

Timothy P. Huff, AIA
Principal Architect



John Hedlund, AIA
Jeff Morris, AIA
Mike Clark, AIA CASp
Jonathan Gish, AIA
Associate Architects

Andrew Huff, PE
Structural Engineering

PROJECT MANUAL

FOR

ESCALON HIGH SCHOOL FOOD SCIENCE CLASSROOM

For Escalon Unified School District

OWNER:

Escalon Unified School District
1520 Yosemite Avenue
Escalon, CA 95320

ARCHITECT:

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

ESCALON HIGH SCHOOL FOOD SCIENCE CLASSROOM

FOR
ESCALON UNIFIED SCHOOL DISTRICT

TABLE OF CONTENTS

DIVISION 0 - CONDITIONS OF THE CONTRACT

Signature Page	1 page
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	5 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	2 pages
Drug Free	2 pages
Recycle Free	1 page

SPECIFICATION

DIVISION 1 - GENERAL REQUIREMENTS

01 3219	Submittals	3 pages
01 7329	Cutting and Patching	3 pages
01 7400	Cleaning	1 page
01 7700	Project Closeout	2 pages

DIVISION 2 - EXISTING CONDITIONS

02 4000	Demolition	3 pages
---------	------------------	---------

DIVISION 3 - CONCRETE

03 0000	Concrete	2 pages
03 3543	Polished Concrete	4 pages

DIVISION 7 - THERMAL AND MOISTURE PROTECTION

07 2600	Underslab Vapor Retarder	3 pages
07 6000	Metal Flashings and SheetMetal Work	7 pages
07 9200	Sealants and Caulkings	3 pages

DIVISION 8 - OPENINGS

08 4113	Aluminum Storefront Window System	6 pages
08 7100	Door Hardware	15 pages
08 8000	Glass and Glazing	6 pages

DIVISION 9 - FINISHES

09 6500	Resilient Flooring	8 pages
09 9100	Painting	6 pages

DIVISION 10 - SPECIALTIES

10 4000	Identifying Devices	3 pages
---------	---------------------------	---------

DIVISION 22 - MECHANICAL

22 0500	Basic Mechanical Materials and Methods	8 pages
22 4000	Plumbing	9 pages

DIVISION 26 - ELECTRICAL

26 0000	Electrical General Requirements	9 pages
26 0110	Electrical Distribution System	1 page
26 0533	Raceways and Fittings	6 pages

DIVISION 28 - ELECTRONIC SAFETY AND SECURITY

28 4620	Fire Alarm System	3 pages
---------	-------------------------	---------


DIVISION 32 - EXTERIOR IMPROVEMENTS

32 1216	Hot-Mix Asphalt Paving	10 pages
---------	------------------------------	----------

END OF SECTION

ESCALON HIGH SCHOOL FOOD SCIENCE CLASSROOM

Timothy P. Huff & Associates
519 McHenry Ave
Modesto, CA 95354
(209) 571-2232


Michael Clark, AIA
Architect



Nexus Engineering
1400 Lone Palm Avenue, Suite A
Modesto, CA 95351
(209) 572-7399





Allen Layman
Mechanical Engineer

H.C.S. Engineering
4512 Feather River Drive, Suite F
Stockton, CA 95219
(209) 478-8270



Richard Smith
Electrical Engineer

ESCALON UNIFIED SCHOOL DISTRICT
1520 Yosemite Ave, Escalon, CA 95320

NOTICE TO BIDDERS

Sealed bids for ESCALON HIGH SCHOOL FOOD SCIENCE CLASSROOM, for ESCALON UNIFIED SCHOOL DISTRICT will be received in the District office of ESCALON UNIFIED SCHOOL DISTRICT, 1520 Yosemite Ave, Escalon, CA 95320 **until April 17, 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 **April 9, 2025 at 10:00 a.m., at 1528 Yosemite Avenue, 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: April 1, 2025
April 8, 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 _____, 2024, 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

ESCALON HIGH SCHOOL FOOD SCIENCE CLASSROOM
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 _____, 2024.

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:

ESCALON HIGH SCHOOL FOOD SCIENCE CLASSROOM
for
ESCALON UNIFIED SCHOOL DISTRICT
1528 YOSEMITE AVE, 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:.

ESCALON HIGH SCHOOL FOOD SCIENCE CLASSROOM
for
ESCALON UNIFIED SCHOOL DISTRICT
1528 YOSEMITE AVE, 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:

April 17, 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,

ESCALON HIGH SCHOOL FOOD SCIENCE CLASSROOM
for
ESCALON UNIFIED SCHOOL DISTRICT
at
1528 YOSEMITE AVE, 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.

Base Bid:

_____ Dollars
(\$ _____).

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 (90) ninety calender 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#:** _____

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 of 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 ESCALON HIGH SCHOOL FOOD SCIENCE CLASSROOM "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 ESCALON HIGH SCHOOL FOOD SCIENCE CLASSROOM 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: Michael Clark, 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 ESCALON HIGH SCHOOL FOOD SCIENCE CLASSROOM at **1528 YOSEMITE AVE, 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 (90) ninety 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 **\$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)**

ESCALON HIGH SCHOOL FOOD SCIENCE CLASSROOM

The undersigned declares that he or she is the person who executed the bid for the ESCALON HIGH SCHOOL FOOD SCIENCE CLASSROOM (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

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 ESCALON HIGH SCHOOL FOOD SCIENCE CLASSROOM (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

SUBMITTALS
SECTION 01 3219

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

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. Sawcutting;
 - 2. Removal of existing asphalt and concrete;
 - 3. Trenching and trench backfilling;
 - 4. 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 22 - Mechanical
 - 3. Division 26 - Electrical
 - 4. Division 28 - Electronic Safety and Security

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. All concrete or asphalt to be removed and patched shall be sawcut in a straight and true line. Replace existing asphaltic concrete with minimum 2" A.C. over minimum 4" aggregate base, over 90% compacted grade. Replace existing concrete with 4" minimum concrete over 90% compacted grade. Finish shall match that of existing.
 - 4. Compaction of trenches shall be done by mechanical means and all lines shall be inspected for proper inspection by the Inspector prior to backfilling of trenches.
 - 5. All round holes through concrete slabs or walls shall be core drilled with a diamond drill bit. In no case shall any concrete beam or column be cut.
 - 6. Asphalt trenches which are to be patched shall be prepped by cleaning the existing surfaces so to be free of debris and dust. Area shall be primed prior to asphalt being applied.
 - 7. Patching which shows evidence of settling shall be removed and replaced at the Contractors expense. The Contractor shall provide appropriate means to protect asphalt and concrete from acts of vandalism until material is cured.

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 017400

PART 1 - GENERAL

1.1 SUMMARY

- A. Throughout the construction period, maintain the site in a standard of cleanliness as described in this Section.

1.2 PROGRESS CLEANING

- A. Site:
 - 1. 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.
 - 2. Maintain the site in a neat and orderly condition at all times.

1.3 FINAL CLEANING

- A. 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.
- B. Buildings:
 - 1. Carpets are to be vacuumed to remove any construction debris caused by communication and fire alarm wiring installation.
 - 2. Clean any hand prints or marks on wall and ceiling surfaces.

END OF SECTION

**PROJECT CLOSEOUT
SECTION 017700**

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 DESCRIPTION OF REQUIREMENTS:

- A. Definitions: Project closeout is the term used to describe certain collective project requirements, indicating completion of the Work that are to be fulfilled near the end of the Contract time in preparation for final acceptance and occupancy of the Work by the Owner, as well as final payment to the Contractor and the normal termination of the Contract.
 - 1. Specific requirements for individual units of work are included in the appropriate sections in Divisions 2 through 16.
 - 2. Time of closeout is directly related to "Substantial Completion"; therefore, the time of closeout may be either a single time period for the entire Work or a series of time periods for individual elements of the Work that have been certified as substantially complete at different dates. This time variations, if any, shall be applicable to the other provisions of this section.

1.3 PREREQUISITES TO SUBSTANTIAL COMPLETION:

- A. General: Complete the following before requesting the Architect's inspection for certification of substantial completion, either for the entire Work or for portions of the Work. List known exceptions in the request.
 - 1. Submit specific warranties, workmanship/maintenance bonds, maintenance agreements, final certifications and similar documents.
 - 2. Submit record drawings and maintenance manuals.
- B. Give particular attention to concealed work that would be difficult to measure and record at a later date.
 - 1. Complete final cleaning up requirements, including touch-up painting of marred surfaces.

2. Touch-up and otherwise repair and restore marred exposed finishes.
- C. Inspection Procedures: Upon receipt of Contractor's request for inspection, the Architect will either proceed with inspection or advise Contractor of unfulfilled prerequisites.
1. Results of the completed inspection will form the initial "punch-list" for final acceptance.

1.4 PREREQUISITES TO FINAL ACCEPTANCE:

- A. General: Complete the following before requesting the Architect's final inspection for certification of final acceptance, and final payment as required by the General Conditions. List known exceptions, if any, in request.
1. 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.
 2. 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.
 3. 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.

END OF SECTION

DEMOLITION SECTION 024000

PART 1 - GENERAL

1.1 SUMMARY

- A. In accordance with pertinent provisions of this Section, carefully demolish and remove from the site those items scheduled to be so demolished and removed. The Conditions of the Contract apply to this section as fully as if repeated herein.
- 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 QUALITY ASSURANCE

- A. Use adequate numbers of 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.

1.3 DUST CONTROL

- A. Take appropriate action to check the spread of dust and to avoid the creation of a nuisance in the 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. Crystalline Silica: Comply with CCR Title 8, Section 1532.3 "Occupational Exposures to Respirable Crystalline Silica".

PART 2 - PRODUCTS

(No products are required in this Section)

PART 3 - EXECUTION

3.1 SURFACE CONDITIONS

- A. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions are corrected.

3.2 DEMOLITION

- A. Contractor is responsible to review the Contract Documents, and visit site to determine the location and extent of demolition to be performed.
- B. In company with the Architect, visit the site and verify the extent and location of demolition required.
 - 1. Carefully identify limits of demolition.
 - 2. Mark interface surfaces as required to enable workmen also to identify items to be removed and items to be left in place intact.
- C. Prepare and follow an organized plan for demolition and removal of items.
 - 1. Protect existing public utility lines in accordance with the requirements of the public agency or utility having jurisdiction.
 - 2. Completely remove items scheduled to be so demolished and removed, leaving surfaces clean, solid, and ready to receive new materials specified elsewhere.
 - 3. In all activities, comply with pertinent regulations of governmental agencies having jurisdiction.
- D. Demolished material shall be considered to be property of the Contractor and shall be completely removed from the job site, unless noted otherwise on the drawings.
- E. Use means necessary to prevent dust becoming a nuisance to the public, to neighbors, and to other work being performed on or near the site.
- F. Contractor shall shutoff and disconnect all existing utilities to site (i.e.: power, communications, fire alarm, water, sewer, natural gas and other related utilities) prior to commencement of demolition. Coordinate scheduling with the Owner.
- G. Install temporary fencing, caution signs and barricades around project area for duration of project to keep area clear of vehicles and spectators.
- H. The Contractor shall be responsible for strict compliance with all requirements of the California Occupational Safety and Health Act (OSHA) which are applicable to the work to be accomplished pursuant to this contract. OSHA shall be construed to include, but not be limited to all applicable safety orders issued by the Division of Industrial Safety, State of California. In the event the Contractor or any of the Contractor's employees shall observe any violation of OSHA in or on the premises on which the Contractor is to perform work pursuant to this contract, the Contractor shall immediately give written notice to the County of such violation.

- I. Contractor shall obtain any and all permits required for such work in accordance with applicable local, state and federal laws and regulations, including San Joaquin Valley Air Pollution Control District.

3.3 REPLACEMENTS

- A. In the event of demolition of items not so scheduled to be demolished, promptly replace such items to the approval of the Architect and at no additional cost to the Owner.

END OF SECTION

CONCRETE SECTION 030000

PART 1 - GENERAL

1.1 SUMMARY

- A. Work included: The work includes the furnishing and installing of all concrete flatwork 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.

1.2 SUBMITTALS

- A. Provide mix designs break sample results and weighmaster certificates.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Portland cement: Type II and shall conform to the specifications for portland cement, ASTM C 150-81 and CBC Section 1903.
- B. Aggregates: Concrete aggregates shall conform to specifications for concrete aggregates ASTM C 33-81 except as modified by CBC Section 1903.3 grading to conform to CBC Table 19 A - J.
- C. Reinforcing Bars: New, deformed, billet steel bars, meeting the requirements of ASTM A 615-80, Grade 40. Deliver bars new and free from rust and mill scale in original bundles with mill tags intact.
- D. Welded Wire Fabric: New, welded steel wire fabric, meeting the requirements of ASTM A 185-79. Provide gauge and center-to-center spacing as indicated.
- E. Forms: Steel, wood, or other suitable material of size and strength to resist movement during concrete placement.
 - 1. Use flexible spring steel forms or laminated boards to form radius bends.
 - 2. Coat forms with a non-staining form release agent.

2.2 MIXING

- A. Provide mix designs for each class of concrete used. The exact proportions of the mix, including amounts of admixture (if any) and water, will be determined by the Testing Laboratory or Mill, based on cement and aggregate submitted by the Contractor. The Concrete Supplier may utilize an established mix design by supplying at least twenty (20)

break sample results by testing lab and supplying weigh master certificate.

