch long samples of tape and sealants; full size samples of acoustical pad.

1.3 HANDLING

- A. Store materials under cover, protected from moisture and off the ground or floor. Remove insulation that becomes wet or damp immediately from the job site.

PART 2 - PRODUCT

2.1 BATT INSULATION

- A. Formaldehyde-free, unfaced blankets "Sound-Shield" by Johns Manville, "Greenguard" by Knauf, or equal.
- B. Unless other indicated, provide insulation of same thickness as the stud depth.

2.2 ACOUSTICAL SEALANTS

- A. Pecora Corp.: AC-20.
- B. US Gypsum Co.: Sheetrock Acoustical Sealants.
- C. Fire-resistive acoustical foam tape: Compressible, closed cell polyvinyl chloride foam

with pressure sensitive adhesive, in rolls with protective release liner on non-adhesive face, 6 pcf density, 1 inch wide by not less than 1/4 inch thick, self-extinguishing, UL 94 recognized, Norseal V740FR by Norton Performance Plastic Corp., or equal.

2.3 ACOUSTICAL PADS

- A. Elsewhere: Lowry Box Pads by Henry A. Lowry Co. (818-768-4661), Sound Pad #68 by LH Dottie Co. (213-269-3161), or Type FSP Firestop Putty Pads by Nelson Electric (800-331-SEAL).

2.4 ACCESSORIES

- A. Staples, zinc-coated wires and other devices for fastening insulation: As recommended by the insulation manufacturer.
- B. Supplementary metal and wood framing where required for insulation support: As specified in Section 061000.

PART 3 - EXECUTION

3.1 EXAMINATION/PREPARATION

- A. Examine conditions and measurements affecting the work of this Section at site.
- B. Before installing insulation in stud walls, thoroughly clean space of debris.
- C. Correct conditions detrimental to the proper and timely completion of this work before proceeding with installation.

3.2 ACOUSTICAL PADS

- A. Cover the back and sides of all electrical, telephone and CATV boxes in sound-insulated walls with the acoustical pad specified.
- B. Verify that all unused knockouts are plugged before installing the pads.
- C. Mold pads tightly to the boxes and to the adjacent surfaces.

3.3 INSULATION

- A. Cut to fit irregular spaces, butt edges into firm contact with each other and adjoining surfaces.
 - 1. Hand pack around pipes, ducts, conduits, electrical boxes, etc., as required to thoroughly fill all voids and spaces between framing members and to form a

- continuous acoustical barrier.
- 2. Comply with the California Electrical Code (CEC) for installation in proximity to light fixtures. Do not install insulation closer than recommended by CEC.
- B. In stud walls more than 8 feet high, and where the insulation is not self-supporting, attach to gypsum board using staples with divergent points placed at each corner and at 24 inches o.c. thereafter.

3.4 ACOUSTICAL SEALANT

- A. Comply with ASTM C 919 and the following.
- B. Clean space to be calked of debris, dust and powdered materials which would prevent the sealant from adhering properly.
- C. Seal openings between gypsum board and the perimeter of items penetrating gypsum board, such as electrical boxes, continuously using sealant specified.
- D. Seal openings between the gypsum board and floors and ceilings along sound-insulated walls continuously, and along those intersecting walls for a minimum distance of 3-foot from insulated walls. When multiple layers occur, seal the perimeter of each layer continuously.
- E. Seal gypsum board edge in contact with door frames continuously.

3.5 FIELD QUALITY CONTROL

- A. Prior to closing-in of insulated assemblies, or prior to Substantial Completion for insulation that will remain exposed in the building, refit, reinstall and/or replace wet, damaged and displaced insulation.

END OF SECTION

PAINTING
SECTION 099000

PART 1 - GENERAL

1.1 SUMMARY:

- A. The work includes the furnishing of all materials and equipment and the completion of all painting and painter's finish on all exposed interior and exterior surfaces, as required to complete the finishing of the building as shown and noted on the drawings and as specified. The Conditions of the Contract and Division 1 apply to this section as fully as if repeated herein.
- B. Related Sections:
 - 1. Section 062000 - Finish Carpentry.
 - 2. Section 092000 - Gypsum Board.

1.2 SUBSTITUTIONS:

- A. Materials will be considered for substitution subject to requirements.

1.3 SUBMITTALS:

- A. Submit proposed paint schedule and product data for each different product.
- B. The Architect will select the finish colors and determine the basic hues of all surfaces to be painted or finished.
- C. Prepare samples of colors and textures based upon the Architect's selections and submit them for review.

1.4 GENERAL REQUIREMENTS:

- A. Examine the drawings and the specifications of other trades and consult with the other trades to determine the full extent of work and items which are specified to include shop priming and shop finish painting.
- B. Conditions affecting the work of this section shall be verified at the job site.
- C. No materials other than those specified, or approved, shall be delivered to the job or used on the work. Materials shall be delivered in manufacturer's sealed containers with labels defining the contents therein.

- D. Paint materials and equipment, when not in actual use, shall be stored in places specifically assigned for that purpose. Such storage space shall be well ventilated and adequately fire protected. Paint mixing and handling shall be performed in these assigned areas and containers used for mixing and handling shall be metal and suitably designed for safety. Paint materials, including rags, tarpaulins, mixers, empty containers and filled or partially filled containers shall be removed from the building areas at the close of each working day.
- E. Paints and Coatings: All paints and architectural coatings totaling 90% or more of the total volumes of such products applied in the project's interior shall meet the requirements described herein. Products in this category include but are not limited to sealers, stains, clear wood finishes, floor sealers and coatings, waterproofing sealers, primers, flat paints and coatings, non-flat paints and coatings, and rust preventative coatings. All such products shall meet the VOC content requirements in the applicable category of South Coast Air Quality Management District (SCAQMD) Rule 1113, Architectural Coatings (amended July 2007, or current version). Further, all such products shall comply with the requirements of the Safe Drinking Water and Toxic Enforcement Act of 1986 and the most current list of chemicals (Proposition 65, CA OEHHA). Products that are labeled or would require labeling under this law are not eligible for this credit.

Further all paints and coatings normally applied to walls, ceilings, floors or trim shall be tested and evaluated for emissions of VOCs of concern with respect to chronic inhalation exposures following the specifications of the CDPH Standard Practice. The product shall be applied to the appropriate plate or gypsum board panel and tested individually (i.e., not as part of a multi-coat assembly). Sealers and paints shall be modeled to the school classroom using the manufacturer's specified coverage and the classroom flooring area. Wall applied paints and coatings shall be modeled using the manufacturer's specified coverage and the classroom wall paint and wall coverings area. Ceiling applied paints and coatings shall be modeled similarly using the ceiling area. Wood stains, finishes, and trim applied paint shall be modeled similarly using the area of the classroom door plus the area of the wall base (i.e., 11.6 m²).

1.5 WORK INCLUDED:

- A. The requirements of this section, is that all work, items and surfaces which are normally painted and finished in a building of this type and quality, shall be so included in this contract, whether or not said work, item or surface is specifically called out and included in the schedules and notes on the drawings, or is, or is not, specifically mentioned in these specifications including exposed piping, conduit and duct work.

1.6 PRODUCT HANDLING:

- A. Deliver paint to site in manufacturer's labeled and sealed containers. Labels shall give manufacturer's name, brand, type, batch number, color of paint and instruction for reducing. Thin only in accordance with printed directions of manufacturer.

1.7 ENVIRONMENTAL CONDITIONS:

- A. Do not apply exterior paint in damp, rainy weather or until the surface has dried thoroughly from the effects of such weather. Do not apply varnish or paint when temperature is below 50 degrees F. Avoid painting surfaces when exposed to hot sunlight.

1.8 PROTECTION AND CLEAN UP:

- A. Before painting, remove hardware, accessories, plates, lighting fixtures and similar items or provide ample protection of such items. On completion of each space, replace above items. Use only skilled mechanics for removing and connecting above items. Protect adjacent surfaces as required or directed.
- B. Wherever painting and finishing work is being performed, floors, surfaces and items shall be carefully protected from damage by the painting work. Clean drop cloths shall be provided and used wherever necessary. Supplies, materials, paints, containers, shall be orderly and carefully arranged and protected. Accidental spatter, spillage, shall be immediately cleaned and the damaged surfaces restored to perfect condition. Paint spots and spatter on glass, other surfaces shall be completely removed and the surface cleaned.
- C. At the completion of work in each space or room, materials, supplies, debris and rubbish shall be removed and the areas left in a clean, orderly condition.

1.9 GUARANTEE:

- A. Guarantee the painting work, in writing, against peeling, fading, cracking, blistering, or crazing for a period of two (2) years from the time the Notice of Completion is filed.

1.10 EXTRA STOCK:

- A. Contractors to provide the owner with at least one-gallon of each type and color of paint product.

PART 2 - PRODUCTS

2.1 MATERIALS:

- A. Paint materials shall be as manufactured by Dunn Edwards Paint (D-E) or as indicated in the Paint Schedule or equal approved in accordance with Section 012500.
- B. Primer and sealer coats may be thinned no more than 10%, with paint manufacturer's thinner. Other coats shall be used as they come from the can, except as otherwise approved.

- C. Secure the Color Schedule before undercoating. Unless otherwise specified, all undercoats shall be tinted slightly to approximate the color of the finish coat. Approval of color shall be obtained before proceeding with the work.
- D. Where a specific name is not given for a product or ingredient, such item shall be of the best quality of the approved manufacturer, which is normally used for the intended purpose.

2.2 **PAINT SCHEDULE:**

A. EXTERIOR:

- | | | | |
|----|-------------|---|---------------|
| 1. | Group One: | Ferrous Metal | |
| | 1st Coat | Primer
(If shop primed, only touch-up is required) | D-E
BRPR00 |
| | 2nd Coat | Exterior Acrylic Semi-Gloss | W7500V |
| | 3rd Coat | Exterior Acrylic Semi-Gloss | W7500V |
| 2. | Group Two | Galvanized Metal | |
| | Etch | Etching Solution | D-E
ME 01 |
| | 1st Coat | Alum Primer | GAPR00 |
| | 2nd Coat | Exterior Acrylic Semi Gloss | W7500V |
| | 3rd Coat | Exterior Acrylic Semi Gloss | W7500V |
| 3. | Group Three | Concrete, Masonry and Stucco | |
| | 1st Coat | Masonry Primer | D-E
W6315 |
| | 2nd Coat | Exterior Acrylic Low Sheen | W7500V |
| | 3rd Coat | Exterior Acrylic Low Sheen | W7500V |
| 4. | Group Four | Composite Trim (Pre-Primed) | |
| | 1st Coat | Primer (for touch-up only) | D-E
EZPR00 |
| | 2nd Coat | Exterior Acrylic Semi Gloss | W7500V |
| | 3rd Coat | Exterior Acrylic Semi Gloss | W7500V |

B. INTERIOR:

- | | | | |
|----|-----------|-------------------------------|-------------|
| 1. | Group One | Gyp Board | |
| | 1st Coat | Gyp Board Primer - Zero VOC | D-E
W600 |
| | 2nd Coat | Acrylic Semi-Gloss - Zero VOC | W603 |
| | 3rd Coat | Acrylic Semi-Gloss - Zero VOC | W603 |

2.	Group Two	Interior Metal - Ferrous	D-E
	1st Coat	Primer - Rust Black Premium Low VOC	BRPR00
	2nd Coat	Acrylic Semi-Gloss - Zero VOC	W603
	3rd Coat	Acrylic Semi-Gloss - Zero VOC	W603
3.	Group Three	Interior Metal - Galvanized	D-E
	1st Coat	Primer - Ultra Grip - Low VOC	UGPR00
	2nd Coat	Acrylic Semi-Gloss - Zero VOC	W603
	3rd Coat	Acrylic Semi-Gloss - Zero VOC	W603
4.	Group Four	Interior Wood	D-E
	1st Coat	Sealer/Undercoat - Low VOC	W6325
	2nd Coat	Acrylic Semi-Gloss - Zero VOC	W603
	3rd Coat	Acrylic Semi-Gloss - Zero VOC	W603

All interior paint must conform to GreenSeal, GS-11 Criteria.