- B. Use ready-mixed concrete mixed and delivered in accordance with the requirements of ASTM C 94-81, and UBC Standard No. 19-3. In the event concrete is mixed at a central batching plant, arrange delivery so intervals between batches are kept at a minimum, and in any event not more than 30 minutes. Do not add water during transit or at the Project Site without the Architect's approval. Place concrete within 90 minutes after cement has been mixed with aggregate or 45 minutes after addition of water and admixtures.

2.3 PROPERTIES AND PROPORTIONS

- A. Proportion concrete to provide a minimum compressive strength at 28 days of 3,000 psi for all site work concrete.
- B. Slump: 4 inches maximum.
- C. Aggregate Size: Maximum 1 inch.

PART 3 - EXECUTION

3.1 INSTALLATION OF SIDEWALKS AND OTHER FLATWORK

- A. Placing: Place concrete in accordance with CBC Section 1905. Strike off and compact the fresh concrete until a layer of mortar has been brought to the surface. Float the surface to grade and cross section with a float not less than 10 feet in length and not less than 6 inches in width. Trowel surfaces to a uniform smooth texture free of trowel marks ready to receive final finish as specified below.
- B. Joints: Tool the surfaces of flatwork to provide weakened plane joints in accordance with patterns indicated. Where no pattern is shown, mark flatwork into rectangles - minimum 12 square feet, maximum 20 square feet. Use a scoring tool that will leave the corners rounded. Form expansion joints 1/4 inch wide at all returns and opposite expansion joints in curbs. Where curb is not adjacent, form expansion joints at intervals of 60 feet. Fill expansion joints with pre-molded expansion joint filler as specified.
- C. Tolerances: The surface of flatwork shall not vary more than 0.02 foot from a 10 foot straight edge except at grade changes.
- D. Finish: Concrete is to be medium broom finish, 0.6 coefficient of friction at typical locations. Provide heavy broom finish at locations where slopes are over 6%.

END OF SECTION

POLISHED CONCRETE
SECTION 033543

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes: Specification for the grinding, epoxy soaking/filling polishing of new and existing concrete slabs on grade, having a bar finish.

1.2 REFERENCE

- A. National Floor Safety Institute (NFSI)
1. NFSI Test method 101-A Standard for Evaluating High-Traction Flooring Materials, Coatings & Finishes

1.3 INFORMATION SUBMITTALS

- A. Installers Qualifications
1. Installing contractor must be able to provide documentation verifying a minimum of 5 years of documented experience and 3 projects of similar requirements including epoxy resin soaking, precision flattening and overall quality of polishing. Previous jobs will be inspected for quality of workmanship.

1.4 QUALITY ASSURANCE

- A. Pre-installation Meetings: Conduct a pre-installation meeting to verify project requirements and manufacturer's installation instructions. Review the following:
1. Environmental requirements.
 2. Scheduling and phasing of work.
 3. Coordinating with other work and personnel.
 4. Protection of adjacent surfaces.
 5. Surface preparation.
 6. Repair of defects and defective work prior to installation, especially concerning any hidden conditions that may exist under existing floor coverings.
 7. Installation of polished floor finishes.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Ensure each manufacturer has a minimum 5 years experience in manufacturing components similar to or exceeding requirements of project.

2.2 POLISHED CONCRETE FINISHING PRODUCTS

- A. Epoxy soaking resin;
 - 1. Acceptable materials: Chemco 246 MVR epoxy primer or equal.
 - a. ChemCo Systems, Inc., 2800 Bay Road, Redwood City, CA 94063;
Telephone 650-261-3790; Fax 650-261-3799;
website: www.chemcosystems.com
 - 2. Any alternate epoxy resin submitted must be two-component, have a very low viscosity and a very long pot life. It also must not be a water-based formulation.
- B. Final stain resistant sealer, “Stain Proof” by Dry Treat (no substitution allowed)
 - 1. Dry Treat, 1201 Orange Street, Suite 600, One Commerce Center, Willington, DE 19801; Telephone 866-667-5119 Stain.
 - 2. Stain Proof is a penetrating sealer which impregnates the surfaces and permanently bonds to the molecular structure of the material, thus changing its absorption characteristics.
- C. Joint Sealants
 - 1. Acceptable material: Sika 2CSL, two component, self-leveling urethane sealant to be applied with hand-operated caulking guns after being mixed to manufacturer’s specifications and in color of owner’s choice.
 - 2. No poly-urea or epoxy or single component urethane joint sealants are allowed.

PART 3 - EXECUTION

3.1 MANUFACTURERS INSTRUCTIONS

- A. Compliance: Comply with manufacturer’s written data, including product technical bulletins, product catalog installation instructions, and product carton installation instructions.

3.2 PREPARATION

- A. Remove any remaining cementitious bonders by means of wet grinding. Do not use ultra-high pressure water (30,000+psi) as this typically can damage or excessively mar the concrete substrate.
- B. Inspect the floor for hidden conditions, including cracks and holes, and work out an agreeable repair method and compensation with the owner. For shallow or feather-edged repairs, epoxy/aggregate mortars are preferred so that un-raveling at the edges can be eliminated.

3.3 GENERAL REQUIREMENTS FOR INSTALLATION OF THE POLISHED FLOOR SYSTEM

- A. All initial flattening and grinding through the 200 grit level shall be done by fully wetted, slurry type grinding. Slurry shall be promptly vacuumed up so as to not leak under walls or soak into wall coverings. Slurry shall be disposed of off-site at an approved concrete dump site or shall be dewatered and disposed of as a dry “cake” off-site.
- B. Walls shall be protected against splashing by attaching 24" wide plastic film or other suitable protective materials to the walls and then sealing all vertical joints or overlapping sufficiently to prevent entry of material.
- C. Before proceeding to the next finer grinding/polishing step, the preceding scratch pattern must be completely removed. Care shall be taken, to properly clean the floor before each new grinding/polishing step.
- D. All edges shall be ground and polished to the same degree as the “field” up to the including 400 grit. Edges shall be ground to a flat and level condition up to the face of the wall.
- E. Any dry grinding starting with the 400 grit level shall be done in conjunction with a dust collector of suitable size and power to adequately eliminate airborne dust and to keep the floor adequately clean.

3.4 INSTALLATION FOR CONCRETE SLABS ON GRADE

- A. Floor Surface Polishing and Treatment
 - 1. Prior to starting any grinding, all open and unprotected construction or control joints shall be filled with a polymer modified cementitious grout or epoxy mortar so as to protect the joint edges against cracking or spalling off during the grinding phase.
 - 2. Provide polished concrete floor treatment in entirety of slab indicated by drawings. Grind to flatten surface of irregularities such as curled joint edges and high ridges. The flattening process shall be continued until a flatness of 1/8" in 10 ft. is achieved. Grind using 30/40 grit diamond tooling on a planetary or other dual action type floor grinder, having three or more cutting heads and an overall cutting diameter of 24" minimum. Grind to remove all the cement rich “cream” thus exposing 1/8 inch diameter aggregate at a maximum. Where relatively high areas are ground off in the flattening process, aggregate of larger size will be exposed. Great care shall be exercised in grinding excessively low areas to not cause swirl marks or gouges.
 - 3. Clean and fill all undesirable chips and cracks with a clear epoxy/sand mortar to the architect’s and owner’s satisfaction. All cracks are to be filled to the top and welded tight.

4. After the 60/80 grit grinding step is completed, the floor shall be cleaned of all grinding slurry and powder deposits. Once the floor exhibits total surface dryness, it is to have a prime coat applied of a two component, clear, low viscosity, long pot life epoxy resin tightly troweled over the entire surface. Excess resin on the surface shall be removed with a steel trowel or with a squeegee. Water based epoxy shall not be used. The epoxy may be thinned slightly with a compatible solvent to facilitate penetration into the concrete surface.
5. After the initial epoxy prime coat has cured sufficiently, a second epoxy coat shall be applied and trowelled out so as to totally fill all remaining holes, cracks, porous stones or other porous areas. Depending on the temperature, the epoxy may need to cure for 2 to 3 days before it is hard enough to grind.
6. Re-saw all construction joints and control joints to width of 3/16" to 1/4" by approximately 3/4" to 1" deep. Clean the joints by pressure washing and then install foam "backer rod" approximately 3/8" deep. Finally, mix and install the urethane joint sealant using hand-operated caulking guns. Tool the top of the sealant so that a slight downward "meniscus" is formed below the adjacent surfaces.
7. Next, all the excess epoxy resin on the surface shall be completely ground off with 120 grit diamond tooling, wet. The floor will be inspected after this step and a "knife scrape test" performed to ensure that no excess resin remains on the tops of polished stones. Care shall be exercised during the grinding process to not excessively grind the surface, thus removing too much of the resin saturated cement paste located between the stones and to not open up new porosity just below the surface.
8. Continue polished with 200 grit wet, then with 400 grit and finally with 800 grit, resulting in a high gloss finish.
9. After the 800 polish is completed, apply one thin coat of Dry Treat's "Stain Proof" permanent sealer as per manufacture's recommendations. While the surface is still slightly wet, buff in the remainder with a high-speed buffer with a non-abrasive pad.

END OF SECTION

UNDERSLAB VAPOR RETARDER
SECTION 072600

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes:
 - 1. Aggregate base, vapor retarder and sand bed under concrete slabs-on-grade.
- B. Related work:
 - 1. Division 31 for grading and compacting subgrade to receive vapor retarder.

1.2 SUBMITTALS

- A. Data: Manufacturer product data, specifications, typical installation details and other data as necessary to demonstrate vapor retarder compliance with the specified requirements.
- B. Samples: 24-inch square samples of vapor retarder with a taped joint at third point.

PART 2- PRODUCTS

2.1 MANUFACTURERS/MATERIALS

- A. Vapor retarder: Provide vapor retarders complying with ASTM E 1745 Class A, one of the following, or equal.
 - 1. Griffolyn 15-mil Green by Reef Industries, Inc.
 - 2. Moistop Ultra 15 by Fortifiber Corp.
 - 3. Perminator 15-mil by WR Meadows.
 - 4. Soco-Shield, 15-mil by Soco Shield.
 - 5. Vapor Block VB15 by Raven Industries.
- B. Sealing material: Mastic, adhesive or pressure-sensitive adhesive tape recommended by the vapor retarder manufacturer.
- C. Repair tape: Self-adhesive tape recommended by vapor retarder manufacturer to repair holes in membrane by jobsite activities.
- D. Pipe boots: Of sizes indicated, compatible with vapor retarder and adhesive materials.

2.2 AGGREGATE

- A. Base course: Washed, evenly graded mixture of gravel conforming to the following gradation.

Sieve size	Percent Passing
3/4-inch	90to100
No.4	0 to 10
No. 100	0 to 3

- B. Top course: Clean sand, free from excessive dirt, debris, organic matter and fines smaller than No. 200 sieve size.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine conditions affecting the work of this Section at the site.
- B. Verify below-grade work and items penetrating moisture retarder are complete.
- C. Verify that subgrade is level and compacted to 95 percent maximum density, determined in compliance with ASTM D 1557.
- D. Correct conditions detrimental to the proper and timely completion of this work before proceeding with installation.

3.2 AGGREGATE BASE COURSE

- A. Place minimum 4 in. of drainage fill material on compacted subgrade in layers of uniform thickness conforming to indicated cross-section and thickness.
- B. Maintain optimum moisture content for compacting material during placement operations.
- C. Level and compact to 95 percent maximum density, determined in compliance with ASTM D 1557.

3.3 VAPOR RETARDER

- A. Comply with ASTM E 1643 and the following:
1. Layout to minimize running and side joints with long dimension parallel with the direction of the pour.

2. Spread sheeting smooth and even; lap edge and end joints 6 inches; turn-up perimeters against concrete 2 to 3 inches.
 3. Offset intermediate end joints in adjacent sheets 4 feet minimum.
 4. Seal laps and perimeters using continuous beads or strips of sealing material applied to bottom layer or tape. When using sealing material, apply top layer and press sufficiently to assure complete contact.
- B. Penetrations:
1. Cut sheeting to fit closely and neatly.
 2. Slip sheeting over penetrations where possible, otherwise slit from penetration hole to nearest edge.
 3. Seal pipe penetrations with prefabricated boots made from vapor retarder and seal tight with tape to the vapor retarder.
 4. Seal edges continuously around penetrations.
 5. For smaller penetrations, repair slits with 12-inch wide strips of sheeting set centered on slit and sealed on each side.
- C. Cuts and accidental tears: Repair with tape, or if too large, with patches of the vapor retarder continuously taped.

END OF SECTION

METAL FLASHINGS AND SHEET METALWORK
SECTION 076000

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes:
 - 1. Prefabricated counterflashing assemblies.
 - 2. All other flashings and sheet metal items shown or required to make the building weathertight and not specified in other Sections.
- B. Related work:
 - 1. Division 1 for Building Placement.
 - 2. Division 9 for finish painting flashings and sheet metalwork.

1.2 PERFORMANCE REQUIREMENTS

- A. General: Install the work of this Section to withstand wind loads, structural movement, thermally induced movement, and exposure to weather without failing, rattling, leaking, and fastener disengagement.
- B. Thermal movements:
 - 1. Provide sheet metal flashing and trim that allow for thermal movements resulting from the following maximum change (range) in ambient and surface temperatures by preventing buckling, opening of joints, hole elongation, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects.
 - 2. Provide clips that resist rotation and avoid shear stress as a result of sheet metal and trim thermal movements.
 - 3. Base engineering calculation on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.
 - 4. Temperature change (range) of 120-degree F ambient; 180-degree F, material surfaces.
- C. Water infiltration: Provide sheet metalwork and flashings that do not allow water infiltration to building interior, and to damage materials, such as insulation, in exterior walls.

1.3 SUBMITTALS

- A. Data: Printed specifications, installation instructions and general recommendations for installation of prefabricated assemblies.

1.4 HANDLING

- A. Do not store sheet metal flashing and trim materials in contact with other materials that might cause staining, denting, or other surface damage. Store sheet metal flashing and trim materials away from uncured concrete and masonry.
- B. Protect strippable protective covering on sheet metal flashing and trim from exposure to sunlight and high humidity, except to the extent necessary for the period of sheet metal flashing and trim installation.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Sheet steel: Commercial quality carbon steel sheets complying with ASTM A 653, lock-forming grade, galvanized with a G90 zinc coating, 22-gage minimum unless otherwise indicated.
- B. Nails for attaching sheet steel to wood: Large flat head "stronghold" type roofing nails with barbed point, formed of hot-dip galvanized steel of sufficient length to penetrate a minimum of 1- inch into the wood nailer.
- C. Hot dip galvanized self-tapping screws, self-locking rivets and bolts, and other suitable fasteners designed to withstand design loads.
 - 1. Fasteners for flashing and trim: Blind fasteners or self-drilling screws, gasketed with hex washer head.
 - 2. Blind fasteners: High-strength aluminum or stainless-steel rivets.
- D. Solder and flux:
 - 1. For galvanized sheet metal: 50-50 lead/tin solder complying with ASTM B 32, used with a non-corrosive flux.
 - 2. For lead: ASTM B 32, Grade Sn50, 50 percent tin and 50 percent lead.
- E. Burning rod for lead: Same composition as lead sheet.

- F. Sealing tape:
 - 1. Pressure-sensitive, 100 percent solids, polyisobutylene compound sealing tape with release-paper backing.
 - 2. Provide permanently elastic, nonsag, non-toxic, non-staining tape.
- G. Expansion-joint sealant: For hooked-type expansion joints, which must be free to move, provide non-setting, non-hardening, non-migrating, heavy-bodied polyisobutylene sealant.
- H. Bituminous coating:
 - 1. Cold-applied asphalt mastic, SSPC-Paint 12, compounded for 15-mil dry film thickness per coat.
 - 2. Provide inert-type noncorrosive compound free of asbestos fibers, sulfur components, and other deleterious impurities.

2.2 PREFABRICATED ASSEMBLIES

- A. Counterflashing assemblies: Formed of 24-gage galvanized sheet steel, of the profiles shown on the Drawings, complete with factory-formed internal and external corners, and end closures by one of the following.
 - 1. Basis of design is for Fry Reglet Corp. Type ST (stucco).
 - 2. Keystone Flashing Co.
 - 3. CF Cheney Flashing Co.
 - 4. MM Systems Corp.

2.3 FABRICATION

- A. General:
 - 1. Shop fabricate flashings and sheet metal work to comply with profiles and sizes indicated on the Drawings and standard Sheet Metal and Air Conditioning Contractors National Association, Inc. (SMACNA) detail plates of the "Architectural Sheet Metal Manual".
 - 2. Form sheet metal on bending brake with straight, sharp edges. Shape, trim, and hand seam sheet metal on bench; keep job site forming to a minimum.
 - 3. Comply with metal producers' recommendations for tinning, soldering, and cleaning flux from metal.

4. Fabricate with joints and corners accurately machined, filed and fitted, and rigidly framed together and connected.
- B. Fabricate in as long length as possible to minimize field joints.
- C. Prefabricate intersections, including counterflashings, with mitered, riveted joints. Make corners and intersections with legs a minimum of 24-inch long extending in each direction.
- D. Tinning and soldering:
 1. Tin edges on both sides of sheet steel to be soldered.
 2. Perform soldering slowly, thoroughly heating seams and completely sweating solder through full width of seams.
- E. Exposed edges: Neatly double back sheet metal 1/2 inch to stiffen edges and to provide a finished appearance.
- F. Provisions for attachment to structure: Furnish supports, hangers, bracing, anchors and other devices shown, specified or necessary for reinforcement and proper attachment of flashings and sheet metal to building.

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 **GENERAL REQUIREMENTS**

- A. In addition to the assemblies listed above, provide required prefinished sheet-metal flashings, counterflashings, transitional and interface flashings required to achieve a properly weatherproofed, flashed and counterflashed building envelope, including sheet metal flashings in the angles formed where exterior waterproofed decks abut walls, and as well at curbs, platforms, ventilators, pipes, roof hatches, and other vertical and horizontal surfaces, where indicated and necessary to make the Work weatherproof.
- B. Comply with manufacturer's installation instructions, where applicable, and applicable SMACNA and NRCA details, except as indicated and specified.

- C. Install counterflashing assemblies at a constant height above the roof.
 - 1. Anchor counterflashing securely into reglet by friction, or provide lead wedges spaced 2- foot o.c. maximum.
 - 2. Use manufacturer's standard splice plates and preformed corners for a weathertight assembly.
- D. Coordinate this work with other trades whose work penetrates, intersects and adjoins flashings and sheet metal work, to permit the correct sequencing and the watertightness of the assemblies.

3.3 INSTALLATION

- A. General:
 - 1. Install sheet metal work in accordance with the approved shop drawings.
 - 2. Attach work securely to supporting construction, plumb, level, with tight, flush joints allowing for thermal movements.
 - 3. Install work with lines, arises, and angles sharp and true.
 - 4. Fold exposed edges neatly to form a 1/2-inch hem on the concealed side; hem all exposed edges, unless otherwise indicated.
 - 5. Assemble work so that face of metal in contact has hairline joints, except where required for expansion or fitting. Provide back-up plates at joints.
 - 6. Conceal fastenings and reinforcement where they would be visible by the public and the building occupants.
 - 7. Finish work shall be straight, smooth and continuous, without dimples, dents and other damage.
- B. Soldering: Solder all joints not intended for expansion and contraction.
 - 1. Clean material and tin prior to soldering.
 - 2. Solder slowly. Heat the seams thoroughly, and completely fill with solder.
 - 3. Make exposed soldering on finish surfaces neatly, full flowing and smooth.
 - 4. Wash acid flux with a soda solution after soldering and remove soldering flux on exposed surfaces.

- C. Nailing:
1. Confine nailing of sheet metal generally to sheet metal having a maximum width of 18 inches. Nailing of flashings shall be confined to one edge only.
 2. Space nails evenly not over 12 inches o.c., and approximately 2 inches from the edge.
 3. Face nailing is not permitted. Do not nail sheet metal assemblies on horizontal surfaces.
- D. Bolts, rivets, and screws:
1. Install bolts, rivets, and screws where indicated or required.
 2. Provide compatible washers to protect surface of sheet metal and to provide a watertight connection.
- E. Dissimilar material protection:
1. Protect sheet metal in contact with dissimilar metals, concrete, masonry and plaster with a heavy coating of bituminous paint, approved separation tape, or building felt or paper.
 2. Set sheet metal assemblies supported by pressure-treated wood on building paper or felt attached to the wood nailer, except set copings on flexible flashing specified. Lap on vertical surfaces at least 2 inches.
- F. Seams - general: Make seams straight, and uniform in width and height with no solder showing on the face.
1. Flat-lock seams: Finish not less than 3/4 inch wide made in the direction of water flow.
 2. Lap seams: Finish soldered seams not less than 1 inch wide. Overlap seams not soldered at least 3 inches.
 3. Loose-lock expansion seams: No less than 3-inch wide, designed to provide minimum 1 inch movement within the joint. Fill joint completely with sealant applied at not less than 1/8 inch thick bed.
 4. Standing seams: Not less than 1 inch high, double locked without solder.
- G. Expansion and contraction:
1. Provide for thermal and building movement without over-stressing the material, breaking connections or producing wrinkles and distortion in finished surfaces. Make sheet metal installations weathertight at all locations.

2. Provide expansion and contraction joints at not more than 40-foot intervals, except that where the distance between the last expansion joint and the end of the continuous run is more than half the required interval spacing, provide an additional joint. Where expansion and contraction joints are exposed to view, their location is subject to the Architect's approval.
 3. Exposed surfaces shall be free from visible wave, warp, and buckle.
- H. Completed work: Completed flashings and sheet metal work shall be watertight, free of tool marks, dents, scratches and other damages, with joints and corners accurately machined, filed and fitted, and rigidly framed together and connected.

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 exterior 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 01300 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 01630.
 - 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

ALUMINUM STOREFRONT WINDOW SYSTEM

SECTION 084113

PART 1 - GENERAL

1.1 SUMMARY

- A. The work includes the furnished and installing of all aluminum storefront system, 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 Section:
 - 1. Section 08 1113 - Hollow Metal Doors and Frames
 - 2. Section 08 7100 - Finish Hardware.
 - 3. Section 08 8000 - Glass and Glazing

1.2 SUBMITTALS

- A. Submit fully detailed shop drawings of all aluminum work included in this section for review. No fabrication or work shall be commenced until shop drawings have been reviewed and returned to the Contractor.
- B. Submittals shall be in accordance with Section 01 3310.

1.3 MEASUREMENTS

- A. Measurements required for the manufacture and installation of aluminum work shall be secured at the building. Consult with the various trades whose work adjoins this work and be responsible for all measurements and the working out of all details.

1.4 REFERENCE

- A. Aluminum Associated (AA):
 - 1. DAF-45 Designation System for Aluminum Fishes.
- B. American Architectural Manufacturer's Association (AAMA):
 - 1. 501.2 Field Check of Metal Curtain Walls for Water Leakage.
 - 2. 2605 Voluntary Specification for High Performance Organic Coatings on Architectural Extrusions and Panels.
 - 3. 606.1 Specifications and Inspection Methods for Integral Color Anodic Finishes for Architectural Aluminum.
 - 4. 607.1 Specifications and Inspection Methods for Clean Anodic Finishes for Architectural Aluminum.

5. 608.1 Specification and Inspection Methods for Electrolytically Deposited Color Anodic Finishes for Architectural Aluminum.
 6. 701.2 Specifications for Pile Weatherstripping.
 7. Manual #10 Care and Handling of Architectural Aluminum From Shop to Site.
 8. SFM-1 Aluminum Storefront and Entrance Manual.
- C. American National Standards Institute (ANSI):
1. A117.1 Safety Standards for the Handicapped.
- D. American Society for Testing and Materials (ASTM):
1. B209 Aluminum and Aluminum - Alloy Sheet and Plate
 2. B221 Aluminum Alloy Extruded Bars, Rods, Wire, Shapes and Tubes.
 3. B308 Aluminum Alloy 6061-T6 Standard Structural Shapes, Rolled or Extruded.
 4. E283 Test Method for Rate of Air Leakage Through Exterior Window, Curtain Walls and Doors.
 5. E330 Test Method for Structural Performance of Exterior Windows, Curtain Walls and Doors by Uniform Static Air Pressure Difference.
 6. E331 Test Method for Water Penetration of Exterior Windows, Curtain Walls and Doors by Uniform Static Air Pressure Difference.

1.5 SYSTEM REQUIREMENTS

- A. Design Requirements:
1. Drawings are diagrammatic and do not purport to identify nor solve problems of thermal or structural movement, glazing, anchorage or moisture disposal.
 2. Requirements shown by details are intended to establish basic dimension of units, sight lines and profiles of members.
 3. Provide concealed fastening.
 4. Provide entrance and storefront systems, including necessary modifications to meet specified requirements and maintaining, visual design concepts.
 5. Attachment considerations are to take into account site peculiarities and expansion and contraction movements so there is no possibility of loosening, weakening or fracturing connection between units and building structure or between units themselves.
 6. Anchors, fasteners and braces shall be structurally stressed not more than 50% of allowable stress when maximum loads are applied.
 7. Provide for expansion and contraction due to structural movement without detriment to appearance or performance.

PART 2 - PRODUCT

2.1 MANUFACTURERS AND PRODUCTS

- A. Storefront Systems:
 - 1. Storefront System: Old Castle - Series 3000, 2"x4 ½" profile with 1" double glazing.
- B. Substitutions: Submit under provision of Section 01 2500.

2.2 FINISH

- A. All exposed surfaces are to be dark bronze anodized finish, Class I, 0.7 mil minimum thickness and shall be free of unsightly scratches or blemishes.

2.3 CONSTRUCTION DESIGN

- A. All aluminum framing shall have a 2" face dimension. The depth of the framing system shall be 4-1/2". The framing shall be accurately assembled with unexposed fasteners utilizing extruding screw splines, shear blocks and/or snap in features. All glazing shall be flush, with the glass held in place elastomeric glazing on both sides.