PART 3 - EXECUTION

3.1 **PREPARATION:**

- A. Examine surfaces to be painted before beginning painting work. Work of other trades that has been left or installed in a condition not suitable to receive paint shall be repaired or corrected by the applicable trade prior to painting. Painting of defective or unsuitable surface implies acceptance of the surface.
- B. Surfaces shall be clean and dry prior to painting and finishing. Dirt and dust shall be removed by stiff bristle brush and wiping with cloths. Oil and grease shall be removed by solvent cleaning, using a solvent such as mineral spirits and wiping with clean cloths. Surfaces shall be given a final rinse of clean solvent. Surfaces which have been contaminated with chemicals shall be thoroughly rinsed with water. The first coat of paint shall be applied as soon as possible after cleaning and drying surfaces.
- C. Shop Primed Ferrous Metal Surfaces: Wash free of grease, dirt, oil, and dust, using solvents as required. Galvanized surfaces shall be cleaned with solvents and given a vinyl wash coat. Shop primed surfaces shall be repaired and touched up wherever shop priming is damaged and at all welds.

3.2 **APPLICATION:**

- A. Application: Apply paints by brush or roller except as otherwise specified. Use paint of proper consistency for each coat, well brushed-out or flowed-on to obtain a uniform finish

free from holidays, brush marks, sags, crawls, or other defects. If paint is applied by sprayer, all surfaces shall be back-rolled.

- B. Materials shall be applied in accordance with the approved manufacturer's directions and specifications. Thinning required, shall be done in the manner and the type of reducer recommended by manufacturer.
- C. The proper number of coats of paints and other finishes specified, properly applied, will result in the desired effect. Should this effect not be attained, additional applications of the specified materials and methods shall be made.
- D. Each coat of painted work shall vary in shade from the proceeding coat in a manner that will make each coat readily distinguishable without affecting the finish color.
- E. In enclosed spaces, the application and drying of paint shall be performed only when the temperature is 65 degrees F., or above and maintained constantly to prevent condensation.
- F. Enamel coats shall be sanded smooth prior to re-coating., All defects and unevenness in previously applied coatings shall be repaired before applying the next coat.
- G. Where questions occur as to the indicated surfaces inform the Architect and receive clarification therefrom.
- H. Back Priming: All wood trim is to be primed on the back side prior to installation. Coordinate with finish carpentry.
- I. Gypsum Board Prime Coat: Primer coat for drywall finishes are to be applied prior to the application of the texture finish coats. Coordinate with Section 09250.

3.3 CLEANING, TOUCH-UP AND REFINISHING:

- A. Touch-up and Refinishing: Runs, sags, misses, holidays, stains and other defects in the painted surfaces, including inadequate coverage and mil thickness shall be satisfactorily touched up, or refinished, or repainted as necessary to produce a first-class workmanlike job.
- B. Cleaning:
 - 1. Carefully remove all spattering, spots and blemishes caused by work under this section from surfaces throughout the project.
 - 2. Upon completion of painting work remove all rubbish, paint cans, and accumulated materials resulting from work.

END OF SECTION

MARKER BOARDS

SECTION 101116

PART 1 - GENERAL

1.1 SUMMARY

- A. The work includes the furnishing and installing of all marker boards and accessories as shown and noted on the drawings and specified herein. The conditions of the contract and Division 1 apply to this section as fully as if repeated herein.
- B. Related Sections:
 - 1. Section 092000 - Gypsum Board.

1.2 SUBMITTALS

- A. Before fabrication, furnish six (6) copies of submittals, including two standard color charts, to the architect for approval. Submittal is to show a cross section indicating materials and backing as well as attachment clip details for each type of installation.
- B. Colors shall be selected by the architect from the manufacturer's standard colors.

1.3 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Materials shall be delivered in original unopened containers bearing the name of the manufacturer and product identification.
- B. Boards are to be stored in such a manner as to prevent warping, bending and dents. Storage shall be protected from the weather and kept dry at all times.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Dry marker boards as manufactured by Steelcase, factory built units:
 - 1. 110 Series horizontal marker boards. Board sizes as indicated on Drawings. P3 ceramic steel surface over ½" particle board with 0.015" aluminum backer. Aluminum ¾" trim and 2-¾" CRC-2B Aluminum tray with radiused corners, with full map rail and cork insert. Provide one flag holder and four map hook/clips per 8' section.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Marker boards shall be installed as indicated on the drawings. All panels shall be installed true to line.

3.2 GUARANTEE

- A. Manufacturer shall provide a written guarantee for a period of 5 years from the Notice of Completion that the Marker Boards will not exhibit excessive color fading, crazing, cracking, flaking or ghosting under normal classroom usage. If the product does fail, the manufacturer must repair or replace the unit within 30 days of written notification by the Owner or Architect for the duration of the guarantee.

END OF SECTION

BASIC MECHANICAL MATERIALS & METHODS
SECTION 220100

PART 1 - GENERAL

1.1 INCLUSIONS:

- A. This section applies for all Division 22 sections. All conditions and materials are pertinent to the other sections as if repeated in those sections.
- B. Furnish and install any incidental work not shown or specified which is necessary to provide a complete and workable system.

1.2 DRAWINGS:

- A. Examine all Drawings prior to bidding of work and report any discrepancies in writing to the Architect.
- B. Drawings showing location of equipment, piping, ductwork, etc., are diagrammatic and job conditions will not always permit their installation in the location shown. The Mechanical drawings show the general arrangement of all piping, ductwork, equipment, etc., and shall be followed as closely as existing conditions, actual building construction and the work of other trades will permit. The Architectural and Structural Drawings shall be considered a part of the work insofar as these Drawings furnish the Contractor with information relating to design and construction of the building. Architectural Drawings shall take precedence over Mechanical Drawings. Because of the small scale of the Mechanical Drawings, it is not possible to indicate all offsets, fittings and accessories which may be required. The Contractor shall investigate the structural and finish conditions affecting the work and shall arrange his work accordingly providing such fittings, valves and accessories as may be required to meet conditions. When job conditions do not permit installation of equipment, piping, ductwork, etc., in the locations shown, it shall be brought to the Architect's attention immediately and the relocation determined in a joint conference. Contractor will be held responsible for the relocation of any items without first obtaining the Architect's approval. Contractor shall remove and relocate such items at his own expense if so directed by the Architect.
- C. Execute work mentioned in the Specifications and not shown on the Drawings, or vice versa, the same as if specifically mentioned in both.

1.2 CODES:

- A. Provide all work and materials in full accordance with the latest rules and regulations of the California Code of Regulations (CCR), Title 21, Title 22, and Title 24, as applicable, Safety Orders of the Division of Industrial Safety, (Cal OSHA); the California Electrical Code; the

California Plumbing Code; the California Building Code, California Mechanical Code; State Fire Marshal; and other applicable laws or regulations. Nothing in these plans or specifications is to be construed to permit work not conforming to these codes. Furnish without extra charge, any additional material and labor required to comply with these rules and regulations.

- B. Where material or equipment is specified to conform to standards such as American Society of Testing and Materials (ASTM), Underwriters' Laboratories, Inc., (UL), American National Standards Institute (ANSI) and the like, it shall be assumed that the most recent edition of the standard in effect at the time of bid shall be used.

1.4 FEES AND PERMITS:

- A. Procure and pay for all permits and licenses required.

1.5 FRAMING, CUTTING, AND PATCHING:

- A. Special framing, recesses, chases and backing for work of this section, unless specified otherwise, is covered under other sections. Be responsible for proper placement of all pipe sleeves, hangers and supports and location and sizing of openings for work of this section.

1.6 SUBSTITUTIONS AND MATERIAL LIST:

- A. Product names are used as standard of quality, items furnished as standard on specified equipment shall be furnished on all substituted 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 the Architect. The burden of proof as to the equality of any proposed material shall be upon the Contractor; Architect's decision is final. Only one request for substitution shall be considered for each item. Equipment capacities specified are minimum acceptable. Submittals will not be accepted until compliance with the requirements of Contract Documents has been confirmed by the Contractor.
- B. Unless stipulated otherwise in General Conditions and Division 1, submit a list of 7 copies of materials for approval within 35 days after the award of the Contract. It shall be accompanied by shop drawings, pump performance curves, fan curves, and other pertinent data, showing the size and capacity of the proposed materials. All materials to be used, whether substitutions or not, shall be listed in the order in which they appear in the specifications.
- C. Any mechanical, electrical, structural or other changes required for the installation of any approved substituted equipment shall be made to the satisfaction of the Architect and without additional cost to the Owner. Approval by the Architect of the substituted equipment and/or dimensional drawings does not waive these requirements. Upon request, submit drawings of mechanical equipment spaces showing substituted equipment before installation.

- D. Review of material shall not be construed as authorizing any deviations from the specifications unless the attention of the Architect has been directed to the specific deviations.
- E. Furnish to the Project Representative, upon request, complete installation instructions on all materials and equipment before starting installation of same.
- F. Submittals shall bear the specification reference or drawing location where they are specified. Submittals shall not be accepted in incomplete form. Submittals shall be organized into booklets for each specification section and submitted in indexed loose leaf binder with notation when it is a deviation from the specifications.
- G. Have fire damper installation instructions available at the site during construction for use by the inspector.

1.7 SITE CONDITIONS

- A. Information on the drawings relative to existing conditions is approximate only. Deviations found necessary during progress of construction to conform to actual conditions, as approved by the Architect, shall be made without additional cost to the Owner. The Contractor shall be held responsible for any damage caused to existing services. Promptly notify the Architect if services are found which are not shown on drawings.

1.8 GUARANTEE:

- A. Repair or replace any defective work, materials or part which may appear within 1 year of the date of acceptance. This shall include damage by leaks.
- B. On failure to comply with the above guarantee within a reasonable length of time after notification is given, the Architect shall have the repairs made at the Contractor's expense.

1.9 MAINTENANCE AND OPERATING INSTRUCTIONS:

- A. Instruct the Owner's authorized representative in operation, adjustment and maintenance of all mechanical equipment and systems. Provide three copies of certificate signed by Owner's representative attesting to their having been instructed.
- B. Furnish three complete sets of operating and maintenance instructions bound in a hardback binder and indexed. Start compiling the data upon approval of list of materials. Final observation will not be made until booklets are approved by Architect.
- C. These sets shall incorporate the following:
 - 1. Complete operating instructions for each item of heating, ventilating, air conditioning and plumbing equipment.

2. Test data and air and water balancing reports as specified.
3. Typewritten maintenance instructions for each item of equipment listing in detail the lubricant to be used, frequency of lubrication, inspections required, adjustment, etc.
4. Manufacturer's bulletins with parts number instructions, etc., for each item of equipment, properly stripped and assembled.
5. Temperature control diagrams and literature.
6. A complete list or schedule of all major valves giving the number of the valve, location and the rooms or area controlled by the valve. Identify each valve with a permanently attached metal tag stamped with number to match schedule. Post list in frame under plastic on wall in mechanical room or where directed.

1.10 SCHEDULE OF WORK:

- A. All temporary connections required to maintain services, including adequate heat and cooling, during the course of this Contract shall be made without additional cost to the Owner. The normal function of the building must not be interrupted; notify the Owner seven (7) days in advance before disturbing any service.

1.11 RECORD DRAWINGS

- A. Upon completion of the work and as a precedent to final payment, deliver to the Architect originals of all Drawings showing the work exactly as installed. Also deliver to the Architect one complete set of reproducible of all Drawings showing the work exactly as installed. All Record Drawings shall be signed by the Contractor verifying their accuracy.

PART 2 - PRODUCT (OR MATERIALS)

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 good condition.

2.2 ELECTRIC MOTORS:

- A. Shall be Allis-Chalmers, General Electric, Gould, Lincoln, or equal, selected for quite operation. Furnish motors with splashproof or weatherproof housings, where required or recommended by the manufacturer. Match the nameplate voltage rating with the electrical service supplied. Check electrical drawings. Provide a transformer for each motor not wound specifically for system voltage. The minimum efficiencies shall be as defined by IEEE 112 Test Method B and NEMA Standard MG1-112-53B.

2.3 MOTOR STARTERS:

- A. Furnish starters with the proper size thermal overload units, ambient compensated. Provide

3-phase overloads. Magnetic starters shall have Hand-Off-automatic switches and control transformers furnished integral with the starter when starter is serving an automatically controlled motor. Starters shall be Square D, Allen Bradley, or equal, in NEMA Type I enclosure inside and NEMA Type IIIR outside as required. Minimum starter size shall be 1.

2.4 VALVES AND FITTINGS:

A. Valves: Shall be DeZurik, Crane, Nibco, Kennedy, or equal.

1. Gate Valves thru 2-1/2" – Crane #428, Kennedy #427, Nibco #T-595.
2. Gate Valves 3" thru 4" – Crane #460 or #461, Nibco #F-617.
3. Gate Valves 5" and Larger – Demco NE, DeZurik #660 or Norris R3310 with throttling handle.
4. Check Valves 2-1/2" and smaller – Muessco #203BP, Crane #36, Nibco #T-413.
5. Check Valves 3" and larger – Muessco #105AP, Crane #373.
6. Gas Valves – Dezurik #425SIRS-49.
7. Gas Cocks at Appliances – ConBra Co. 50 Series.
8. Gas Pressure Regulators – reliance #1803 or #2003, Rockwell or equal with internal relief for LPG.
9. Valves in the ground shall be Crane #2487-1/2-0, Mueller #A-2380-21 or equal, and shall be installed in Christy Concrete Products #F` valve box with C210 C.I. lid, Books #1-RT box with #1-RT C.I. lid or equal. Nut operated valves in Alhambra Foundry Co. #A-3004 or equal access boxes marked for service. Provide a tee handle wrench for each size. Set access boxes in 4" thick concrete pad, trowel smooth and edge, set flush with grade. Water service valve in ground shall be AWWA, 200 psi, nut operated.
10. Valves in copper lines shall be furnished with adapters, or may be solder joint type of equal quality to screw type valves.
11. OS&Y Gate – Crane \$459 thru 2", #467 for 2-1/2" and larger; Demco NE-H for 4" and larger.
12. Ball Valves – Worcester #411TS, Nibco #t-560, 2" maximum (use for air, vacuum, steam and high pressure gases).
13. Vacuum Breakers, Makeup – Cla Val Co. Type RP, Watts 909, reduced pressure type backflow preventer.
14. Vacuum Breaker, General – SMR #P-701 (1/2" to 1"); #P-711 (1-1/4" to 2"); #P-714 (2" or larger) with check valves, pressure type. SMR #H-400 (1/2"); #H-403 (3/4") atmospheric type.
15. Flow Control Valves – Bell & Gossett Circuit Setter Plus, Armstrong CBV, or equal thru 3", Circuit Sensor with hand valves above 3". Illinois Series 5000 will be acceptable thru 2".

16. Balance Valves – Rockwell 142 thru 2", 143 above 2"; Walworth 1796 thru 2", 1797F-1718F above 2".
17. Provide gate or glove valves on inlet of each water heater and inlet and outlet of each pump whether shown or not.
18. Butterfly Valves: Keystone 100, Crane Monarch 2200 or equal.

B. Union and Flanges:

1. Steel 2" and smaller – 150# screwed black or galvanized malleable iron, match pipe, ground joint, brass-to-iron seat.
2. Steel 2-1/2" and larger – 150# black flange union, flat faced, full gasket.
3. Copper or brass pipe or tubing 2" or smaller – 150# cast bronze ground joint, bronze-to-bronze seat with copper-to-copper end connections.
4. Copper or brass pipe or tubing 2-1/2" and larger – 150# brass flange union, flat faced, full gasket.
5. Gaskets - Hot and cold water – Garlock Style 320D.
6. Flange Bolts – Open-hearth bolt steel, square heads with cold pressed hexagonal nuts, cadmium plated in ground. Provide copper plated steel bolts and nuts or brass bolts and nuts for brass flanges.

2.5 HANGERS AND SUPPORTS:

All hanger components shall be Grinnell, Elcen, Super-Strut or equal.

- A. Vertical Piping: Grinnell #261, Elcen #39, or equal, clamps attached to the pipe above each floor, to rest on the floor: Provide with two wraps of 10 mil PVC tape on copper tubing. Provide additional support at base of cast iron risers.
- B. Individually Suspended Piping: Super-Strut C-711, Elcen #90, or equal complete with threaded rod. Provide insulation shield hangers outside on all insulated water and steam piping.

<u>Pipe Size</u>	<u>Rod Size</u>
2" and smaller	3/8"
2-1/2" to 3-1/2"	1/2"
4" to 5"	5/8"
6"	3/4"
8" to 12"	7/8"

- C. Trapeze Suspension: Super-Strut, Elcen, or equal 1-5/8" width channel in accordance with manufacturer's published load ratings. No deflection to exceed 1/180 of a span.
- D. Trapeze Supporting Rods: Shall have a safety factor of 5, securely anchor to building structure.

- E. Pipe Straps: Super-Strut C-702, Speed Strut #650, or equal through 8" for ferrous pipe; C-701, Speed Strut #751, or equal, through 6" for copper pipe.
- F. Concrete Insets: Uni-Strut P-3200 continuous insets or M24 spot inserts.
- G. Pipe Rollers: Super-Strut C-728 up to 8"; C-721 for 10" and 12".
- H. Above Roof: H frame made from Uni-Strut hot-dipped galvanized 1-5/8" single or double channel with P-2072A or P-2073A foot secured to roof and surrounded with waterproof pitch pocket.
- I. Steel Connectors: Beam clamps with retainers.
- J. Wood Connectors: Angle clips with through bolts in shear; no lag screws in tension.

2.6 SERVICE MARKERS:

- A. 4" round by 30" long concrete marker, Haley Mfg., Co., Pinkerton, or equal with engraved brass identification plate.

2.7 PIPE PROTECTION:

- A. Polyethylene Coating: Extruded polyethylene coating, X-Tru-Coat, or field wrap as in B, Raychem "Thermofit" polyethylene sleeve joints, or field wrap as in B.
- B. Tape Wrap: Pressure sensitive polyvinyl chloride tape, "Trantex #V-10 or #V-20", "Scotchrap #50, Slipknot 100, or equal, with continuous identification. Tape shall be minimum of 20 mils thick for fittings and irregular surfaces, 2 wraps, 50% overlap, 40 mils total thickness. Tape shall be laminated with a suitable adhesive. Widths are recommended by manufacturer for the pipe size. Wrap 50'-0" or longer sections of piping with an approved wrapping machine.
- C. Pabco Wrap: Pabco Specification #D-40-240K double wrap, in accordance with manufacturer's recommendations or PVC as in B. Lap pipe wrap a minimum of 1/4" and stagger the second later. All Pabco pipe wrapping shall be done by the manufacturer's agent and not by the Contractor, except the field joints.
- D. Field Joints and Fittings: Pabco double wrap and Polyvinyl Chloride type as above. Provide at least 2 thicknesses of tape over the joint and extend a minimum of 4" over adjacent pipe covering. Build up with primer to match adjacent covering thickness. Width of tape on fittings shall not exceed 2". Tape shall adhere tightly to all surfaces of the fittings, without air pockets.

2.8 ACCESS DOORS:

- A. Milcor, Newman, or equal, with concealed hinges, screwdriver locks, prime coated with rust inhibitive paint, and style of door to suit ceiling or wall construction. Access doors in acoustical tile ceilings shall be "Sesame" with tile recess. Doors shall be 14 gauge C.R. steel and shall be 22" x 30", 24" x 24" in tile ceilings, unless otherwise noted or required, fire rated to match rating of surface in which installed. Doors in walls of toilet rooms, shall be stainless steel.

2.9 FLASHINGS:

All flashings shall be made of four pound sheet lead with 8" minimum skirt, Semco SS1100-2 or S1100-4, Stoneman #1110-2 or 1110-4, or equal, and counter flashing.

PART 3 - EXECUTION

3.1 ELECTRICAL REQUIREMENTS

- A. Provide adequate working space around electrical equipment in compliance with the California Electric Code. Coordinate Mechanical Work with Electrical Work to comply.
- B. Furnish and set in place all motors. Furnish necessary control diagrams and instructions for 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 correctness of electrical connections and protective devices.
- C. Motors and control equipment shall conform to Standards of National Electrical Manufacturer's 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 to inhibit condensation.
- D. All power wiring, conduit, fuses, thermal overloads, and disconnect switches, and connection of all motors are under electrical work, Division 26. All wiring and conduit associated with the temperature control and indicating system is including in this section. Run all wiring in conduit in accordance with Division 26.
- E. Electric Motors: All motors shall be rated for continuous operation at 115% of nameplate amperage throughout the entire operating cycle. Motors found exceeding the nameplate amperage shall be promptly replaced at no cost to the Owner. Horsepowers shown are minimum and shall be increased as necessary to comply with above requirements.

- F. Motor Starters: Furnish magnetic motor starter for all equipment furnished under this section except those shown in motor control centers.
- G. Provide OSHA label indicating device starts automatically.

3.2 PRIMING AND PAINTING

- A. Perform all priming and painting on the equipment and materials as specified herein.
- B. Priming: Exposed ferrous metals, including piping, which are not galvanized or factory finished shall be primed. Black steel pipe exposed to the weather shall be painted one coat of Rust-Oleum #769 primer and one coat of #960 primer. Items to be primed shall be properly cleaned by effective means, free of rust, dirt, scale, grease, wax and other deleterious matter. Any abrasion or other damage to the shop or field prime coat shall be properly repaired and touched up with the same material used for the original priming.
- C. Finish Painting:
 - 1. Equipment and machinery located in fan rooms, equipment rooms and similar purpose rooms and at other locations when specified, shall be furnished with a standard factory-applied beaked enamel finish in approved uniform colors. At the Contractor's option, equipment and machinery may be field-painted hereunder with two coats consisting of an air-dried synthetic industrial enamel undercoater and enamel as approved over the shop or factory-applied primer. All exposed ferrous metals, including piping located in fan rooms, equipment rooms, and boiler rooms shall be painted one coat of an approved paint, of color selected, over primer. Canvas insulation jackets, including piping located in fan rooms, equipment rooms, and boiler rooms shall be painted two coats of paint of color selected. Mechanical Work, except as described herein, occurring in rooms or spaces required to be painted on walls, and/or ceilings will be finish painted as described above for equipment and machinery to equipment rooms.
- D. See Painting Section for detail requirements and finishes.

3.3 EXCAVATING:

- A. Perform all excavating required for work of this section.
- B. Unless shown otherwise, provide a minimum of 3'-0" above top of pipe to finished grade outside so as to be below frost line and a minimum of 1'-0" under building from bottom of slab. Trim trench bottom by hand or provide a 4" deep minimum bed of sand to provide uniform grade and firm support throughout entire length of pipe. For cement asbestos pipe, insulated pipe, glass pipe, or plastic pipe, bed the pipe in sand.

- C. Maintain all warning signs, barricades, flares and red lanterns as required.
- D. For all trenches 5' or more³ in depth, shoring, bracing, slipping or other provisions shall be made for worker protection from hazard of caving ground during the excavation of such trenches in accordance with Cal OSHA.

3.4 BACKFILLING

- A. Backfill shall comply with applicable compaction provisions of Division 2 of these specifications.
- B. Backfill plastic pipe and insulated pipe with sand for a minimum distance of 12" above the top of the pipe. Compact sand backfill by impact tamper and concrete vibrator.
- C. Except under existing or proposed paved area, walks, roads, or similar surfaces, in cases where rock is encountered, backfill more than 1'-0" above the top of the pipe shall be made using suitable excavated material or other approved materials as necessary. Place the backfill in 8" layers, measured before compaction, and compact with impact hammer to at least 95% relative compaction per ASTM D1557.
- D. Entire backfill for excavations under existing or proposed pavements, walks, roads, or similar surfaces, under new slabs on grade and where rock is encountered, shall be made with clean sand compacted with mechanical tamping equipment to at least 95% relative compaction per ASTM D1557. Remove excess earth from site or deposit on site if so directed by the Architect.
- E. Replace or repair to its original condition all sod, concrete, asphalt paving, or other materials, including landscape sprinklers, disturbed by the trenching operation. Repair within the guarantee period as required.

3.5 THRUST BLOCKS:

- A. Provide concrete anchors or thrust blocks on all cast iron and cement asbestos water and forced main sewer lines in the ground. Install thrust blocks at all changes in direction and at all connections to mains 2" and larger. Form thrust blocks by pouring concrete between the pipes and trench wall. They shall be adequate in size and placed to take all thrusts created by the maximum internal water pressure.