2.3 FRAMING MATERIALS AND ACCESSORIES

- A. Aluminum
 - 1. ASTM B221, alloy 6063-T5 for extrusions; ASTM B209, alloy 5005-H16 sheets; or other alloys and temper recommended by manufacturer appropriate for specified finish.
- B. Internal Reinforcing:
 - 1. ASTM A36 for carbon steel or ASTM B308 for structural aluminum.
 - 2. Shapes and sizes to suit installation.
 - 3. Steel components factory coated with alkyd type zinc chromate primer complying with FS TT-P-645.
- C. Anchorage Devices:
 - 1. Manufacturer's standard form or fabricated steel or aluminum assemblies of shapes, plates, bars or tubes.
 - 2. Hot-dip galvanize steel assemblies after fabrication, comply with ASTM A 123, 2.0 ounce minium coating.
- D. Fasteners:
 - 1. Aluminum, non-magnetic stainless steel or other non-corrosive materials compatible with items being fastened.

2. Provide concealed fasteners wherever possible.
 3. For exposed locations, provide Phillips flathead screws with finish matching item fastened.
 4. For concealed locations, provide manufacturer's standard fasteners.
- E. Expansion Anchor Devices: Lead-shield or toothed-steel, drilled-in, expansion bolt anchors.
- F. Protective Coatings: Cold applied asphalt mastic complying with SS:C-Paint 12, compounded for 30 mil thickness for each coat; or alkyd type since chromate primer complying with FS TT-P-645.
- G. Touch-Up Primer for Galvanized Components: Zinc oxide conforming FS TT-P_641.
- H. Glazing Gaskets:
1. Compression type design, replaceable, molded or extruded, of neoprene, polyvinyl chloride (PVC) or ethylene propylene diene monomer (EPDM).
 2. Profile and hardness as required to maintain uniform pressure for watertight seal.
- I. Weatherstripping:
1. Wool pile conforming to AAMA 701.2.
 2. Provide EPDM or vinyl-blade gasket weatherstripping in bottom door rail, adjustable for contact with threshold.

2.4 GLASS AND GLAZING ACCESSORIES

- A. Refer to Section 08 8000.

2.5 DOOR HARDWARE

- A. Hardware Items:
1. See Section 08 7100 for door hardware components. All hardware is to be installed and allow full operation without binding and compliant with 2019 CBC requirements.

2.6 FABRICATION

- A. Coordination of Fabrication:
1. Check actual frame or door openings required in construction work by accurate field measurements before fabrications.
 2. Fabricate units to withstand loads which will be applied when system is in place.
- B. General:
1. Conceal fasteners wherever possible.

2. Reinforce work as necessary for performance requirements and for support to structure.
3. Separate dissimilar metals and aluminum in contact with concrete utilizing protective coating or preformed separators which will prevent contact and corrosion.
4. Comply with Section 08 8000 for glazing requirements.

PART 3 - EXECUTION

3.1 **INSTALLATION, WORKMANSHIP AND STANDARDS**

- A. General: Work shall be performed in accordance with reviewed shop drawings and these specifications and the standards and recommendations of the manufacturer. Installer shall be approved by the manufacturer.
- B. Erection Tolerances:
 1. Limit variations from plumb and level:
 - a. 1/8" in 10'-0" vertically.
 - b. 1/8" in 20'-0" horizontally.
 2. Limit variations from theoretical locations: 1/4" for any member at any location.
 3. Limit offsets in theoretical end-to-end and edge-to-edge alignment: 1/16" from flush surfaces not more than 2" apart or out-of-flush by more than 1/4".
- C. Install doors and hardware in accordance with manufacturer's printed instructions.
- D. Set units plumb, level and true to line, without warp or rack of frame.
- E. Anchor securely in place, allowing for required movement, including expansion and contraction.
- F. Separate dissimilar materials at contact points, including metal in contact with plaster or concrete surfaces, with bituminous paint or preformed separators to prevent contact and corrosion.
- G. Set sill members in bed of sealant. Set other members with internal sealants and baffles to provide weathertight construction.
- H. Coordinate installation of perimeter sealant and backing materials between assemblies and adjacent construction in accordance with requirements of Section 07 9200.
- I. Glazing: Refer to requirements of Section 08 8000.

- J. Caulking: Joints shall be tightly and continuously caulked with compounds and tape herein specified. Application and workmanship shall conform with the applicable requirements of Section 07 9200.
- K. Protection and Cleaning: Wherever aluminum is installed in contact with dissimilar metal, the aluminum shall be painted with a heavy coat of bitumastic paint or separated with butyl tape. Adequate protection shall be provided during fabrication, shipment, site storage, and erection to prevent damage to finish work. Aluminum work shall be cleaned before acceptance, removing blemishes, finger marks, oxidation, and left in first-class condition. Cleaning compound shall be approved by the aluminum manufacturer.
- L. Responsibility: Installer shall assume full responsibility for the installation of the aluminum sections and the caulking and sealing of all components parts of the assembly to produce a weatherproof installation.

END OF SECTION

FINISH HARDWARE

SECTION 087100

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes items known commercially as finish or door hardware that are required for swing, sliding, and folding doors, except special types of unique hardware specified in the same sections as the doors and door frames on which they are installed.
- B. This Section includes the following, but is not necessarily limited to:
 - 1. Door Hardware, including electric hardware.
 - 2. Storefront and Entrance door hardware.
 - 3. Digital keypad access control devices.
 - 4. Power supplies for electric hardware.
 - 5. Thresholds, gasketing and weather-stripping.
 - 6. Door silencers or mutes.
- C. Related Sections: The following sections are noted as containing requirements that related to this Section, but may not be limited to this listing.
 - 1. Division 8 - Section - Steel Doors and Frames
 - 2. Division 8 - Section - Aluminum Storefront
 - 3. Division 28 - Section - Fire/Life - Safety Systems & Security Access Systems

1.3 REFERENCES

- A. 2019 California Building Code, CCR, Title 24.
- B. BHMA - Builders' Hardware Manufacturers Association.
- C. CCR - California Code of Regulations, Title 24, Part 2, California State Accessibility Standards.
- D. DHI - Door and Hardware Institute.
- E. NFPA - National Fire Protection Association.
 - 1. NFPA 80 - Fire Doors and Other Opening Protective.
 - 2. NFPA 105 - Smoke and Draft Control Door Assemblies.

- F. UL - Underwriters Laboratories.
 - 1. UL 10C - Fire Tests of Door Assemblies.
 - 2. UL 305 - Panic Hardware.
- G. WHI - Warnock Hersey Incorporated.
- H. SDI - Steel Door Institute.

1.4 SUBMITTALS AND SUBSTITUTIONS

- A. General: Submit in accordance with Conditions of the Contract and Division 1 Specification sections.
- B. Submit product data (catalog cuts) including manufacturers' technical product information for each item of door hardware, installation instructions, maintenance of operating parts and finish, and other information necessary to show compliance with requirements.
- C. Submit six (6) copies of schedule organized vertically into "Hardware Sets" with index of doors and headings, indicating complete designation of every item required for each door or opening. Include following information:
 - 1. Include a Cover Sheet with;
 - a. Job Name, location, telephone number
 - b. Architect name, location, telephone number
 - c. Contractors name, location, telephone number, job number
 - d. Supplier name, location, telephone number, job number
 - e. Hardware consultant's name, location, and telephone number
 - 2. Job Index information included;
 - a. Numerical door number index including; door number, hardware heading number and page number.
 - b. Complete keying information (referred to DHI hand-book "Keying Systems and Nomenclature"). Provision should be made in the schedule to provide keying information when available; if it is not available at the time the preliminary schedule is submitted.
 - c. Manufacturers' names and abbreviations for all materials.
 - d. Explanation of abbreviations, symbols, and codes used in the schedule.
 - e. Mounting locations for hardware.
 - f. Clarification statements or questions.
 - g. Catalog cuts and manufacturer's technical data and instructions.
- D. Make substitution requests in accordance with Division 1. Substitution request must be made prior to bid date. Include product data and indicate benefit to the project. Furnish samples of any proposed substitution.

- E. Wiring Diagrams: Provide product data and wiring and riser diagrams for all electrical products listed in the Hardware Schedule portion of this section.
- F. Keying Schedule: Submit separate detailed schedule indicating clearly how the Owner's final instructions on keying of locks has been fulfilled.
- G. Templates for doors, frames, and other work specified to be factory prepared for the installation of door hardware. Check shop drawings of other work to confirm that adequate provisions are made for locating and installing door hardware to comply with indicated requirements.
- H. Furnish as-built/as-installed schedule with close-out documents, including keying schedule and transcript, wiring/riser diagrams, manufacturers' installation and adjustment and maintenance information.

1.5 QUALITY ASSURANCE

- A. Obtain each type of hardware (latch and lock sets, hinges, closers, exit devices, etc.) from a single manufacturer.
- B. Supplier Qualifications: A recognized architectural door hardware supplier, with warehousing facilities in the project's vicinity, that has a record of successful in-service performance for supplying door hardware similar in quantity, type, and quality to the indicated for this project and that employs an experienced architectural hardware consultant (AHC) who is available to Owner, Architect, and Contractor, at reasonable times during the course of the Work, for consultation.
 - 1. Responsible for detailing, scheduling and ordering of finish hardware.
 - 2. Meet with Owner to finalize keying requirements and to obtain final instructions in writing.
 - 3. Stock parts for products supplied and are capable of repairing and replacing hardware items found defective within warranty periods.
- C. Hardware Installer: Company specializing in the installation of commercial door hardware with five years documented experience.
- D. Fire-Rated Openings: Provide door hardware for fire-rated openings that complies with NFPA Standard No. 80 and requirements of authorities having jurisdiction. Provide only items of door hardware that are listed and tested by UL or Warnock Hersey for given type/size opening and degree of label. Provide proper latching hardware, door closers, approved-bearing hinges and seals whether listed in the Hardware Schedule or not.
 - 1. Where emergency exit devices are required on fire-rated doors, (with supplementary marking on doors' UL labels indicating "Fire Door to be Equipped with Fire Exit Hardware") Provide UL label on exit devices indicating "Fire Exit Hardware"

- E. Exit Doors: Operable from inside with single motion without the use of a key or special knowledge or effort.
- F. Product packaging to be labeled in compliance with CA Prop 65, Safe Drinking Water and Toxic Enforcement Act of 1986.

1.6 DELIVERY, STORAGE AND HANDLING

- A. Coordinate delivery of packaged hardware items to the appropriate locations (shop or field) for installation.
- B. Hardware items shall be individually packaged in manufacturer's original containers, complete with proper fasteners. Clearly mark packages on outside to indicate contents and locations in hardware schedule and in work.
- C. Provide locked storage area for hardware, protect from moisture, sunlight, paint, chemical, etc.
- D. Contractor to inventory door hardware jointly with representatives of hardware supplier and hardware installer until each all are satisfied that count is correct.

1.7 WARRANTY

- A. Provide warranties of respective manufacturers' regular terms of sale from day to final acceptance as follows:
 - 1. Lockset: Ten (10) years
 - 2. Electronic: One (1) year
 - 3. Closers: Thirty (30) years
 - 4. Exit devices: Three (3) years
 - 5. All other hardware: Two (2) years

1.8 MAINTENANCE

- A. Maintenance Tools and Instructions: Furnish a complete set of specialized tools and maintenance instructions as needed for Owner's continued adjustment, maintenance, and removal and replacement of door hardware.

1.9 PRE-INSTALLATION CONFERENCE

- A. Convene a pre-installation conference at least one week prior to beginning work of this section.
- B. Attendance: Architect, Construction Manager, Contractor, Security Contractor, Hardware Supplier, Installer, Key Owner Personnel, and Project Inspector.

- C. Agenda: Review hardware schedule, products, installation procedures and coordination required with related work. Review Owner's keying standards.

PART 2 - PRODUCT

2.1 MANUFACTURERS

<u>Item</u>	<u>Manufacturer</u>	<u>Acceptable Substitutes</u>
Hinges	Ives	Hager, Stanley, McKinney
Locks, Latches & Cylinders	Schlage	Or Approved Equal
Exit Devices	Von Duprin	Or Approved Equal
Closers	LCN	Or Approved Equal
Push, Pulls & Protection Plates	Ives	Trimco, BBW, DCI
Flush Bolts	Ives	Trimco, BBW, DCI
Dust Proof Strikes	Ives	Trimco, BBW, DCI
Coordinators	Ives	Trimco, BBW, DCI
Stops	Ives	Trimco, BBW, DCI
Overhead Stops	Glynn-Johnson	Or Approved Equal
Thresholds	Zero	Pemko, National Guard
Seals & Bottoms	Zero	Pemko, National Guard

2.2 MATERIALS

- A. Hinges: Exterior out-swinging door butts shall be non-ferrous material and shall have stainless steel hinge pins. All doors to have non-rising pins.
1. Hinges shall be sized in accordance with the following:
 - a. Height:
 - (1) Doors up to 42" wide: 4-1/2" inches
 - (2) Doors 43" to 48" wide: 5 inches
 - b. Width: Sufficient to clear frame and trim when door swings 180 degrees.