3.6 INSTALLATION OF PIPING SYSTEMS:

- A. General:
 - 1. All piping shall be concealed unless shown or otherwise directed.
 - 2. Where piping or conduit is left exposed within a room, the same shall be run true to plumb, horizontal or intended planes. Where possible, uniform margins are to be

- maintained between parallel lines and/or adjacent wall, floor or ceiling surfaces.
3. Horizontal runs of pipes and/or electrical conduit suspended from ceilings shall provide for a maximum headroom clearance. The clearance shall not be less than 6'-8" without written approval from the Architect.
 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.
 5. Grade all water-circulating piping, flow and return, to provide for drainage of lines and elimination of air.
 6. Close ends of pipe immediately after installation. Leave closure in place until removal is necessary for completion of installation.
 7. Each piping system shall be thoroughly flushed and proved clean before connection to equipment.
 8. Pipe the discharge of each relief valve, air vent, backflow preventer and similar devices to floor sink and drain.
 9. Install exposed polished or enameled connections with special care showing no tool marks or threads at fittings.
 10. Tracer Wires (for Non-Metallic Pipe):
 - a. Install tracer wire where shown for non-metallic pipe in ground outside of buildings. Use AWG #12 tracer wire and lay continuously below vertical projection of pipe so that it is not broken or stressed by backfilling operations. Solder all joints.
 - b. Locate terminal where shown. Terminals: Precast concrete box and cast iron locking traffic cover, Brooks 3TL, or equal; cover marked with name of service; 6" of loose gravel below box. Plastic terminal board with brass bolts; identify line direction with plastic tags. Test for continuity between terminals after backfilling in presence of Construction Supervisor.
 - c. Option: Use electrically detectable plastic tape with metallic core, Terra Tape D, manufactured by Griffolyn Co., or equal; tape 2" wide, continuously imprinted "CAUTION, WATER (GAS, etc.) LINE BELOW". Install, with printed side up, directly over pipe, 8" below finish grade. Backfill material shall be as previously specified for the particular condition where pipe is installed, but avoid use of crushed rock or of earth with particles larger than ½" within the top 12" or backfill.

Take precautions to insure that tape is not damaged or misplaced during backfill operations. Terminal boxes not required.
 11. Use reducing fittings: bushing shall not be allowed. Use eccentric reducing fittings wherever necessary to provide free drainage of lines and passage of air.
- B. Sleeves: Install AMI sleeves of sufficient size to allow for free motion of pipe, 24 gage galvanized steel. The space between pipe and sleeves through floor slabs on ground, through outside wall above or below grade, through roof, and other locations as directed shall be caulked with oakum and mastic and made water-tight. At Contractor's option pipes through

slabs on grade may be wrapped with 1" thick fiberglass insulation to completely isolate the pipe from the concrete in lieu of sleeves. Link seal casings may be used in lieu of caulking.

- C. Floor, Wall and Ceiling Plates: Fit all pipe with or without insulation passing through walls, floors, or ceilings, and all hanger rods penetrating finished ceilings with chrome plated or stainless steel plates. Openings through air plenums shall be sealed airtight.
- D. Flashing: Furnish and install around each pipe, where it passes through a roof, a flashing and counterflashing.

E. Hangers and Supports:

- 1. General: Support all piping so that it is firmly held in place by approved iron hangers and supports and special hangers as required. Rigidly fasten hose faucets, fixture stops, and similar items to the building construction. All hanger material shall be approved by the Architect before installation. Support no piping or ductwork by any plumbers tape, wire, rope, wood, or other makeshift devices.

2. Pipe Support and Hanger Spacing Schedule:

	<u>1/2</u>	<u>3/4</u>	<u>1</u>	<u>1-1/4</u>	<u>1-1/2</u>	<u>2</u>	<u>2-1/2</u>	<u>3</u>	<u>4</u>	<u>4 & up</u>
Standard weight steel pipe; Sch 40(liquid filled)	5'	5'	6'	6'	7'	8'	9'	10'	10'	10'
Standard weight steel pipe; Sch. 40 (vapor filled)	6'	8'	8'	10'	10'	10'	10'	10'	10'	10'
Copper tubing Type K	4'	4'	5'	5'	6'	6'	7'	8'	9'	10'
Copper tubing Type L	3'6"	4'	4'6"	5'	5'6"	6'	7'	7'6"	8'6"	10'
IPS Brass Pipe	5'	6'	7'	8'	9'	10'	10'	10'	10'	10'

Cast Iron Support at every joint and ten-foot o.c. maximum.

- 3. On insulated pipes, install the hangers on the outside of pipe covering and not in contact with the pipe. Provide rigid insulation and a 12" long. 18 gage galvanized sheet iron shield between the hanger whenever hangers are installed on the outside of the pipe covering.
- 4. Burning or welding on any structural member may only be done if approved by the Architect.
- 5. Insulate copper tubing from ferrous materials and hangers with 2" thickness of 3" wide 10 mil polyvinyl tape wrapped around pipe.
- 6. No valve or piece of equipment shall be used to support the weight of any pipe.

7. Provide a support or hanger close to each change of direction of pipe either horizontal or vertical.
- F. Anchors:
1. Piping subject to expansion or contract shall be provided with anchors and expansion loops or joints as required. Provide adequate guides to prevent misalignment.
- G. Fireproofing:
1. The annular space between the pipe sleeves and the pipe and between duct openings and ducts through all floors and walls shall be protected by a UL-listed Fire Stopping System, 3M, Fire Barrier, Dow Firestop or Nelson Firestop.

3.7 SERVICE MARKERS:

- A. Mark the location of each plugged or capped pipe, set marker in 6" x 6" concrete pad flush with finish grade.

3.8 PIPE JOINTS AND CONNECTIONS:

- A. Cutting: Cut piping and tubing square, ream cut ends to full bore, remove rough edges, burrs, loose materials.
- B. Threaded Pipe: Make joints with Rectorseal #5 or Permatex #1 thread lubricant or joint tape. Use no caulking of any kind. Remake leaky joints with new materials.
- C. Copper and Brass Pipe and Tubing (except Control Piping): Make all joints with silver brazing alloy, Sil-Fos or equal, 1100 degrees F. melting point or greater, ASTM B-260, except that water piping 2" and smaller not buried in the ground or concrete and Type DWV plumbing piping may be made up with 95-5 tin-antimony, ASTM B-32, Grade 5A solder. Boss or saddle type fittings or mechanically extracted tube joints will not be allowed. Use leadless solder for potable water piping.
- D. Welded Pipe:
1. Make up with oxyacetylene or electric arc process.
 2. All welding shall conform to the American Standard code for Pressure Piping ASA B-31, Section 6, Chapter 4, and Appendix A. When requested by the Architect, furnish certification from an approved testing agency or National Certified Pipe Welding Bureau that the welders performing the work are qualified.
 3. All line welds shall be of the single "V" butt type. Welds for flanges shall be of fillet type.
 4. Where the branch is 2 pipe sizes smaller than the main or smaller, Booney Weldolets, Thredolets, Nibco, or equal, may be used in lieu of welding tees.

- E. Cast Iron Soil Pipe:
1. Make-No Hub joints with torque wrench. Wrought iron, steel, or copper pipe shall have a ring or part of a coupling screwed on to form a spigot end where connected to a No-Hub joint. Suspended No-Hub pipe shall have sway brace at 20'-0" maximum spacing.
 2. Ty-Seal, Dual-Tite, or equal, pipe and fittings may be used at the Contractor's option.
 3. Connect building drain piping to outside service pipe with reducers or increasers as required. Caulking of smaller pipe into the larger without a reducer or increaser will not be permitted. Provide for changes in material types.

3.9 UNION AND FLANGES:

- A. Install Epco, or equal, dielectric unions or flanges at points or connection between copper or brass piping material and steel or cast iron pipe or material except in drain, waste, vent, or rainwater piping. Bushings or couplings shall not be used. Dielectric unions shall not be installed below grade.
- B. Install unions, whether shown or not, at each connection to all equipment and tanks, at one connection to each valve or cock, and at all connections to all automatic valves, such as temperature control valves.
- C. Locate the unions for easy removal of the equipment, tank or valve.

3.10 PIPE PROTECTION:

- A. Wrap all underground bare galvanized and black steel pipe and copper pipe, buried in the ground and to 6" above grade, including piping in conduit, with corrosive protective wrap as specified under "Pipe Protection" in Part 2 of Section 2200500.
- B. Cleaning: Clean all piping thoroughly before wrapping.
- C. Inspection: Damaged or defective wraps shall be repaired as directed. No wrapped pipe shall be covered until approved by the Architect.
- D. Testing: Test completed piping with Tinker and Rasor Co. test machine (San Gabriel, Calif. 626/287-7942).
- E. Covering: No rocks or sharp edges shall be backfilled against the wrap. When backfilling with other than sand, protect wrap with an outer wrapping of Kraft paper. Leave in place during backfill.

3.11 ACCESS DOORS:

- A. Furnished and install access doors wherever required whether shown or not for easy maintenance of mechanical system; for example, at concealed valves, strainer, traps, cleanouts, dampers, motors, controls, operating equipment, etc. Access doors shall provide for complete removal and replacement of equipment.

3.12 CONCRETE WORK:

- A. Concrete work required for work of this section shall be included under another section of the specifications, unless otherwise noted. This shall include all poured in place concrete work for installing precast manholes, catch basins, etc., unless the work is specifically indicated on the drawings to be furnished under this section. Thrust blocks, underground anchors, and pads for cleanouts, valves access boxes and washer boxes are included under this section of the specification. Concrete shall be 2500 psi test minimum.

3.13 INSULATION WORK

A. General:

1. All insulation shall be done by a contractor specifically licensed for insulation work. Insulation applied by the mechanical and plumbing contractor is not acceptable.
2. The term "piping" used herein shall include pipe, air separators, valves, strainers and fittings. Apply insulating cement to fittings, valves and strainers and trowel smooth to the thickness of adjacent covering. Cover with jacket to match piping. Extend covering on valves up to the bonnet. Leave strainer cleanout plugs accessible. Valve and fitting covers may be preformed PVC. Provide rigid insulation, 18" minimum length at each pipe hanger. Seal ends of insulation with jacket.
3. Do not insulate flanges and unions on high temperature piping. Insulate unions and pump bodies on chilled water and combination hot and chilled water systems with three heavy layers of Mortell's No-Drip Paint, 1/16" minimum total thickness or Armstrong Armaflex Tape per manufacturer's recommendations.
4. Clean thoroughly, test, and have approved, all piping and equipment before installing covering.
5. All insulation, adhesive coverings and jackets including pre-insulated flexible ductwork shall have a flame spread of 25 or less and developed smoke rating of 50 or less tested in accordance with ASTM E84.

B. Insulation of Piping:

1. Domestic hot and tempered water shall be insulated with 1" thick 3-1/2# density fiberglass with ASJ-SSL jacket.
2. Urethane insulation will not be allowed above ground or on hot water or steam piping.
3. On all insulated piping exposed to the weather apply .015 aluminum jacket secured with 1/2" aluminum bands on 12" centers. Cover fittings with six ounce canvas and

two coats of Foster's 30-36 or Zeston plastic fitting covers. Insulation shall be vaportight before applying metal jacket or plastic covers.

4. All insulated piping exposed in occupied spaces or mechanical rooms shall have a Proto or equal, 25/50 rated PVC jacket. Color as selected, installed and sealed per manufacturer's recommendations.
5. Refrigerant piping, including all fittings, shall be insulated with nominal 3/4" thick Armstrong Armaflex 22, Owens-Corning Flex Tubing, or equal. Seal all joints with Armstrong 520 adhesive, Owens-Corning 500 adhesive, or equal. Insulation exposed to the weather shall be finished with two coats of Armstrong white Armaflex finish, or equal. Apply insulation in strict accordance with manufacturer's recommendation.

C. Duct Insulation:

1. Wrap all unlined concealed supply and return ducts with O.C. Fiberglas All-Service duct wrap with a reinforced foil Kraft vapor barrier facing 2" thick and 3/4" per cubic foot density. Wrap insulation entirely around duct and wire securely in place with #16 wire 12" o.c. and each side of each standing seam and over each insulation joint. Lap all insulation joints 3" minimum. Insulate ducts installed tight against other work before hanging in place.
2. All ducts and plenums in Fan Room shall be insulated with 1-1/2" (2" outside building) thick Fiberglas 705 insulating board with factory-applied foil facing. Insulation shall be adhered to ducts with Type B STICKLIPS at 18" o.c. cemented in place. Wrap insulation with 8 ounce canvas sized with Foster's Seal-fas mastic. Apply one final undiluted coating of Foster's 30-76 white insulation coating.
3. Install acoustical lining in all supply, return and mixed air ducts and plenums exposed in the Equipment Room or outside the building and where marked; and additional length as necessary to provide, in all cases, a minimum of 10'-0" in each direction from the fan, fan casing, or unit casing. Line exhaust ducts for a minimum of 10'-0" from fan inlet and 10'-0" downstream from each register or grille. Line all transfer ducts. Lining shall be 1" thick vinyl face black matt Fiberglas Aeroflex Type 150, 1-1/2# per cubic foot, J-M., or equal. Cement the lining in place with 100% coverage of Foster's 85-20, 3M #38, or equal, and coat all edges and joints. In addition, all lining shall be fastened with Sticklips or welded pins spaced at 18" maximum centers both ways. No bare fiberglass shall be left exposed to air stream.
4. Seal airtight all seams of all supply, return and exhaust ducts except those exposed in the conditioned space with Hardcast Inc. FTA-20 adhesive and Hardcast DT-Tape installed in accordance with manufacturer's directions.
5. Seal watertight all joints of all ductwork exposed to the weather with 6 ounces canvas dipped in Arabol; cover the canvas with a heavy coat of Foster's 30-76, or equal, no dilution.

3.14 EQUIPMENT IDENTIFICATION:

- A. Identify each piece of equipment with an engraved brass tag fastened with screws. For example- EXHAUST FAN 2.

3.15 PIPE IDENTIFICATION:

- A. Identify each piping system and indicate the direction of flow by means of Idento Bands (Idento Metal Products Co.) Or SETMARK pipe markers. Apply the markings after all painting and cleaning of the piping and insulation is completed.
- B. Apply the legend and flow arrow at all valve locations; at all points where the piping enters or leaves a wall, partition, cluster of piping or similar obstruction; and at approximately 50'-0" intervals on pipe runs. Variations or changes in locations and spacing may be made with the approval of the Architect. There shall be at least one marking in each room. Markings shall be located for maximum visibility from expected personnel approach.
- C. Wherever two or more pipes run parallel, markings shall be supplied in the same relative location on each.
- D. The legends and flow arrows shall conform to ANSI A13.1.
- E. The sizes of the letter and flow arrows shall be as follows:

Outside Diameter of Pipe or Coverings (Inclusive)	Size of Letter	Minimum Length of Flow Arrow
5/8"-to 2"	1/2"	2-1/2"
2-1/2" or larger	1"	4"
- F. Each hand valve on non-potable water piping shall be labeled with a metal tag stamped "DANGER – NON-POTABLE WATER" in one-quarter inch (1/4") high letters.

3.16 GUARDS

- A. General: Belt drive, gear drive shafts, coupling, fan inlet and outlets, and running equipment shall be properly protected by guards as required by the CCR, Title 8, Division of Industrial Safety, Sub Chapter 7, General Industry Safety Orders, Articles 31 through 36, whether shown on the drawings or not.
- B. Construction: Guards shall be factory furnished or made of expanded metal with angle iron framework. Guards for belt drives shall have an easily removable section for replacement of belts. Openings shall be provided at shaft ends for taking rpm readings.

3.17 ANTI-VIBRATION BASES AND HANGERS:

- A. All ventilating and air conditioning equipment shall operate under continuous demand without objectionable vibration. Contract shall be sure that above result is achieved. Isolate all equipment connections, including conduit, piping, drains, etc.
- B. Air conditioning units and all fans shall be supported on anti-vibration bases or hangers. Other equipment and pumps shall be supported on anti-vibration bases, pads or hangers, when shown on Drawings or specified with equipment. Isolators and supporting bases shall be supplied by single manufacturer, Kinetics, Korfund, or equal. Type of mounting and supporting base for each piece of equipment schedule or as hereinafter specified. Individual mounts shall be Kinetics Type FPS, or equal. Contractor shall provide calculations for isolators and mounting acceptable to review authority.
- C. All piping in Mechanical Equipment rooms and piping three supports away from mechanical equipment mounted on vibration isolators shall be isolated from structure by means of vibration and noise isolators. Suspended piping shall be isolated with combination Spring and Fiberglass hangers in supporting rods. Hangers shall be Type H. Floor-mounted piping shall be supported directly on Spring Mounts, Type S. Vertical pipe risers shall be isolated from structure by means of vibration and noise isolating Expansion Hangers, Type XH.
- D. Isolator manufacturer's submittal shall include complete design for supplementary bases, tabulation of design data on isolators, including O.D. free operating, and solid heights of springs, free and operating heights of neoprene or fiberglass isolators, and isolation efficiency based on lowest operating speed of equipment supported.

3.18 SPECIAL SEISMIC REQUIREMENTS

- A. Supports for all piping and ductwork shall be in accordance with SMACNA "Guidelines for Seismic Restraints of Mechanical Systems and Plumbing Piping Systems".
- B. Expansion Anchors in Hardened Concrete:
 - 1. Maximum Values: The allowable shear and withdrawal shall not exceed values permitted for bolts cast into concrete, as defined in Section 2624 of Title 24, with the 100% increase provided in Footnote 1 to CCR Table 26-F.
 - 2. Qualification Tests: The allowable shear and withdrawal load shall be based on qualification tests of at least three (3) test specimens, using a factor of safety of five (5) on the average of the test values, or a factor of safety of four (4) on the lowest test value, whichever is lower. Until the test data for the various anchors can be evaluated, use not more than 80% of the allowable load listed in the ICBO Research Committee Recommendations for the specific anchor.
 - 3. Installation: The anchors must be installed in accordance with the requirements given in ICBO Research Committee Recommendations for the specific anchor.
 - 4. Limitations on Anchors in Withdrawal: Anchors acting in withdrawal shall not be

used for major connections such as anchoring tilt-up walls, tie-downs, heavy continuously applied loads, frequent vibratory loads, etc.

5. Job Testing: Fifty percent of the anchors shall be load-tested on each job to twice the allowable capacity in tension, except that if the design load is less than 75 pounds; only one anchor in ten need to be tested. If any anchor fails, all anchors must be tested. The load test shall be performed in the presence of the project inspector.

The load may be applied by any method that will effectively measure the tension in the anchor, such as direct pull with a hydraulic jack, a torque wrench calibrated using the specific anchor, calibrated spring-loading devices, etc. Anchors in which the torque is used to expand the anchor without applying tension to the bolt may not be verified with a torque wrench.

3.19 TESTS AND ADJUSTMENTS:

- A. Test the installation in accordance with the following requirements and all applicable codes. Notify the Architect at least 7 days in advance of any test. All piping shall be tested at completion of roughing-in, or at other times as directed by Architect.
- B. Furnish all necessary materials, test pumps, gases, instruments and labor required for testing. Tests shall be witnessed by the Architect.
- C. Isolate from the system all equipment which may be damaged by test pressure.
- D. Test Schedule: No loss in pressure or visible leaks shall show after four hours at the pressures indicated.

<u>System Tested</u>	<u>Test Pressure PSI</u>	<u>Test Width</u>
Sanitary Sewer, Drain, Vent	10 Ft. Hd.	Water
Storm Drain, Condensate Drains	10 Ft. Hd.	Water
Domestic Hot and Cold Water	125	Water
Gases	100	Air & Soap

All piping, including underground, connected to the fire sprinkler system shall be tested and certified in accordance with ISO requirements.

- E. Testing, Evacuating, Charging and Lubrication of Refrigeration System:
 1. Pressurize with dry nitrogen and/or refrigerant to 300 psig test all joints with an electronic detector or halide torch. Release the pressure and attach a high vacuum pump. Evacuate to 4mm (4000 microns) and hold for 30 minutes. Break to 5 psig with dry nitrogen or R-22 and allow to remain in the system for ten minutes. Evacuate to 2mm (2000 microns) and hold for 30 minutes. Use a mercury manometer or electronic vacuum gauge. Do not start timing until recommended vacuum range is reached.

2. At the end of the evacuation, if the system has been proved leakfree, charge with refrigerant and fill the crankcase to the oil level specified by the manufacturer. All refrigerant oil shall be delivered to the location in sealed containers.
 3. Replenish for a period of one year without cost to the Owner all refrigerant and oil required to maintain the proper levels.
- F. Perform operational tests under simulated or actual service conditions, including one test of complete plumbing installation with all fixtures and other appliance connected.
- G. Should any material or work fail in any of these tests, it shall be immediately removed and replaced by new materials, any portion of the work replaced shall again be tested by Contractor at his own expense.
- H. Instruct Owner's operating personnel during test and operating adjustment period. Lubricate each item of equipment, including motors, before operation.

3.20 MISCELLANEOUS FRAMES AND COVERS:

- A. Furnish all steel channel frames and covers in connection with concrete work required by this Section of the Specification. All items shall be welded construction, and except as noted, hot-dip galvanized after fabrication painted two coats of chromate before delivering to the jobsite.

END OF SECTION

HEATING, VENTILATION AND AIR CONDITIONING

SECTION 230100

PART 1 - GENERAL

1.1 The General Conditions apply to this section.

1.2 SCOPE

Furnish and install all heating, ventilating and air conditioning work indicated on the drawings and described herein. Also, any incidental work not shown or specified that is necessary to provide the complete system.

1.3 DRAWINGS

- A. Examine all drawings prior to starting to work and report any discrepancies in writing to the Architect.
- B. Verify all dimensions at the building site and check existing conditions before beginning work. Make changes which are necessary to install the work in harmony with other crafts; they shall be first approved by the Architect.
- C. Execute work mentioned in the specifications and not shown on the drawings, or vice versa, the same as if specifically mentioned in both.

1.4 CODE RULES AND SAFETY ORDERS

- A. Provide all work and materials in full accordance with the latest rules and regulations of the:
 - 1. 2022 California Building Code
 - 2. 2022 California Plumbing Code
 - 3. 2022 California Mechanical Code
 - 4. 2022 California Electrical Code
 - 5. 2022 California Fire Code
 - 6. Title 24, California Code of Regulations.

Nothing in these plans or specifications is to be construed to permit work not conforming to these codes. Furnish without extra charges, any additional material and labor required to comply with these rules and regulations.

1.5 FEE AND PERMITS

- A. Procure and pay for all licenses, fees and permits required.

1.6 UTILITY COORDINATION

- A. It shall be the contractor's responsibility to arrange and coordinate with the utility companies all requests for service(s) and the installation of meter(s) and services. The contractor shall furnish all documentation and information that the utility companies require prior to start of construction. Within 35 calendar days of the award of contract, the contractor shall submit to the architect a letter with copies of drawings that are sent to the utility companies for such services.

1.7 FRAMING, CUTTING AND PATCHING

- A. Special framing, recesses, chases and backing for work of this section is covered under other sections. Be responsible for proper placement of all pipe sleeves, hangers and supports and location of openings for work of this section.

1.8 SUBSTITUTIONS AND MATERIALS LIST

- A. Product names are used as qualitative standards, however other materials or methods shall not be used unless approved in writing by the Architect. The burden of proof as to the equality of any proposed material shall be upon the contractor, and the Architect's decision is final. Only one request for substitution shall be considered for each item. Equipment capacities specified are minimum acceptable.
- B. Submit in indexed folders, five (5) sets of submittals for approval within 35 days after the award of the contract. The submittals shall be accompanied by equipment shop drawings, pump performance curves, and other pertinent data, showing the size, capacity and the proposed materials to be used. Submittals shall be provided, whether substitutions are made or not, and shall be listed in the order in which they appear in the schedules. Submittals shall be provided and approved prior to start of construction.
- C. Any mechanical, electrical, structural or other changes required for the installation of any substituted equipment shall be made to the satisfaction of the architect and without additional cost to the owner. Approval by the architect of the substituted equipment and/or dimensional drawings does not waive these requirements. With submittals, provide drawings showing substituted equipment.
- D. Approval of material shall not be construed as authorizing any deviations from the specifications unless the attention of the architect has been directed to the specific deviations.
- E. Furnish to the Inspector, upon request, complete installation shop drawings of the same approved substitutions and drawings.