- c. Number of Hinges: Furnish 3 hinges per leaf to 7'-5" in height. Add one for each additional 2 feet in height.
 - 2. Furnish non-removable pins (NRP) at all exterior out-swing doors and interior key lock doors with reverse bevels.
- B. Continuous Hinges: As manufactured by Ives, an Allegion Company. UL rated as required.
- C. Heavy Duty Cylindrical Locks and Latches: Schlage "ND" Series as scheduled with "Longitude" design, fastened with through-bolts and threaded chassis hubs.
 - 1. Provide cylindrical locksets exceeding the ANSI/BHMA A156.2 Grade 1 performance standards for strength, security, and durability in the categories below.
 - a. Abusive Locked Lever Torque Test - minimum 3,100 inch-pounds without gaining access.
 - b. Offset lever pull - minimum 1,600 foot pounds without gaining access.
 - c. Vertical lever impact - minimum 100 impacts without gaining access.
 - 2. Cycle life- tested to minimum 16 million cycles per ANSI/BHMA A156.2 Cycle Test with no visible lever sag or use of performance aids such as set screws or spacers.
 - 3. UL 10C for 4'-0" x 10'-0" 3-hour fire door.
 - 4. Cylinder: Refer to "KEYING" article, herein.
 - 5. Provide solid steel anti-rotation through bolts and posts to control excessive rotation of lever.
 - 6. Provide lockset that allows lock function to be changed to over twenty other common functions by swapping easily accessible parts.
 - 7. Provide locks with standard 2-3/4 inches (70 mm) backset, unless noted otherwise, with 1/2 inch latch throw capable of UL listing of 3 hours on a 4'x10' opening. Provide proper latch throw for UL listing at pairs.
 - 8. Provide locksets with separate anti-rotation thru-bolts, and no exposed screws.
 - 9. Provide independently operating levers with two external return spring cassettes mounted under roses to prevent lever sag.
 - 10. Provide standard ASA strikes unless extended lip strikes are necessary to protect trim.
 - 11. Provide wired electrified options as scheduled in the hardware sets.
 - a. 12 through 24 volt DC operating capability, auto-detecting
 - b. Selectable EL (fail safe)/ EU (fail secure) operating mode via switch on chassis
 - c. 0.230A (230mA) maximum current draw
 - d. 0.010A (10mA) holding current
 - e. Modular/ "plug in" request to exit switch
 - 12. Lever Trim: Solid cast levers without plastic inserts, and wrought roses on both sides.

- D. Exit Devices: Von Duprin as scheduled.
1. Provide certificate by independent testing laboratory that device has completed over 1,000,000 cycles and can still meet ANSI/BHMA A156.3-2001 standards.
 2. All internal parts shall be of cold-rolled steel with zinc dichromate coating.
 3. Mechanism case shall have an average thickness of .140".
 4. Compression spring engineering.
 5. Non-handed basic device design with center case interchangeable with all functions.
 6. All devices shall have quite return fluid dampeners.
 7. All latchbolts shall be deadlocking with 3/4" throw and have a self-lubricating coating to reduce friction and wear.
 8. Device shall bear UL label for fire and or panic as may be required.
 9. All surface strikes shall be roller type and utilize a plate underneath to prevent movement.
 10. Lever Trim: "Breakaway" design, forged brass or bronze escutcheon with a minimum of .130" thickness, match lockset lever design.
 11. Removable Mullions: Removable with single turn of building key. Securely reinstalled without need for key.
 12. Furnish glass bead kit for vision lites where required.
 13. All Exit Devices to be sex-bolted to the doors.
 14. Panic Hardware shall comply with CBC Section 11B.404.2.7 and shall be mounted between 34" and 44" above the finished floor surface.
 - a. Provide exit devices UL certified to meet maximum 5 pound requirements according to the California Building Code section 11B-309.4, and UL listed for Panic Exterior Fire Exit Hardware.
 15. Hardware (including panic hardware) shall not be provided with "Night Latch" (NL) function for any accessible doors or gates unless the following conditions are met per DSA Interpretation 10-08 DSA/AC (External), revised 4/28/2009). Such conditions must be clearly demonstrated and indicated in the specification:
 - a. Such hardware has a 'dogging' feature.
 - b. It is dogged during the time the facility is open.
 - c. Such 'dogging' operation is performed only by employees as their job function (non-public use).
- E. Closers: LCN as scheduled. Place closers inside building, stairs, room, etc.
1. Door closer cylinders shall be of high strength cast iron construction with double heat treated pinion shaft to provide low wear operating capabilities of internal parts throughout the life of the installation. All door closers shall be tested to ANSI/BHMA A156.4 test requirements by BHMA certified testing laboratory. A written certification showing successful completion of a minimum of 10,000,000 cycles must be provided.
 2. All door closers shall be fully hydraulic and have full rack and pinion action with a shaft diameter of a minimum of 11/16 inch and piston diameter of 1 inch to ensure longevity and durability under all closer applications.

3. All parallel arm closers shall incorporate one piece solid forged steel arms with bronze bushings. 1-9/16" steel stud shoulder bolts, shall be incorporated in regular arms, hold-open arms, arms with hold open and stop built in. All other closers to have forged steel main arms for strength, durability, and aesthetics for versatility of trim accommodation, high strength and long life.
 4. All parallel arm closers so detailed shall provide advanced backcheck for doors subject to severe abuse or extreme wind conditions. This advanced backcheck shall be located to begin cushioning the opening swing of the door at approximately 45 degrees. The intensity of the backcheck shall be fully adjustable by tamper resistant non-critical screw valve.
 5. Closers shall be installed to permit doors to swing 180 degrees.
 6. All closers shall utilize a stable fluid withstanding temperature range of 120 degrees F. To -30 degrees F. without requiring seasonal adjustment of closer speed to properly close the door.
 7. Provide the manufacturers drop plates, brackets and spacers as required at narrow head rails and special frame conditions. NO wood plates or spacers will be allowed.
 8. Maximum effort to operate closers shall not exceed 5 lbs, such pull or push effort being applied at right angles to hinged doors. Compensating devices or automatic door operators may be utilized to meet the above standards. When fire doors are required, the maximum effort to operate the closer may be increased but shall not exceed 15 lbs. when specifically approved by fire marshal. All closers shall be adjusted to operate with the minimum amount of opening force required to retract latch bolts or disengage other devices that hold the door in a closed position. Per 11B-404.2.8.1, door shall take at least 5 seconds to move from an open position of 90 degrees to a position of 12 degrees from the latch jamb.
- F. Flush Bolts & Dust Proof Strikes: Automatic Flush Bolts shall be of the low operating force design. Utilize the top bolt only model for interior doors where applicable and as permitted by testing procedures.
1. Manual flush bolts only permitted on storage or mechanical openings as scheduled.
 2. Provide dust proof strikes at openings using bottom bolts.
- G. Door Stops:
1. Unless otherwise noted in Hardware Sets, provide floor type with appropriate fasteners. Where wall type cannot be used, provide floor type. If neither can be used, provide overhead type.
 2. Do not install floor stops more than four (4) inches from the face of the wall or partition (CBC Section 11B-307).
 3. Overhead stops shall be made of stainless steel and non-plastic mechanisms and finished metal end caps. Field-changeable hold-open, friction and stop-only functions.

- H. Protection Plates: Fabricate either kick, armor, or mop plates with four beveled edges. Provide kick plates 10" high and 2" LDW. Sizes of armor and mop plates shall be listed in the Hardware Schedule. Furnish with machine or wood screws of bronze or stainless to match other hardware.
- I. Thresholds: As Scheduled and per details.
 - 1. Thresholds shall not exceed ½" in height, with a beveled surface of 1:2 maximum slope.
 - 2. Set threshold in a full bed of butyl-rubber or polyisobutylene mastic sealant complying with requirements in Division 7 "Thermal and Moisture Protection."
 - 3. Use 1/4" fasteners, red-head flat-head sleeve anchors (SS/FHSL).
 - 4. Threshold shall comply with CBC Section 11B-404.2.5.
- J. Seals: Provide silicone gasket at all rated and exterior doors.
 - 1. Fire-rated Doors, Resilient Seals: UL 10C Classified complies with NFPA 80 & NFPA 252. Coordinate with selected door manufacturers' and selected frame manufacturers' requirements.
 - 2. Fire-rated Doors, Intumescent Seals: Furnished by selected door manufacturer. Furnish fire-labeled opening assembly complete and in full compliance with UL 10C Classified complies with NFPA 80 & NFPA 252. Where required, intumescent seals vary in requirement by door type and door manufacture – careful coordination required.
 - 3. Smoke & Draft Control Doors, Provide UL 10C Classified complies with NFPA 80 & NFPA 252 for use on "S" labeled Positive Pressure door assemblies.
- K. Door Shoes & Door Top Caps: Provide door shoes at all exterior wood doors and top caps at all exterior out-swing doors.
- L. Silencers: Furnish silencers for interior hollow metal frames, 3 for single doors, 2 for pair of doors. Omit where sound or light seals occurs, or for five-resistive-rated door assemblies.

2.3 KEYING

- A. Furnish a Proprietary Schlage masterkey system as directed by the district or architect. Key system to be designated and combined by the Schlage Master Key Department even if pinned by the Authorized Key Center, Authorized Security Center or a local authorized commercial dealer.
- B. A detailed keying schedule is to be prepared by the district and/or architect in consultation with a representative of Allegion or an Authorized Key Center or Authorized Security Center. Each keyed cylinder on every keyed lock is to be listed separately showing the door #, key group (in BHMA terminology), cylinder type, finish and location on the door.

- C. Extend the original masterkey system established for the School site.
- D. Furnish all cylinders in the Schlage conventional style except the exit device and removable mullion cylinders which will be supplied in Schlage Full Size Interchangeable Core (FSIC). Pack change keys independently (PKI).
- E. Furnish construction keying for doors requiring locking during construction.
- F. Furnish all keys with visual key control.
 - 1. Stamp key "Do Not Duplicate"
 - 2. Stamp (BHMA) key symbol on key
- G. Furnish all cylinder with visual key control
 - 1. Stamp (BHMA) key symbol on site of cylinder (CKC)
- H. Furnish mechanical keys as follows:
 - 1. Furnish 2 cut change keys for each different change key code.
 - 2. Furnish 1 uncut key blank for each change key code.
 - 3. Furnish 6 cut masterkeys for each different masterkey set.
 - 4. Furnish 3 uncut key blanks for each masterkey set.
 - 5. Furnish 2 cut control keys cut to the top masterkey for permanent I/C cylinders.
 - 6. Furnish 1 cut control key cut to each SKD combination.
 - 7. Furnish KS43D2200 padlock for use with non-I/C Schlage cylinders. Furnish 47-413 (conventional) or 47-743-XP (PrimusXP) with above.
 - 8. Furnish KS43G3200 padlock for use with FSIC Schlage cylinder. Furnish 23-030 (Classic/ Everest) or 20-740 (PrimusXP) with above.
 - 9. Furnish KS41D1200 padlock for use with SFIC Schlage cylinder. Furnish 80-037 (Everest-B) with above.
- I. Furnish Schlage Padlock and the cylinders to tie them to the masterkey system for gates, storage boxes, utility valve security, roof hatches and roll-up doors keyed as directed in the keying schedule.
 - 1. Furnish KS43D2200 padlock for use with non-I/C Schlage cylinders. Furnish 47-413 (conventional) or 47-743-XP (PrimusXP) with above.
 - 2. Furnish KS43G3200 padlock for use with FSIC Schlage cylinders. Furnish 23-30 (Classic/Everest) or 20-740 (Primus XP) with above.
 - 3. Furnish KS41D1200 padlock for use with SFIC Schlage cylinder. Furnish 80-037 (Everest-B) with above.
- J. Furnish one Schlage cabinet lock for each cabinet door or drawer so designated on the drawings or keying schedule to match the masterkey system.
 - 1. Furnish CL100PB for use with non-I/C Schlage cylinders.
 - 2. Furnish CL771R for use with FSIC Schlage cylinders.
 - 3. Furnish CL721G for use with SFIC Schlage cylinders.

2.4 FINISHES

- A. Generally to be satin chrome US26D (626 on bronze and 652 on steel) unless otherwise noted.
- B. Furnish push plates, pull plates and kick or armor plates in satin stainless steel US32D (630) unless otherwise noted.
- C. Door closers shall be powder-coated to match other hardware, unless otherwise noted.
- D. Aluminum items to be finished anodized aluminum except thresholds which can be furnished as standard mill finish.

2.5 FASTENERS

- A. Screws for strikes, face plates and similar items shall be flat head, countersunk type, provide machine screws for metal and standard wood screws for wood.
- B. Screws for butt hinges shall be flathead, countersunk, full-thread type.
- C. Fastening of closer bases or closer shoes to doors shall be by means of sex bolts and spray painted to match closer finish.
- D. Provide expansion anchors for attaching hardware items to concrete or masonry.
- E. All exposed fasteners shall have a phillips head.
- F. Finish of exposed screws to match surface finish of hardware or other adjacent work.
- G. All Exit Devices and Lock Protectors shall be fastened to the door by the means of sex bolts or through bolts.