1.9 SITE CONDITIONS

- A. Information on the drawings relative to existing conditions is approximate only. Deviations found necessary during progress of construction to conform to actual conditions, as approved by the architect, shall be made without additional cost to the owner. The contractor shall be held responsible for any damage caused to the existing property and services. Promptly notify the architect if service are found which are not shown on the drawings.

1.10 GUARANTEE

- A. Repair or replace any defective work, material or part which may appear within one year of the date of acceptance. This shall include damage by leaks.
- B. On failure to comply with the above guarantee within a reasonable length of time, after notification is given, the architect shall have the repairs made at the contractor's expense.

1.11 MAINTENANCE AND OPERATING INSTRUCTION

- A. Furnish four complete sets of operating and maintenance instructions bound in a hardboard binder and indexed. Start compiling the data upon approval of list of materials, Final inspection will not be made until booklets are approved by the architect.
- B. These sets shall incorporate the following:
 - 1. Complete operating instructions for each item of equipment listing in detail the lubricants to be used, frequency of lubricant, inspections required, adjustments, etc.
 - 2. Manufacturer's documentation with part numbers, instruction etc., for each item of equipment.
- C. Post service telephone numbers and/or addresses in an appropriate place as designated by the architect.

1.12 RECORD DOCUMENTS

- A. Upon completion of the work, and as precedent to final payment, the contractor shall provide and deliver, to the architect, updated reproducible drawings showing the work exactly as installed.

PART 2 - PRODUCTS

- 2.1** Provide equipment as specified on the drawings.

PART 3 - EXECUTION

3.1 MATERIAL STORAGE

- A. During storage at the construction site, all duct and related air distribution component openings shall be covered tape, plastic, sheetmetal or other methods acceptable to the local authority to reduce dust or debris collection in compliance with CalGreen section 5.504.3.

3.2 FILTERS

- A. Air filters shall be of an approved type tested in accordance with test method SFM Std. 12-71-1 as shown in Part 12, Title 24, California Code of Regulations. Performed filters having combustible framing shall be tested as a complete assembly. Air filters in all occupancies shall be Class 2 or better (as shown in the State Fire Marshall listing).
- B. Provide temporary filters for all fans that are used during construction; after all construction dirt has been removed from the buildings, install new filters at no additional cost to the Owner.
- C. Air filters shall be accessible for cleaning or replacement.
- D. Filters shall be 1" thick Farr (MERV-8) or approved equal.

3.3 SHEET METAL WORK

- A. Construct and install all sheet metal in accordance with the latest SMACNA recommendations. Provide variations in duct size, and additional duct fittings as required to clear obstructions and maintain clearances, as approved by the Architect, at no extra cost to the Owner. Pressure class shall be 2" w.c. or better.
- B. Exterior ductwork shall be sealed water-tight with hardcast RTA 50 adhesive and DT-tape or Glenkote.
- C. Interior ductwork shall be sealed water-tight with hardcast RTA 20 adhesive and DT-tape or Glenkote.
- D. Duct sealer system must be installed in strict conformance with the manufacturer's application instructions.
- E. Provide drive slip or equivalent flat seams for ducts where necessary due to spacer limitations. On ducts with flat seams, provide standard reinforcing inside of duct.

- F. Provide Duro-Dyne Ventlon flexible connections on inlet and out of each fan.
- G. Duct size shown on lined duct is the inside dimension.
- H. All round ductwork shall be metal, except fiberglass flexible duct shall be used on the final 5'-0" connection to the diffuser in concealed areas. Transitions and bends to ductwork, to avoid obstructions, must be approved by the Architect. Protect ductwork from damage during and after erection until final inspection.
- I. Flexible ducts shall conform the following requirements:
 - 1. Factory-made air ducts shall be approved for the use intended or shall conform to the requirements of U.M.C. Standard No. 6-1. Each portion of a factory-made air duct system shall be identified by the manufacturer with a label or other suitable identification indicating compliance with U.M.C. Standard No. 6-1 and its class designation. These ducts shall be listed and shall be installed in accordance with the terms of their listing.
 - 2. Flexible ducts shall consist of an exterior reinforced laminated vapor barrier, 1-1/2" thick fiber glass insulation (K=.25 @ 75°F), encapsulated spring steel wire Helix and impervious, smooth, non-perforated interior vinyl liner. Individual lengths of flexible ducts shall contain factory fabricated steel connection collars.
 - 3. Flexible ducts shall be supported at or near mid-length with 2" wide 28 GA. Steel hanger collar attached to the structure with a approved duct hanger. Installation shall minimize sharp radius turns or offsets. The maximum length connecting to terminal outlets shall be seven feet.
 - 4. Flexible ducts may be used to cross seismic joints without offsets.
 - 5. Flexible air ducts shall be anchored and supported per the latest SMACNA air duct annual.

3.4 GRILLES

- A. Provide all outlets with gaskets and install so that there will be no streaking of the walls or ceiling due to leakage.
- B. Furnish all diffusers, registers, and grilles with baked enamel finish - color to be coordinated with architect - and white gaskets on ceiling-mounted outlets.
- C. All visible surfaces behind air outlet faces to be flat black.

3.5 VIBRATION ISOLATION

- A. Isolate all ventilating and air conditioning equipment, including conduit, piping, duct, drains, etc., so that equipment will operate under continuous demand without objectionable vibrations.

3.6 TESTING AND BALANCING

- A. Coordinate testing and balancing agency work with work of other trades.
- B. Contractor shall provide for adjustments and/or additions or modifications to fan and motor sheaves, belts, damper linkage and the like to achieve proper air balance at no additional cost.
- C. Testing and balancing shall be performed in complete accordance with AABC National Standards for Field Measurements and Instrumentation. Testing and balancing shall be performed on air distribution systems.
- D. Balance air quantities of supply, return, outside air, and exhaust to achieve those given on Drawings with accuracy within minus 5 percent and plus 10 percent. Measure the total air quality at each fan.
- E. The air balance technician shall be responsible to modify all supply, return, and exhaust fan sheaves & VFD output frequency limits as applicable such that the design air flows are met. All supply fans controlled for filter loading shall similarly be modified to ensure the full range of motor power is available to the control system. Rated fan speed and motor speed shall not be exceeded.

END OF SECTION

BASIC MATERIALS AND METHODS - ELECTRICAL
SECTION 260100

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. All basic instructions of the project including scope and project electrical requirements.

1.2 RELATED SECTIONS

- A. All of the Division 26 Sections relate.

1.3 QUALIFICATIONS

- A. Electrical Contractor shall be established within a minimum of 5 years in the area with a working knowledge of the California Electrical Code.
- B. All electrical equipment shall be of a manufacturer as specified or approved equal.

1.4 REFERENCE

- A. California Electrical Code 2022 Edition.
- B. California Building Code 2022 Edition.
- C. California Mechanical Code 2022 Edition.
- D. California Fire Code 2022 Edition.

PART 2 - SCOPE AND PROJECT ELECTRICAL REQUIREMENTS

2.1 PROVISIONS

- A. The General Conditions, Supplemental Conditions and Division 01, General Requirements, are a part of this section and the Contract for this work and apply to this Section as fully as if repeated herein.

2.2 SCOPE

- A. Provide all labor, materials, tools, plant equipment, transportation and perform all operations necessary for and completion of all electrical work whether specifically mentioned or not; all as indicated, specified herein, and/or implied thereby to carry out the apparent intent thereof. Some of the items of work specified herein are as follows.

1. Study work and related drawings and specifications of all other crafts whose work abuts, adjoins, or in any manner is affected by work of this Section. Consult with other trades and with them expedite and coordinate material and labor to avoid omissions and delays.
2. Complete system of 480/277 and 208/120 volt, three phase, four wire, wiring distribution including all branch circuits and outlets for the lighting and convenience outlets, as shown on the drawings.
3. Electrical Service.
4. Any electrical item that needs to be relocated temporarily in order to carry out the contract works shall be included in the bid.
5. All lighting fixtures furnished and installed complete with lamps.
6. Exit and Emergency Lighting.
7. Fire Alarm System.
8. Provide data and telephone system conduits and boxes, as shown on the plans and specified herein. All outlets, cover plates, cables and terminations for data system by owners vendor.
9. Framing and other associated work required for the installation of the electrical system.
10. Submission of shop drawings and submittals.
11. Excavation, backfill, framing, and other associated work required for the installation of the electrical systems.
12. "As-Built" drawings.
13. Acceptance testing for all the different systems installed. Provide itemized list of tests carried out and recorded test results.
14. Prepare day-to-day record of "as built" changes as specified hereinafter.
15. Furnish, install and connect all line voltage conduit and wiring to mechanical equipment and other Owner furnished electrical equipment unless otherwise noted. Conduit and wiring for low voltage control wiring of the HVAC systems is under another session unless otherwise noted.
16. Furnish and install disconnect switches, as required for the mechanical equipment and controls as shown on electrical and mechanical drawings. Install all motor starters furnished loose by Mechanical Contractor.

2.3 WORK NOT INCLUDED

- A. The following work as outlined is not included in the Electrical Contract; however, this Contractor shall cooperate with the other contractors involved and shall be responsible to give complete directions on sizes of openings, locations, etc., and to insure that the completed electrical installation shall be of good workmanship and in accordance with drawings and specifications.
- B. Telephone and Data processing system head end equipment and rack.

2.4 QUALITY ASSURANCE

- A. **QUALIFICATIONS OF INSTALLERS:** For actual fabrication, installation and testing of the electrical work, use only personnel who are thoroughly trained and experienced in the skills required and who are completely familiar with the manufacturers recommended methods of installation, the equipment to be utilized, and the requirements of this work.
- B. **PERMITS AND ORDINANCES:** Comply with all codes, ordinances, and authorities having jurisdiction, including all local ordinances, the State of California Title 24, the California Electrical Code, and the California Building Code. Electrical Contractor shall procure and pay for all permits, licenses, etc. required to carry on and complete the work. Additionally:
 - 1. Comply with pertinent requirements of Underwriters' Laboratories, incorporated for all items installed for which UL standards have been established.

2.5 REVIEW SUBMITTALS

- A. For ease of maintenance and parts replacement, to the maximum extent possible use equipment of a single manufacturer. The Architect reserves the right to reject any Material List which contains equipment from various manufacturers if suitable materials can be secured from fewer manufacturers and to require that the source of materials be unified to the maximum extent possible.
- B. When specific names are used in connection with materials, they are used as standards only, but this implies no right upon the part of the Contractor to use other materials or methods unless approved as equal in quality and utility by the Architect in writing and in accordance with provisions for substitutions previously stipulated in these specifications.
- C. Shop drawings and all supporting data shall be submitted as instruments of the Contractor. Contractor shall place his stamp on the cover sheet of submittal documents, thereby stating that the equipment meets all requirements of the conditions. At least one set of submittals shall have check marks at each item indicating that the Contractor has verified compliance with the above requirements.
- D. Should the original submittal of a proposed substitution be rejected, the specified item shall be furnished.
- E. Within twenty-one (21) days after award of contract, submit (7) bound copies of brochures containing complete information and catalog cuts on all equipment including, that which is to be furnished as specified. Include wiring diagrams where so required. The brochures shall be bound separately according to classifications of equipment such as power, lighting, emergency generator, signal systems and miscellaneous systems. Proposed substitutions shall be accompanied by catalog cuts, ratings, sizes, performance curves, shop drawings and other data complete to prove full equality to the specified item. At least one copy of the submittals for each system shall be made up of original printed manufacturer's cut sheets.

Additional copies may be made up of Xerox copies. FAX submittals and electronically transmitted submittals are not acceptable and will be returned unreviewed.