PART 3 - EXECUTION

3.1 INSPECTION

- A. Verify that doors and frames are square and plumb and ready to receive work and dimensions are as instructed by the manufacturer.
- B. Beginning of installation means acceptance of existing conditions.
- C. Fire-Rated Door Assembly Inspection: Upon completion of the installation, all fire door assemblies shall be inspected to confirm proper operation of the closing device and latching device and that only the manufacturer's furnished fasteners are used for

installation and that it meets all criteria of a fire door assembly per NFPA 80 (Standard for Fire Doors and Other Opening Protective) 2019 Edition. A written record shall be maintained and transmitted to the Owner to be made available to the Authority Having Jurisdiction (AHJ). The inspection of the swinging fire doors shall be performed by a certified FDAI (Fire Door Assembly Inspector) with knowledge and understanding of the operating components of the type of door being subjected to the inspection. The record shall list each fire door assembly throughout the project and include each door number, an itemized list of hardware set components at each door opening, and each door location in the facility.

3.2 INSTALLATION

- A. Install hardware in accordance with manufacturer's instructions and requirements of DHI.
- B. Use the templates provided by hardware item manufacturer.
- C. Mounting heights for hardware shall be as recommended by the Door and Hardware Institute. Operating hardware will be located between 34" and 44" AFF.
- D. Set units level, plumb and true to line and location. Adjust and reinforce the attachment substrate as necessary for proper installation and operation.
- E. Drill and countersink units that are not factory-prepared for anchorage fasteners. Space fasteners and anchors in accordance with industry standards.
- F. Set thresholds for exterior doors in full bed of butyl-rubber sealant.
- G. If hand of door is changed during construction, make necessary changes in hardware at no additional cost.
- H. Hardware Installer shall coordinate with security contractor to route cable to connect electrified locks, panic hardware and fire exit hardware to power transfer or electric hinges at the time these items are installed so as to avoid disassembly and reinstallation of hardware.
- I. Hardware Installer shall also be present with the security contractor when the power is turned on for the testing of the electronic hardware applications. Installer shall make adjustments to solenoids, latches, vertical rods and closers to insure proper and secure operation.
- J. All wiring for electro-mechanical hardware mounted on the door shall be connected through the power transfer and terminated in the interface junction box specified for in the Electrical Section.

- K. Conductors shall be minimum 18 gage stranded, multicolored. A minimum 12 in. loop of conductors shall be oiled in the interface junction box. Each conductor shall be permanently marked with its function.
- L. If a power supply is specified in the hardware sets, all conductors shall be terminated in the power supply. Make all connections required for proper operation between the power supply and the electro-mechanical hardware. Provide the proper size conductors as specified in the manufacturer's technical documentation.

3.3 ADJUST AND CLEAN

- A. Adjust and check each operating item of hardware and each door, to ensure proper operation or function of every unit. Replace units which cannot be adjusted to operate freely and smoothly as intended for the application made.
- B. Clean adjacent surface soiled by hardware installation.
- C. Final Adjustment: Wherever hardware installation is made more than one month prior to acceptance or occupancy, return to that work area and make final check and adjustment of all hardware items in such space or area. Clean operating items as necessary to restore proper function and finish of hardware and doors. Adjust doors control devices to compensate for final operation of heating and ventilating equipment.
- D. Instruct Owner's Personnel in proper adjustment and maintenance of hardware finishes, during the final adjustment of hardware.
- E. Continued Maintenance Service: Approximately six months after the completion of the project, the Contractor accompanied by the Architectural Hardware Consultant, shall return to the project and re-adjust every item of hardware to restore proper functions of doors and hardware. Consult with and instruct Owner's personnel in recommended additions to the maintenance procedures. Replace hardware items which have deteriorated or failed due to faulty design, materials or installation of hardware units. Prepare a written report of current and predictable problems (of substantial nature) in the performance of the hardware.

3.4 HARDWARE LOCATIONS

- A. Conform to CCR, Title 24, Part 2; and ADAAG; and the drawings for access-compliant positioning requirements for the disabled.

3.5 FIELD QUALITY CONTROL

- A. Contractor is responsible for providing the services of an Architectural Hardware Consultant (AHC) or a proprietary product technician to inspect installation and certify that hardware and its installation have been furnished and installed in accordance with manufacturers' instructions and as specified herein.

3.6 SCHEDULE

- A. The items listed in the following schedule shall conform to the requirements of the foregoing specifications.
- B. While the hardware schedule is intended to cover all doors, and other movable parts of the building, and establish type and standard of quality, the contractor is responsible for examining the Plans and Specifications and furnishing proper hardware for all openings whether listed or not. If there are any omissions in hardware groups in regard to regular doors they shall be called to the attention of the Architect prior to bid opening for instruction; otherwise, list will be considered Complete. No extras will be allowed for omissions.
- C. The Door Schedule on the Drawings indicate which hardware set is used with each door.

Manufacturers Abbreviations (Mfr.)

IVE	=	Ives	Hinges Pivots, Bolts, Coordinators, Dust Proof Strikes, Push Pull & Kick Plates, Door Stops & Silencers
LCN	=	LCN	Door Closers
SCE	=	Schlage Electronics	Electronic Door Components
SCH	=	Schlage Lock Company	Locks, Latches & Cylinders
VON	=	Von Duprin	Exit Devices
ZER	=	Zero International	Thresholds, Gasketing & Weather-stripping

HARDWARE GROUP NO. 01

3	EA	HINGE	5BB1 4.5X4.5 NRP	630	I'VE
1	EA	VANDL STOREROOM LOCK	ND96P6D LON	626	SCH
1	EA	SURFACE CLOSER	4040XP RW/PA MC	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	EA	FLOOR STOP	FS18S	BLK	IVE
1	EA	GASKETING	188SBK PSA	BK	ZER
1	EA	DOOR SWEEP	39A	A	ZER
1	EA	THRESHOLD	PER DETAIL		

HARDWARE GROUP NO. 02

3	EA	HINGE	5BB1HW 4.5X4.5 NRP	630	IVE
1	EA	VANDL CLASSROOM LOCK	ND94P6D LON	626	SCH
1	EA	SURFACE CLOSER	4040XP RW/PA MC	689	LCN
1	EA	KICK PLATE	8400 10"X2" LDW B-CS	630	IVE
1	EA	FLOOR STOP	FS18S	630	IVE
1	EA	GASKETING	188SBK PSA	BLK	IVE
1	EA	DOOR SWEEP	39A	BK	ZER
1	EA	THRESHOLD	PER DETAIL		

END OF SECTION

GLASS AND GLAZING SECTION 088000

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes glazing for the following products, including those specified in other Sections where glazing requirements are specified by reference in this Section:
 - 1. Window units.
 - 2. Doors, Vision Panels.
- B. Related Sections:
 - 1. Aluminum Storefront Window System - Section 084113

1.3 SYSTEM PERFORMANCE REQUIREMENTS

- A. General: Provide glazing systems that are produced, fabricated, and installed to withstand normal thermal movement, wind loading, and impact loading (where applicable), without failure including loss or glass breakage attributable to the following: defective manufacture, fabrication, and installation; failure of sealants or gaskets to remain watertight and airtight; deterioration of glazing materials; and other defects in construction.
- B. Glass Design: Glass thicknesses to be 1/4" at door vision panels and windows (safety glazing where required by code).

1.4 SUBMITTALS

- A. General: Submit the following according to Conditions of Contract and Section 01 3300.
- B. Substitution to conform to Section 01630.

1.5 QUALITY ASSURANCE

- A. Glazing Publications: Comply with published recommendations of glass product manufacturers and organizations below, except where more stringent requirements are indicated. Refer to these publications for glazing terms not otherwise defined in this Section or in referenced standards.

1. FGMA Publications: "FGMA Glazing Manual."
 2. LSGA Publications: "LSGA Design Guide"
- B. Safety Glass: Products complying with 2020 CBC, 2406 and testing and requirements of CPSC 16 CFR 1201 for Category II materials.
1. Per 2020 CBC, 2406.3, provide safety glass permanently marked with certification label of Safety Glazing Certification council (SGCC) or other certification agency acceptable to authorities having jurisdiction and requirements of 2020 CBC, 2406.
- C. Glazier Qualifications: Engage an experienced glazier who has completed glazing similar in material, design, and extent to that indicated for Project with record of successful in-service performance.
- D. Single-Source Responsibility for Glass: Obtain glass from one source for each product indicated below:
1. Primary glass of each (ASTM C 1036) type and class indicated.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Protect glazing materials to comply with manufacturer's directions and as needed to prevent damage to glass and glazing materials from condensation, temperature changes, direct exposure to sun, or other causes.

1.7 PROJECT CONDITIONS

- A. Environmental Conditions: Do not proceed with glazing when ambient and substrate temperature conditions are outside the limits permitted by glazing materials manufacturer or when glazing channel substrates are wet from rain, frost, condensation, or other causes.

PART 2 - PRODUCT

2.1 MANUFACTURERS

- A. Products: Subject to compliance with requirements, provide one of the products specified in product Data Sheet at end of this Section.

2.2 PRIMARY FLOAT GLASS PRODUCTS

- A. Clear Float Glass - Quality Q-3 Glazing Select Glass, 1/4" thickness or heavier where required. ASTM C1036-91 Standard Specifications for flat glass, by LOF or equal tempered where indicated.

- B. Tempered Float Glass - ASTM C1048, Fully Horizontal Tempered (after cutting to final size) to achieve a flexural strength four (4) times normal glass strength. All tempered glass is to have permanent logo signifying compliance with Public Safety Commission.

2.3 TEMPERED GLASS IN DOORS

- A. Door vision panels to be fully tempered clear 1/4" thickness meeting the safety requirements of 2020 CBC, 2406.

2.4 ELASTOMERIC GLAZING SEALANTS

- A. General: Provide products of type indicated, complying with the following requirements:
 - 1. Compatibility: Select glazing sealants and tapes of proven compatibility with other materials they will contact, including glass products, seals of insulating glass units, and glazing channel substrates, under conditions of installation and services, as demonstrated by testing and field experience.
 - 2. Suitability: Comply with sealant and glass manufacturer's recommendations for selecting glazing sealants and tapes that are suitable for applications indicated and conditions existing at time of installation.
 - 3. Colors: Provide color of exposed joint sealants to comply with the following:
 - a. Provide selections made by Architect from manufacturer's full range of standard colors for products of type indicated.
- B. Elastomeric Glazing Sealant standard: Provide manufacturer's standard chemically curing, elastomeric sealants of base polymer indicated that comply with ASTM C920 requirements.

2.5 GLAZING TAPES

- A. Back-Bedding Mastic Glazing Tape: Preformed, butyl-based elastomeric tape with a solids content of 100 percent, nonstaining and nonmigrating in contact with nonporous surfaces, with or without spacer rod as recommended by tape and glass manufacturers for application indicated, packaged on rolls with a release paper backing, and complying with AAMA 800 for products indicated below:
 - 1. AAMA 804.1.
- B. Expanded Cellular Glazing Tape: Closed-cell, polyvinyl chloride foam tape, factory coated with adhesive on both surfaces, packaged on rolls with release liner protecting adhesive, and complying with AAMA 800 for product 810.5.
- C. Products: Subject to compliance with requirements, provide one of the following:
 - 1. Back-Bedding Mastic Glazing Tape Without Spacer Rod:
 - a. PTI303 Glazing Tape (shimless), Protective Treatments, Inc.
 - b. S-M 5700 Poly-Glaze Tape Sealant, Schnee-Morehead, Inc.

- c. Tremco 440 Tape, Tremco Inc.
- d. Extru-Seal, Pecora Corp.
- e. PTI 606 Architectural Sealant Tape, Protective Treatments, Inc.
- f. Dyna-Seal, Pecora Corp.
- g. PTI 626 Architectural Sealant Tape, Protective Treatments, Inc.
- h. S-M 5710 H.P Poly-Glaze tape Sealant, Schnee-Morehead, Ind.
- i. SST-800 Tape, Tremco, Inc.
- 2. Back-Bedding Mastic Glazing Tape with Spacer Rod:
 - a. PTI 303 Glazing Tape (with shim), Protective Treatments, Inc.
 - b. Pre-shimmed Tremco 440 Tape, Tremco, Inc.
 - c. PTI 606 Architectural Sealant Tape, Protective Treatments, Inc.
- 3. Expanded Cellular Glazing Tape:
 - a. Norseal V-980 Closed-Cell Glazing Tape, Norton Company.

2.6 MISCELLANEOUS GLAZING MATERIALS

- A. General: Provide products of material, size, and shape complying with referenced glazing standard, requirements of manufacturers of glass and other glazing materials involved for glazing application indicated, and with a proven record of compatibility with surfaces contacted installation.
- B. Cleaners, Primers and Sealers: Type recommended by sealant or gasket manufacturer.
- C. Setting Blocks: Elastomeric materials with a Shore A durometer hardness of 85 plus or minus 5.
- D. Spacers: Elastomeric blocks or continuous extrusions with Shore A durometer hardness required by glass manufacturer to maintain glass lites in place for installation indicated.
- E. Edge Blocks: Elastomeric materials of hardness needed to limit glass lateral movement (side-walking).

2.7 FABRICATION OF GLASS AND OTHER GLAZING PRODUCTS

- A. Fabricate glass and other glazing products in sizes required to glaze openings indicated for Project, with edge and face clearance, edge and surface conditions, and bite complying with recommendations of product manufacturer and referenced glazing standard as required to comply with system performance requirements.
- B. Clean cut or flat grind vertical edges of butt-glazed monolithic lites in a manner that produce square edges with slight kerfs at junctions with indoor and outdoor faces.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Clean glazing channels and other framing members receiving glass immediately before glazing. Remove coatings that are not firmly bonded to substrates.

3.2 GLAZING, GENERAL

- A. Comply with combined recommendations of manufacturers of glass, sealants, gaskets, and other glazing materials, except where more stringent requirements are indicated, including those in referenced glazing publications.
- B. Provide spacers for glass sizes larger than 50 united inches (1250 mm) (length plus height) as follows:
 - 1. Locate spacers inside, outside, and directly opposite each other. Install correct size and spacing to preserve require face clearance, except where gasket and glazing tapes are used that have demonstrate ability to maintain required face clearance and comply with system performance requirements.
 - 2. Provide 1/8 inch (3 mm) minimum bite of spacers on glass and use thickness equal to sealant width. With glazing tape, use thickness slightly less than final compressed thickness of tape.
- C. Provide edge blocking to comply with requirements of referenced glazing publications, unless otherwise required by glass manufacturer.
- D. Set glass lites in each series with uniform pattern, draw, bow, and similar characteristics.

3.3 PROTECTION AND CLEANING

- A. Protect glass from contact with contaminating substances resulting from construction operations including weld splatter. If, despite such protection, contaminating substances do come into contact with glass, remove them immediately as recommended by glass manufacturer.
- B. Remove and replace glass that is broken, chipped, cracked, abraded, or damaged in any way, including natural causes, accidents and vandalism, during construction period.
- C. Wash glass on both faces in each area of Project not more than 4 days prior to date schedule for inspection that establish date of Substantial Completion. Wash glass as recommended by glass manufacturer.

3.4 **GLASS SCHEDULE**

- A. **Type GL-1:** Exterior Windows: ASTM E-2190; double pane with low conductivity spacer dual seal silicone edge seal: IGCC Class CBA rating.
1. Type: Reflective Tinted Solar Control Low-E Insulating Glass-Reflective cool light-grey exterior appearance.
 - a. Solarcool (2) Solargray + Solarban 60 (3) Clear by Vitto Architectural Glass.
 - b. Performance Values: VLT 14 percent; SHGC 0.17; shading coefficient 0.20; exterior reflectance 11 percent; U-value winter 0.259; U-value summer 0.27.
 - c. Insulating Glass Unit Construction: 1/4 inch Solargray glass, Solarcool on second surface (2)+ 1/2 inch (13 mm) air space + 1/4 inch Clear glass, low-e coating Solarban 60 solar control (sputtered) on third surface (3).
- B. **Type GL-2:** 1" thick, clear, **tempered**, float glass to match GL-1.

END OF SECTION

RESILIENT FLOORING

SECTION 096500

PART 1 - GENERAL

1.1 GENERAL PROVISIONS

- A. Attention is directed to the Contract and General Conditions and all Sections within Division 01 - General Requirements which are hereby made a part of this Section of this Specifications.

1.2 DESCRIPTION OF WORK

- A. Work Included: Provide labor, materials and equipment necessary to complete the work of this Section, including but not limited to the following:
1. Resilient tile flooring for commercial traffic.
 2. Resilient wall base and accessories.
 3. Substrate preparation.
- B. Related Work: The following items are not included in this Section and are specified under the designated Sections:
1. Section 033000 - Cast-In-Place Concrete for concrete substrate; slab surface tolerances; vapor retarder for applications on or below grade.
 2. Section 061000 - Rough Carpentry for plywood substrate and surface tolerances.
 3. Section 096900 - Access Flooring for resilient floor covering for access panels.
- C. Reference (Industry Standards):
1. American Association of Textile Chemists and Colorists (AATCC):
 - a. AATCC 134 Electrostatic Propensity of Carpets.
 2. American National Standards Institute (ANSI):
 - a. ANSI ESD S97.2 Floor Materials and Footwear - Voltage Measurement on a Person.
 3. ASTM International (ASTM):
 - a. ASTM C518 Standard Test Method for Steady State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus.
 - b. ASTM D412 Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers - Tension
 - c. ASTM D2047 Standard Test Method for Static Coefficient of Friction of Polish-Coated Floor Surfaces as Measured by the James Machine.
 - d. ASTM D2240 Standard Test Method for Rubber Property - Durometer Hardness.
 - e. ASTM D3389 Standard Test Method for Coated Fabrics Abrasion Resistance (Rotary Platform, Double Head Abrader)

- f. ASTM D6499 Standard Test Method for the Immunological Measurement of Antigenic Protein in Natural Rubber and its Products.
- g. ASTM E84 Standard Test Method for Surface Burning Characteristics of Building Materials.
- h. ASTM E648 Standard Test Method for Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source
- i. ASTM E662 Standard Test Method for Specific Optical Density of Smoke Generated by Solid Materials
- j. ASTM E1745 Standard Specification for Water Vapor Retarders Used in Contact with Soil or Granular Fill under Concrete Slabs.
- k. ASTM E2179 Standard Test Method for Laboratory Measurement of the Effectiveness of Floor Covering in Reducing Impact Sound Transmission Through Concrete Floors.
- l. ASTM E2180 Standard Test Method for Determining the Activity of Incorporated Antimicrobial Agent(s) in Polymeric or Hydrophobic Materials.
- m. ASTM F150 Standard Test Method for Electrical Resistance of Conductive and Static Dissipative Resilient Flooring.
- n. ASTM F155 Method of Test for Temper of Strip and Sheet Metals for Electronic Devices
- o. ASTM F386 Standard Test Method for Thickness of Resilient Flooring Materials Having Flat Surfaces.
- p. ASTM F710 Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring.
- q. ASTM F925 Standard Test Method for Resistance to Chemicals of Resilient Flooring.
- r. ASTM F970 Standard Test Method for Static Load Limit.
- s. ASTM F1344 Standard Specification for Rubber Floor Tile.
- t. ASTM F1482 Standard Practice for Installation and Preparation of Panel Type Underlayments to Receive Resilient Flooring.
- u. ASTM F1514 Standard Test Method for Measuring Heat Stability of Resilient Flooring by Color.
- v. ASTM F1515 Standard Test Method for Measuring Light Stability of Resilient Flooring by Color Change.
- w. ASTM F1859 Standard Specification for Rubber Sheet Floor Covering Without Backing.
- x. ASTM F1860 Standard Specification for Rubber Sheet Floor Covering with Backing.
- y. ASTM F1861 Standard Specification for Resilient Wall Base.
- z. ASTM F2055 Standard Test Method for Size and Squareness of Resilient Floor Tile by Dial Gage Method.
- aa. ASTM F2169 Standard Specification for Resilient Stair Treads.
- bb. ASTM F2170 Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes.

- cc. ASTM F2199 Standard Test Method for Determining Dimensional Stability of Resilient Floor Tile after Exposure to Heat.
- dd. ASTM F3010 Standard Practice for Two-Component Resin Based Membrane-Forming Moisture Mitigation Systems for Use Under Resilient Floor Covering.
- ee. ASTM G21 Standard Practice for Determining Resistance of Synthetic Polymeric Materials to Fungi
- 4. European Norm (FTM):
 - a. FTM 101 C 4046 Static Decay
- 5. International Organization for Standardization (ISO)
 - a. ISO 140 Measurement of sound insulation in buildings and of building elements
- 6. National Fire Protection Association (NFPA)
 - a. NFPA 253 Test Method for Critical Radiant Flux of Floor Covering Systems Using a Radiant Energy Source.
 - b. NFPA 258 Test Method for Specific Density of Smoke Generated by Solid Materials.

1.3 SUBMITTALS

- A. Product Data: Submit manufacturer's product data, installation guide and maintenance guide for each material and accessory proposed for use.
- B. Samples: Submit three representative samples of each product specified for verification.

1.4 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Provide resilient flooring manufactured by a firm with a minimum of 10 years' experience with resilient flooring of type equivalent to those specified.
 - 1. Manufacturer's quality management system must have ISO 9001:2000 approval.
 - 2. Provide resilient flooring products, including wall base, accessories and subfloor preparation products from one manufacturer to ensure color matching and compatibility.
 - 3. Manufacture shall be capable of providing technical training and technical field service representation.
- B. Installer Qualifications: Acceptable to manufacturer of resilient flooring or INSTALL (International Standards & Training Alliance) resilient certified for the requirements of the project.
- C. Sustainable Design Requirements:
 - 1. ISO 14001 Environmental Management Systems certification.

2. Construction Waste take back program for the purpose of reducing jobsite waste by taking back uninstalled waste flooring. Details of the nora® program are available at www.nora.com/us.
3. Flooring surfaces that are easily cleaned and do not require coatings and stripping, or use chemicals that may be hazardous to human health.
4. Supply all required products that are CA 01350 compliant.
5. Flooring that is free of materials known to be teratogenic, mutagenic or carcinogenic.
6. Flooring that contains no polyvinyl chloride or plasticizers.
7. Flooring that contains no halogens.
8. Flooring that contains no asbestos.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials in labeled packages. Store and handle in strict compliance with manufacturer's recommendations. Protect from damage due to weather, excessive temperature, and construction operations.
- B. Deliver materials sufficiently in advance of installation to condition materials to the required temperature for 48-hours prior to installation.

1.6 PROJECT CONDITIONS

- A. The installation area must be fully enclosed, weather tight, and climate controlled between 63°F and 75°F and 40% to 60% ambient relative humidity (RH) for at least 48 hours prior, during and 72 hours after installation (do not use gas fueled blowers). Dew point must be avoided. The substrate must be at least 5°F above dew point to be considered acceptable.

1.7 WARRANTY

- A. Provide manufacturer's standard limited warranty for wear, defect, bond and conductivity.

PART 2 - PRODUCT

2.1 ACCEPTABLE MANUFACTURER

- A. Basis-of-Design: nora systems, Inc., 9 Northeastern Blvd., Salem, NH 03079; telephone 800-322-NORA or 603-894-1021; fax 603-894-6615.

2.2 RESILIENT TILE FLOORING FOR COMMERICAL TRAFFIC WITH PRE-APPLIED ADHESIVE

A. Rubber Floor Tile (nora® nTx):

B.

- | | | |
|-----|--|---|
| 1. | Product Name: | norament® grano nTx, Article 3111 |
| 2. | ASTM Specification:
ASTM F1344 Standard
Specification for Rubber Floor
Tile | Type IB and Grade 2 |
| 3. | Limited Wear Warranty: | 10 years |
| | Limited Bond Warranty: | 10 years |
| 4. | Material: | Nora® vulcanized rubber compound 926
with environmentally compatible color
pigments that are free of toxic heavy metals
like lead, cadmium or mercury. |
| 5. | Material: | Homogeneous rubber compound with a
random scattered design. |
| 6. | Color: | 6 standard colors; additional colors available
with minimum order. |
| 7. | Surface: | Hammered |
| 8. | Back of Tile: | Nora® nTx pre-applied adhesive |
| 9. | Material Size (ASTM F2055):
±0.02 inches (±0.5mm) is
required | 39.53 inches by 39.53 inches
(1004 mm by 1004 mm) |
| 10. | Squareness (ASTM F2055):
±0.010 inches (±0.254 mm) is
required | Meets requirements |
| 11. | Thickness (ASTM F386):
+0.015/-0.005 inches (+ 0.381/
0.127 mm) is required | 0.14 inches (3.5mm) |
| 12. | Dimensional Stability (ASTM
F2199)
≤ 0.15% in both directions is
required. | Meets requirements |
| 13. | Flammability (E648/ NFPA 253):
≥ 0.45 watts/sq. cm for Class 1 is
required | NBSIR 75 950, 0.97 |
| 14. | Smoke Density (ASTM E662/
NFPA258):
< 450 is required | NBS, 346 (flaming) and 145 (non-flaming) |
| 15. | Burn Resistance: | Resistant to cigarette and solder burns. |

16.	Slip Resistance (ASTM D2047): ≥ 0.5 is required	Static coefficient of friction, Neolite dry 0.99 Neolite wet 0.95 (not recommended for Ramps)
17.	Bateria Resistance (ASTM E2180/ASTM G21)	Resistant to bacteria, fungi, and micro - Organism activity
18.	VOC's:	This flooring is GREENGUARD Gold Certified for Low VOC Emissions, Blue Angel Certified and CA 01350 compliant.
19.	Latex Allergies (ASTM D6499):	Inhibition Elisa, results are below detection level
20.	Sound Absorption (ASTM E2179/ISO 140):	Δ IIC 11, Δ Lw 11 dB (compare only Δ values)
21.	Sound Generation:	66.3 dBA, 68.5 dBC and 19.6 Sones, Independently tested.
22.	Hardness (ASTM D2240): ≥70 is required	Shore Type "A", 82
23.	Static Load (ASTM F970): ≤0.005 inches with 250 lbs. is required	Residual compression of 0.005 inches with 800 lbs.
24.	Rolling Load Limit:	≤850 lbs./ sq. inch; will withstand fork lift traffic.
25.	Abrasion Resistance (ASTM D3389): ≤ 0.035 oz. (1.0g) is required	1.1 lbs. (500g) load on H-18 wheel with 1000 cycles, 0.002 oz (0.05g) weight loss
26.	Oil & Grease Resistance:	Yes
27.	Heat Resistance (ASTM F1514): Avg. ΔE ≤8.0 is required	Easily achieved with all batches and regular maintenance
28.	Static Generation (AATCC 134):	<2000 Volts at 20% RH
29.	Thermal Transmission (ASTM C518):	R-value of -0.90
30	Cleaning:	Cleaned and maintained effectively using water, nora® pads and suitable cleaning machine, without the use of any factory and/or field-applied coating. Also without using any chemicals that may be hazardous or containing any teratogenic, mutagenic or any other ingredients known to be carcinogenic. Refer to nora maintenance guides for product specific details.
31.	Shine:	Higher shine achieved by buffing without any artificial topical applied coatings.
32.	Stain Removal:	Samples of the product must be provided for stain removal testing by the owner. Sample size should be ~ 1 m ² , pre-cleaned by

manufacture per published recommendations. Samples must have no coatings, sealers, floor finish or other manually or mechanically applied finish on the surface of the product. Stain testing must consist of application of common healthcare related disinfectants and chemicals to include, but not limited to, Betadine, Methylene Blue, Silver Nitrate and alcohol base hand sanitizer. Duration of test period must be no less than one week. Removal of chemicals must be in accordance with manufacturers published cleaning and maintenance recommendations.