- F. Approval of a substitution does not authorize any deviation from the utility, size or function of the specified item unless specifically pointed out and approval requested in the letter of submittals. Responsibility for conflicts due to space limitations are not relieved by approved of a substitution. If revision of wiring, piping or arrangement of other equipment is necessary, after approval, furnish the Architect with (7) copies for file and further reference.
- G. Panelboard submittals shall be arranged to show bussing circuit numbers with respective branch circuit devices similar to schedules on drawings. Switchboard and motor control center submittals shall show elevations indicating layout of devices, metering, etc. Device ratings, circuit numbers and nameplates shall be in table form. Terminal cabinet submittals shall include elevations with terminal strip mounting arrangement.
- H. Unless otherwise shown or specified, material shall be new, full weight, standard, the best quality of its' kind and satisfactory to the Architect. Materials shall be stored and protected as necessary and/or required by the Architect, and the Contractor shall be entirely responsible for damage or loss from any cause. Unless otherwise shown or specified, major equipment shall be the product of a manufacturer who has for a period of not less than five (5) years, been in successful manufacturer of the equipment and who has nationally distributed catalog covering ratings and specifications of said equipment.
- I. Electrical materials and equipment shall bear the label of, or be listed by, the Underwriters' Laboratories unless of a type for which label or listing service is not provided.
- J. Materials and components shall conform to industrial standards including:
 - N.E.M.A - National Electrical Manufacturers' Association
 - A.S.A - American Standards Association
 - A.S.T.M. - American Society of Testing Materials
 - I.P.C.E.A. - Insulated Power Cable Engineers' Association
 - C.B.M. - Certified Ballast Manufacturers
- K. Samples of fixtures, materials and equipment shall be submitted for approval of Architect if requested.
- L. As minimum, submittals shall be provided for the following items/systems:
 - 1. Basic Electrical Materials
 - 2. Light Fixtures and Controls
 - 3. Panelboards
 - 4. Main service switchboard
 - 5. Fire Alarm System
 - 6. Data Communications

2.6 PRODUCT HANDLING

- A. Delivery and Storage: Deliver material in time to insure uninterrupted progress of the work. Materials shall be stored in a manner to preclude damage and permit ready access for inspection and identification of each shipment. Materials shall be kept free from dirt, grease and other foreign matter, and shall be protected from corrosion. Materials showing evidence of damage will be rejected and shall be immediately removed from the work.
- B. Protection: Use all means necessary to protect the electrical work and fixtures before, during, and after installation and to protect the installed work and materials of all other trades.
- C. Replacements: In the event of damage to either the work or materials hereunder or the work and/or materials of other trades, immediately make all repairs and replacements necessary to the approval of the Architect and at no additional expense to the Owner.

2.7 JOB CONDITIONS

- A. Examination of Site: Contractor shall be held to have visited the site and satisfied himself as to the conditions under which the work is to be performed. Contractor shall check all existing conditions which may affect the work under this section. No allowances will subsequently be made on behalf of the Contractor for any extra expense to which Contractor may be put due to any failure or neglect relative to the discovery of conditions affecting the work under this Section.
- B. Specification and Contract Drawings: Accuracy of data given herein and on the drawings are as exact as could be secured, but their extreme accuracy is not guaranteed. The drawings and specifications are for the assistance and guidance of the Contractor and exact locations, distances, levels, etc., will be governed by the building and the Contractor shall accept same with this understanding.
 - 1. Drawings and specifications may be superseded by later details specifications and detail drawings prepared by the Architect, and the Contract shall conform to them and to such reasonable changes in the Contract Drawings as may be called for by those revised drawings without extra cost to the Owner. Where work called for exceeds code requirements, drawings and specifications shall take precedence.
 - 2. Layouts of equipment, accessories and wiring systems are diagrammatic (not pictorial), but shall be followed as closely as possible. Architectural, structural and other mechanical drawings shall be examined, noting all conditions that may affect this work. Report conflicting conditions to the Architect for adjustment before proceeding with work.
 - 3. Should Contractor proceed with work without so reporting matter, he does so on his own responsibility, and shall alter work if directed by the Architect, at his own expense. Right is reserved to make minor changes in locations of equipment and wiring systems shown, providing change is ordered before conduit runs and/or work directly connected to same is installed and no extra materials are required.

- C. Relocation by Owner: The Owner reserves the right to make minor changes in locations of equipment, lighting, outlets, switches, telephone outlets, and any other component of the electrical work under this Section, providing such change is ordered before conduit runs and/or work directly connected to same is installed and no extra materials are required, all at no extra cost to the Owner.
- D. Working Space: Adequate working space shall be provided around electrical equipment in strict compliance with the Electrical Safety Orders. In general provide six and one half feet (6'-6") of headroom and thirty-six inches (36") minimum clear work space in front of panelboards and controls for 120 volts and forty-two inches (42") 480 volts. Particular attention shall be paid to CEC Article 110-26 and 408.
- E. Equipment Identification: Nameplates shall be installed on electrical equipment. Equipment to be so labeled shall include the following:
1. Individual enclosures such as disconnect switches, time switches, push buttons, contractor, relays, motor starters, etc.
 2. Group mounted equipment such as panelboards and switchboards.
 3. Individual circuit breakers on switchboards.
 4. Wall switches for lighting or other use where the control function is not self-evident.
 5. Each panel shall be labeled to provide the following information minimum:
 - a. Panel name.
 - b. Size of feeder feeding the panel.
 - c. Rated voltage, amps and phases.
 6. Each distribution panel shall be labeled to provide the following information minimum:
 - a. Rated voltage, amps and phases.
 - b. Main switch rating.
 - c. Feeder circuit breaker rating with name of panel or equipment fed and size of feeder to this equipment.
 7. Nameplates shall adequately describe the item and its' function or use of the particular equipment involved.
 8. Nameplate material shall be laminated phenolic plastic. Black front and black with white core for normal power circuits, panels, etc. Engraving shall be through the outer layer. Embossed plastic pressure sensitive labels are not acceptable. In lieu of plastic plates, device plates shall be engraved directly with lettering filled with black enamel.
 - a. Install engraved nameplates for each new panelboard, cabinet, disconnect, etc. Nameplates shall be securely fastened to the equipment with #4 phillips round head cadmium plated self-tapping screws, brass bolt.
 - b. Label all switches and power receptacles as to the circuit number and panelboard that feeds them, normal and emergency. Such label shall be self adhesive white tape with black (normal power) or red (emergency power) letters made on a label maker.

- F. Electrical Work for Motors and Appliances Furnished by Others:
1. Work is shown on drawings according to best information available at time drawings was prepared; but this Contractor shall obtain accurate information on equipment power requirements and connection points from Contractors furnishing the actual equipment and shall install electrical work to suit at no extra cost to Owner. Should Contractor proceed with work without first verifying accuracy of the plans, he does so on his own risk and shall alter work if required at his own expense.
 2. Mechanical, Plumbing, and Fire Sprinkler Contractors shall furnish written or printed specifications, dimension sheets and wiring diagrams for the electrical work applying to the actual equipment being installed. Electrical Contractor shall be responsible for obtaining these and shall assist other Contractors in testing of their system, but his responsibility is restricted to having correctly installed and connected electrical work in accordance with diagrams and specifications furnished him by the other Contractors.
- G. OPERATIONS AND MAINTENANCE MANUALS: Provide “As-Built” drawings for each system as part of the O&M Manuel. Provide O&M Manuel for panels, light fixtures and lighting controls. Each binder shall be a 3 ring binder and have project name, contractor’s name, address, telephone and system description. Provide one binder for power/lighting systems. Do not combine these binders with any other disciplines on this project.

PART 3 - EXECUTION

3.1 PREPARATION

- A. REVIEW OF DEVELOPED CONDITIONS: Prior to the installation of any electrical system, under this Section, carefully inspect the installed work of all other trades and verify that all such work is complete to the point where the work hereunder can properly commence.
- Verify that all electrical work can be performed in accordance with all pertinent codes and regulations, the original design, and the referenced standards.
- B. DISCREPANCIES: In the event of discrepancies, immediately notify the Architect. Do not proceed with the information of work hereunder in areas of discrepancy until all such discrepancies have been fully resolved.

3.2 EXECUTION

- A. **NAMEPLATES:** Install engraved nameplates for each electrical device, disconnect control station, etc. Designation shall be as direct by the Engineer. Nameplates shall be securely fastened to the equipment with #4 Phillips round head cadmium plated self-tapping screws.
- B. **WEATHERPROOF CONSTRUCTION:**
 - 1. All wiring or equipment installed exterior of buildings or in wet or damp locations shall be weatherproof construction to suit the service conditions.
 - 2. Outlet boxes shall be gasketed; electrical metallic tubing shall have compression type fittings; lighting fixtures shall be designed for exterior installation.
 - 3. All exterior mounted equipment shall be corrosion resistant and constructed in accordance with NEMA standards for the service conditions encountered.
- C. **STRUCTURAL REQUIREMENTS:** Installation under this Section shall comply with the Uniform Building Code and Title 24.
- D. **MANUFACTURER'S DIRECTIONS:** Follow manufacturer's directions where these directions cover points not included in the drawings or in the specifications.
- E. **WORKMANSHIP:** Workmanship shall be of the best quality and shall be performed by craftsmen to insure long and trouble-free service. The requirements of the codes and Safety Orders are minimum standards.
- F. **CUTTING AND PATCHING:** This Contractor shall be responsible for all cutting and patching required for the installation of the electrical work under this Section. The actual cutting and patching work shall be executed by the appropriate trade involved under the supervision of the General Contractor, but the cost of such cutting and patching shall be borne by this Contractor.
 - 1. Neither holes or notches shall be made in any structural member without the written approval of the Structural Engineer for each specific location.
 - 2. This Contractor shall arrange for, and bear all costs for, all necessary sleeves or openings in masonry, concrete, or other structural elements where such are permitted by the Structural Engineer.
- G. **CLEANING:** Keep the premises in a neat, safe and orderly conditions at all times during the execution of the electrical work. Areas adjacent to the electrical work, both interior and exterior shall be free from accumulations of debris and/or shipping containers and packing. All refuse shall be removed to the area of the job site set aside for its storage.
- H. **FLASHING AND SEALING:** Flash and counter flash roof and wall penetrations in manner described under other applicable sections of this specification and as approved by the Architect. Conduits, ducts, etc. passing through finished walls shall be fitted with steel escutcheon plates, chrome or paint finish as directed. Conduits which penetrate floor slabs

and concrete or masonry walls shall be grouted and sealed watertight at penetration in addition to escutcheon plate trim.

- I. Cooperation and Coordination: Cooperate and coordinate with other crafts in putting the installation in place at a time when the space required by this installation is accessible. Works done with disregard to other crafts shall be moved at the Contractor's expense.
- J. TESTING: The entire electrical installation shall be free from short circuits and improper grounds. Test all ground fault protection equipment where so provided. Test all wiring and connected and where such test indicate faulty insulation or other defects, they shall be located, repaired and retested at the contractor's expense. Electrical load shall be balanced at the panelboards. Rotation of all motors shall be checked and corrected, if necessary, after final connections are made.
 - 1. Merger test insulation of all new feeder cables for a length of 30 seconds prior to connection between phases, between phase and neutral and between phase and ground. Use a 1000 Volt Megger. Provide a copy of test results for review by Engineer. Cables shall test at 2.5 Megohm or better.
 - 2. Test Fire Alarm System.
 - 3. System test shall be performed only by an individual who has attend a manufacturer's training school for installation and testing the system as described herein. Testing of the system shall be performed with the test instruments as required by manufacturer; provide all instruments to make such test. Testing by means other than the manufacturer's procedures will not be acceptable unless agreed to by the Owner, specifying Engineer and the Manufacturer.
 - 4. For each test, the test report shall provide the following information.
 - a. System Tested.
 - b. Date Tested.
 - c. Persons present during the test.
 - d. Schedule of actual tests carried.
 - e. Conclusion.
 - f. Signature by person responsible for the test.
 - g. Date of the report.
 - 5. Demonstrate to the Owners and the Architect, that the entire installation is complete, in proper operating conditions and that the Contract has been property and fully executed.
- K. ACCEPTANCE BY GOVERNING AUTHORITIES: Upon the completion of the electrical work, and as a condition of its acceptance, this Contract shall obtain final inspections and acceptance from local building inspection agencies, utility companies, and/or other governing authorities. Deliver to the Owner and the Architect verification of such acceptance.

3.3 COMPLETION:

- A. Upon completion of work covered by this Contract, furnish Architect with Mylar transparencies, as required by the General Conditions, upon which shall be shown all changes of feeders, panels, circuits, light fixtures, etc., within building and installed under this contract, which are not in accord with these drawings for the work. Diazo sepia transparencies will not be acceptable.
- B. In addition, furnish one tracing showing all outside utility lines, transformer pad, pullboxes, etc., installed under this Contract. Locate and dimension all work with reference to permanent landmarks.
- C. All symbols and designations used in preparing "Record" drawings shall match those used in contract drawings. All record drawings shall be produced by CAD using same size of plan and symbols as the project plans. Each Sheet shall have "As-Built Plan" and date printed on it with complete address of the Contract providing the As-Built plans.
- D. Properly identify all stubs for future connections, as to locations and use, by setting of concrete marker at finished grade in the manner suitable to the Architect.
- E. Guarantee: Acceptance of the Contract for this work includes this guarantee: The Contractor guarantee that he has performed the work in accordance with the Contract Documents. Contractor agrees to replace or repair, as new, any defective work, materials, or part which may appear within on years of final acceptance, if in the opinion of the Architect or the Owner the defect is due to workmanship or material.

Warranties, guarantees, certificates, etc. that are furnished and available for equipment and materials furnished and installed under this Section shall be properly filled out as of the date of the acceptance of the completed work by the Owner and shall be delivered to the Architect.

END OF SECTION

RACEWAY AND BOXES FOR ELECTRICAL SYSTEMS
SECTION 260533

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes conduit, surface raceways, outlet boxes, pull and junction boxes, and handholes.

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.
- 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 TC 2 - Electrical Polyvinyl Chloride (PVC) Tubing and Conduit.
 6. 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. Underground outside Foundation Wall: Use nonmetallic conduit. Terminate with rigid steel conduit out of concrete or soil. Use cast metal boxes or nonmetallic handhole.
- B. Outdoor Locations, Above Grade: Provide rigid steel conduit, intermediate metal conduit and electrical metallic tubing with compression type fittings. Provide cast metal or nonmetallic outlet, pull, and junction boxes.
- C. Below Slab on Grade: Use Schedule 40 nonmetallic conduit. Terminate with rigid steel elbows and short length or rigid steel conduit out of concrete.
- D. Wet and Damp Locations: Provide rigid steel conduit, electrical metallic tubing with compression type fittings, Schedule 40 nonmetallic conduit. Provide cast metal or nonmetallic outlet, junction, and pull boxes. Provide flush mounting outlet box in finished areas.

- E. Concealed Dry Locations: Provide rigid steel conduit intermediate metal conduit or electrical metallic tubing. Provide sheet-metal boxes. Provide flush mounting outlet box in finished areas.
- F. 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, elevator 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. ½ inch.
 - 2. ¾ inch for homeruns.
 - 3. 1 inch outside foundation line.

PART 2 - PRODUCTS

2.1 METAL CONDUIT

- A. Rigid Steel Conduit: ANSI C80.1.
- B. Intermediate Metal Conduit (IMC): Rigid Steel.
- C. Fittings and Conduit Bodies: NEMA FB 1. Fittings shall be steel or malleable iron with threaded fittings. Use insulated metallic bushing with lug where ground connections are required. Use plastic bushing for non-bonding applications.

2.2 FLEXIBLE METAL CONDUIT

- A. Product Description: Interlocked steel construction.
- B. Fittings: NEMA FB 1; steel or malleable iron fitting with insulated throat.

2.4 ELECTRICAL METALLIC TUBING (EMT)

- A. Product Description: ANSI C80.3; galvanized tubing.
- B. Fittings: NEMA FB 1; steel or malleable iron couplings and connectors. Box connectors shall have with insulated throat.

2.5 NONMETALLIC CONDUIT (MAY NOT BE USED)

2.6 SURFACE METAL RACEWAY (MAY NOT BE USED WHERE CALLED OUT ON PLANS)

2.7 OUTLET BOXES

- A. Sheet Metal Outlet Boxes:
 - 1. NEMA OS 1, galvanized steel.
 - 2. Boxes for shall be 1-1/2 inch deep by 4 inch square minimum.
- B. Cast Boxes: NEMA FB 1, Type FD, cast fer alloy. Furnish gasketed cover by box manufacturer. Furnish threaded hubs.
- C. Wall Plates for Finished Areas: As specified in Section 262726.
- D. Wall Plates for Unfinished Areas: Furnish gasketed cover.

2.8 PULL AND JUNCTION BOXES

- A. Sheet Metal Boxes: NEMA OS 1, galvanized steel.
- B. Concrete composite Handholes: Die-molded, concrete composite hand holes:
 - 1. Cable Entrance: Pre-cut cable entrance at center bottom of each side.
 - 2. Extension: 12" reinforced concrete below box.
 - 3. Cover: Concrete composite cover with nonskid finish. Covers shall be marked "ELECTRICAL", "SIGNAL", "GROUND" or as indicated on drawings.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Ground and bond raceway and boxes in accordance with Section 16060.
- B. Fasten raceway and box supports to structure and finishes in accordance with Section 262000.
- C. Identify raceway and boxes in accordance with Section 260533.

3.2 INSTALLATION CONCRETE COMPOSITE HANDHOLES

- A. Install boxes flush with finished grade or surface material.
- B. Provide hold down bolts for all covers.

- C. Provide minimum 12" depth of crushed rock or pea gravel below boxes for drainage. Ground bond steel cover plate with insulated green grounding conductor.

3.3 CLEANING

- A. Clean interior of boxes to remove dust, debris, and other material.
- B. Clean exposed surfaces and restore finish.

END OF SECTION

LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES

SECTION 262000

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes building wire and cable, metal clad cable; and wiring connectors and connections.

1.2 REFERENCES

- A. International Electrical Testing Association:
 - 1. ANSI/NETA ATS - 2009 Acceptance Testing Specifications for Electrical Power Equipment and Systems.
- B. NECA (National Electrical Contractors Association) - Standard of Installation.
- C. Part 3, Title 24, - California Electrical Code (CEC).
- D. 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. Conductor not smaller than 12 AWG for power and lighting circuits.
 - 2. Conductor not smaller than 14 AWG for control circuits.
 - 3. 10 AWG conductors for 20 ampere, 120 volt branch circuit home runs longer than 75 feet.
 - 4. 10 AWG conductors for 20 ampere, 277 volt branch circuit home runs longer than 200 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 or metal clad cable with ground wire.
 - 2. Exposed Dry Interior Locations: Use only building wire in raceways.
 - 3. Exterior Locations: Use only building wire in raceway.
 - 4. Underground Locations: Use only building wire insulation, in raceway.

PART 2 - PRODUCTS

2.1 BUILDING WIRE

- A. Product Description: Single conductor insulated wire.
- B. Conductor: Copper.

2.2 METAL CLAD CABLE

- A. Conductor: #12 AWG Copper.
 - 1. Ground: Internal insulated green copper.
 - 2. Insulation Voltage Rating: 600 volts.
 - 3. Insulation Temperature Rating: 75 or 90 degrees C.
 - 4. Insulation Material: Thermoplastic.

2.3 PLASTIC TAPE

- A. Black 7 mil thick general purpose electrical tape, Scotch 33 plus or equal.

2.4 WIRING CONNECTORS

- A. Bolted pressure connectors: Cast bronze compression bolts designed for parallel taps, tees, crosses or end-to-end connections.
- B. Insulated spring wire connectors: Multi-part construction incorporating a steel spring enclosed with a color coded outer thermoplastic shell.
- C. Compression type termination lugs: Tin plated copper high-compression type lugs for installation with hand or hydraulically operated crimping tools and dies. Provide 2-hole lugs for size #4/0 AWG and larger wire where terminated to bus bars.

PART 3 - EXECUTION

3.1 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 16130. Identify each conductor with its circuit number or other designation indicated.

- D. 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. 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. Metal Clad Cable is only permitted for light fixture whips in suspended ceiling system.
- E. Special Techniques - Wiring Connections:
1. Clean conductor surfaces before installing lugs and connectors.
 2. Make splices, tapes, 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. Install [solderless tool applied pressure][split bolt] connectors and lugs for copper conductor splices and taps, 8 AWG and larger.
 5. Install insulated spring wire connectors with plastic caps for copper conductor splices and taps, 10 AWG and smaller.
 6. Encapsulate below grade splices at outlet, pull and junction boxes with specified insulating resin kits. Make all splices watertight.
 7. Install waterproof wire connectors with plastic caps for copper conductor splices and taps, 10 AWG and smaller in outdoor or wet locations.
 8. Where oversized cables are used to accommodate voltage drop, whether a single or parallel feeder, provide appropriate reducing adapter and conductors for termination.
 9. Install suitable reducing connectors or mechanical connector adaptors for connecting aluminum conductors to copper conductors.

3.2 WIRE COLOR

- A. General
1. For wire size 10 AWG and smaller, install wire colors in accordance with the following:
 - a. Black and red for single phase circuits at 120/240 volts.
 - b. Black, red, and blue for circuits at 120/208 volts single or three phase.
 2. For wire size 8 AWG and larger, identify wire with colored tape at terminals, splices and boxes. Colors are as follows:
 - a. Black and red for single phase circuits at 120/240 volts.
 - b. 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 located 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.
 - 2. For 4 AWG and larger: Identify with green tape at both ends and visible points including junction boxes.

3.3 FIELD QUALITY CONTROL

- A. Provide visual and mechanical inspection in accordance with NETA ATS, 7.3.2.1.
- B. Subject feeder cables sized #2 AWG and larger, rated 600 volts AC to insulation resistance test in accordance with NETA ATS, 7.3.2.2.

END OF SECTION

WIRING DEVICES

SECTION 262726

PART 1 - PRODUCT

1.1 SUMMARY

- A. Section includes wall switches; wall dimmers; receptacles; and device plates and decorative box covers.

1.2 REFERENCE

- A. National Electrical Manufacturers Association:
 - 1. NEMA WD 1 - General Requirements for Wiring Devices
 - 2. NEMA WD 6 - Wiring Devices - Dimensional Requirements.

PART 2 - PRODUCTS

2.1 WALL SWITCHES

- A. Manufacturers:
 - 1. Pass & Seymour
 - 2. Hubbell
 - 3. Leviton
 - 4. Cooper
 - 5. Approved equal
- B. Product Description: Specification Grade, NEMA WD 1, Heavy-Duty, AC only general-use snap switch.
- C. Body and Handle: White thermoplastic with rectangular rockers switch. Red color for devices connected to emergency power system.
- D. Rating:
 - 1. Voltage: 120-277 volts, AC.
 - 2. Current: 20 amperes.

2.2 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. 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. Convenience Receptacle: Type 5-15.
- E. Dedicated Receptacle: Duplex, type 5-20.
- F. GFCI Receptacle: Convenience receptacle with integral ground fault circuit interrupter to meet regulatory requirements.
- G. Special Purpose Receptacles: Type and rating and number of poles indicated or required for the anticipated purpose.

2.3 WALL PLATES

- A. Decorative Cover Plate: Brush Stainless Steel.
- B. Mounting Screws: Stainless steel, painted head to match plate finish.
- C. Surface cover plate in dry locations: Galvanized steel. Four inch square, raised ½" for surface mounted switches and receptacles.
- D. Weatherproof Damp Location Cover Plate: Gasketed cast metal cover plate with hinged and gasketed device cover.
- E. Weatherproof Wet Location Cover Plate: Extended metal hinged cover for use when attachment plug is inserted.

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 INSTALLATION

- A. Install devices plumb and level.
- B. Mounting heights shown shall be measured from the center of the device. U.O.N.
- C. Mounting heights of electrical switches, receptacles and telecommunication devices in accessible spaces as defined by the CBC shall comply with the mounting height requirements. Switches and receptacle outlets shall be located no more than 48 inches measured from the top of the outlet box nor less than 16 inches measured from the bottom of the box to the level of the finished floor or working platform.
- D. Install switches with OFF position down.
- E. Install wall dimmers to achieve full rating specified and indicated after de-rating for ganging as instructed by manufacturer.
- F. Do not share neutral conductor on load side of dimmers.
- G. Connect wiring devices grounding terminal to outlet box with bonding jumper and branch circuit equipment grounding conductor.
- H. Install decorative plates on switch, receptacle, and blank outlets in finished areas.
- I. Install galvanized steel plates on outlet boxes and junction boxes in unfinished areas, above accessible ceilings, and on surface mounted outlets.

3.4 LABELS AND INSCRIPTIONS

- A. Identify receptacle cover plate with panel and branch circuit number (for example L2A-3). Provide label as described in Section 260533.

END OF SECTION