33. Substrate Preparation:

As per the nora® nTx Installation Guide.

PART 3 - GENERAL

3.1 **GENERAL CONTRACTOR RESPONSIBILITIES**

- A. A secure storage area that is fully enclosed, weather tight, and climate controlled between 63°F and 75°F and 40% to 60% ambient relative humidity (RH) for at least 48-hours prior and during the installation, so the flooring contractor can acclimate all materials.
- B. An installation area that is fully enclosed, weather tight, and climate controlled between 63°F and 75° and 40% to 60% ambient relative humidity (RH) for at least 48-hours prior, during, and 72-hours after installation (do not use gas fueled blowers). If this is not possible, contact the nora® Technical Department.
- C. Areas with direct prolonged exposure to sunlight should be protected with the use of Low E glass doors, windows or facades that reduce the UV transmissions to less than 1%.
- D. Areas of the flooring subjected to direct sunlight, for example through doors or windows, must be covered using blind, curtains, cardboard or similar materials for 24-hours before, during, and for a period of 72-hours after the installation to allow nora “west” adhesives to cure. Do not allow traffic when using wet set adhesives for a minimum of 12-hours and prohibit rolling loads for 72-hours. When using nora® nTx or nora ® dryfix 750, the flooring can be trafficked immediately with no restrictions. All flooring must be protected from damage during construction operations using Masonite, plywood or a similar product. Before laying the panels the flooring surface must be free of all debris. Lay panels so that they are edge to edge and tape the joints to prevent movement and debris entrapment. Inspect the flooring before covering and after removal for final acceptance.

- E. Conduct post-installation cleaning after 72-hours for wet set adhesives. Conduct post-installation cleaning immediately for installations using nora dryfix 750 or nora nTx. Refer to the appropriate nora® Maintenance Guide for product specific details.

3.2 FLOORING CONTRACTOR RESPONSIBILITIES

- A. Provide trained installers that have at least one of the following:
 - 1. Approved by nora systems, Inc. or INSTALL (International Standards & Training Alliance) certified for the requirements of the project.
 - 2. An effective installation manager to manage the project, installers, and ensure that all of the required procedures are followed as detailed in nora Installation Guide (available at www.nora.com/us).
- B. Follow all requirements in the appropriate nora Installation Guide or nora nTx Installation Guide.

END OF SECTION

PAINTING SECTION 099100

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 for 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 06 2000 - Finish Carpentry
 - 2. Section 09 2000 - 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 and 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 conditions. Paint spots an 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 STOCKS:

- 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 01 2500.
- 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 D-E
BRPR00
(If shop primed, only touch-up is required)
 - 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)	
	1 st Coat	Primer (for touch-up only)	D-E EZPR00
	2 nd Coat	Exterior Acrylic Semi Gloss	W7500V
	3 rd Coat	Exterior Acrylic Semi Gloss	W7500V
B.	INTERIOR:		
1.	Group one:	Gyp Board	
	1 st Coat	Gyp Board Primer - Zero VOC	D-E W600
	2 nd Coat	Acrylic Semi-Gloss - Zero VOC	W603
	3 rd Coat	Acrylic Semi-Gloss - Zero VOC	W603
2.	Group two:	Interior Metal - Ferrous	
	1 st Coat	Primer - Rust Black Premium Low VOC	D-E BRPR00
	2 nd Coat	Acrylic Semi-Gloss- Zero VOC	W603
	3 rd Coat	Acrylic Semi-Gloss- Zero VOC	W603
3.	Group three:	Interior Metal - Galvanized	
	1 st Coat	Primer - Ultra Grip - Low VOC	D-E UGPR00
	2 nd Coat	Acrylic Semi-Gloss - Zero VOC	W603
	3 rd Coat	Acrylic Semi-Gloss - Zero VOC	W603
4.	Group four:	Interior Wood	
	1 st Coat	Sealer/Undercoat - Low VOC	D-E W6325
	2 nd Coat	Acrylic Semi-Gloss -Zero VOC	W603
	3 rd 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 chemical 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 ship 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 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 09 2500.

3.3 CLEANING, TOUCH-UP AND REFINISHING:

- A. Touch-up and Refinishing: Runs, sags, misses, holiday, 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 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

IDENTIFYING DEVICES

SECTION 104000

PART 1 - GENERAL

1.1 SUMMARY

- A. The work includes the furnishing and installing of all identifying devices as specified herein.
- B. Related Work:
 - 1. Documents affecting work of this Section include, but are not limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications.

1.2 REFERENCES

- A. ADAAG - Americans with Disabilities Act Accessibility Guidelines; U.S. Architectural and Transportation Barriers Compliance Board.

1.3 SUBMITTALS

- A. Submit under provisions of Section 013219.
- B. Product Data: Manufacturer's descriptive literature for sign types specified, including components and accessories.
- C. Shop Drawings: Indicate location of each individual sign in the project.
- D. Signage Schedule: Each door that is to receive signage, by door number referenced to drawings with indicated pictogram and/or text signage is to receive.
- E. Verification Samples: One full size sample sign of type style and color specified, including method of attachment.
- F. Manufacturer's Instructions: Printed installation/mounting instructions for each product.

1.4 QUALITY ASSURANCE

- A. Regulatory Requirements: Sign types to comply with 2019 CBC, ADAAG requirements, the Americans with Disabilities Act - 2010 (ADA) and ANSI A117.1 - 1992.
- B. All new signage must be field inspected after installation (CBC 11B-703.1.1.2).
- C. Tactile characters and braille to comply with 11B-703.2 and 11B-703.3.

1.5 DELIVERY, STORAGE AND HANDLING

- A. Store products of this section in Manufacturer's unopened packaging until installation.
- B. Maintain dry, climate controlled storage area for products.

PART 2 - PRODUCTS

2.1 APPROVED MANUFACTURER'S

- A. ASI Sign Systems (916) 924-1939, Sacramento, CA.
- B. American Graphics Inc. (800) 653-7982, Montgomery AL.
- C. Grimco Architectural Signs and Graphics, (800) 542-9941, St. Louis, MO.
- D. Or approved equal.

2.2 ROOM SIGNAGE & ACCESSIBLE ENTRY SIGNAGE

- A. All signs are to be one piece extruded clear acrylic with subsurface paint, signs to match existing adjacent signs 1/4" thick (min), radius edges, rated for exterior use only.
- B. Tactile text signs are to have California grade 2 Braille. Contracted Grade 2 Braille shall be used whenever Braille symbols are specifically required. Braille to comply with measurement range and description in Table 11B-703.3.1. All signage shall conform to CBC Section 11B-703.
- C. Mounting: Provide mechanical mount with pre-drilled holes and spanner head counter sunk screws for specified sign thickness and mounting surface, minimum three (3) per round sign and four (4) per square or rectangular sign. See Drawings for specific locations and mounting height criteria.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Site Verification of Conditions: Verify that installation conditions are acceptable for product installation in accordance with manufacturers instructions.

3.2 INSTALLATION

- A. Install product in accordance with suppliers instructions.

- B. Install product in locations indicated using double sided mounting tape and spanner head screws as indicated. Install product level, plumb and at heights indicated and free from distortion, warp or defect adversely affecting appearance..
- C. Install product at heights conforming to Americans with Disabilities Act Accessibility Guidelines (ADAAG), CBC, and applicable local amendments and regulations.
- D. Mounting Conditions: On metal stud framed walls, provide solid metal backing attached to studs, adequate for fastening at all corners of sign.

3.3 CLEANING, PROTECTION AND REPAIR

- A. Repair scratches and other damage which might have occurred during installation.
- B. Remove temporary coverings and protection to adjacent work areas. Clean installed products in accordance with manufacturer's instructions prior to Owner's acceptance.

END OF SECTION

BASIC MECHANICAL MATERIALS AND METHODS
SECTION 220500

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. The requirements of the General Conditions, Supplemental Conditions, and Division 1, General Requirements, apply to the work of this Section.

1.2 SUMMARY

- A. This Section includes the following basic mechanical materials and methods to complement other Division 22 sections.
1. Piping materials and installation instructions common to most piping systems.
 2. Equipment nameplate data requirements.
 3. Non-Shrink grout for equipment installations.
 4. Installation requirements common to equipment specification Sections.
 5. Mechanical demolition.
- B. Pipe and pipe fitting materials are specified in piping system Sections.

1.3 DEFINITIONS

- A. Pipe, pipe fittings, and piping include tube, tube fittings and tubing.
- B. Finished Spaces: Spaces other than mechanical and electrical equipment rooms, furred spaces, pipe and duct shafts, unheated spaces immediately below the roof, spaces above ceiling, un-excavated spaces, crawl spaces, and tunnels.
- C. Exposed Interior Installations: Exposed to view indoors. Examples include finished occupied spaces and mechanical equipment rooms.
- D. Exposed Exterior Installation: Concealed from view and protected from weather conditions and physical contact by building occupants, but subject to outdoor ambient temperatures. Examples include installations within unheated shelters.
- E. Concealed Exterior Installations: Concealed from view and protected from physical contact by building occupants. Examples include above ceilings and in duct shafts.
- F. Concealed Exterior Installations: Concealed from view and protected from weather conditions and physical contact by building occupants, but subject to outdoor ambient temperatures. Examples include installations within unheated shelters.

1.4 SUBMITTALS

- A. Product Data: Submit seven (7) hard copies or one (1) electronic copy of the manufacturer's technical product data and installation instructions for each type of material listed in this Section. 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.

1.5 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 lubrication, inspections required, adjustments, etc.
 - 2. Manufacturer's documentation with part numbers, instructions etc., for each item of equipment.
- C. Post service telephone numbers and/or addresses in an appropriate place as designated by the architect.

1.6 QUALITY ASSURANCE

- A. For all Sections of Work in these Specifications and for all tasks and obligations of the Contract, provide skilled work persons and techniques in each trade required to complete the Work, and who shall be present at all times during the progress of the Work of each trade.
- B. No exception will be made to Contractor nor acceptance given to unacceptable work caused by lack of skill, inappropriate methods or lack of due care in craftsmanship. The level of performance shall, at a minimum, meet or exceed the level of performance set by a regionally or nationally recognized association that produces, publishes, and enforces industry standards for that trade or craft, unless a higher level of performance is specified herein. All such unacceptable work shall be replaced by the Contractor in a good craftsman-like manner at no additional expense to the Owner.

1.7 DELIVERY, STORAGE AND HANDLING

- A. Deliver pipes and tubes with factory-applied end-caps. Maintain end-caps through shipping, storage, and handling to prevent pipe-end damage and prevent entrance of dirt, debris, and moisture.
- B. Protect stored pipes and tubes from moisture and dirt. Elevate above grade. When stored inside, do not exceed structural capacity of the floor.
- C. Protect flanges, fittings, and piping specialties from moisture and dirt.

1.8 SEQUENCING AND SCHEDULING

- A. Coordinate mechanical equipment installation with other building components.
- B. Arrange for chases, slots, and openings in building structure during progress of construction to allow for mechanical installations.
- C. Sequence, coordinate, and integrate installations of mechanical materials and equipment for efficient flow of the Work. Coordinate installation of large equipment requiring positioning prior to closing in the building.
- D. Coordinate connection of electrical services.
- E. Coordinate requirements for access panels and doors where mechanical items requiring access are concealed behind finished surfaces.
- F. Coordinate installation of identifying devices after completing covering and painting where devices are applied to surfaces.

PART 2 - PRODUCT

2.1 PIPE AND PIPE FITTINGS

- A. Refer to individual piping system specification Section in Division 22 for special joining materials not listing below.
- B. Pipe Threads: ASME B1.20.1 for factory threaded pipe and pipe fittings.

2.2 JOINING MATERIALS

- A. Refer to individual piping system specification Section in Division 22 for special joining materials not listed below.

- B. Pipe Flange Gasket Materials: Suitable for the chemical and thermal conditions of the piping system contents.
- C. Flange Bolts and Nuts: ASME B18.2.1, carbon steel, except where other material is indicated.
- D. Solder Filler Metal: ASTM B32
 - 1. Alloy Sn95 or Alloy Sn94: Tin (approximately 95%) and silver (approximately 5%) having 0.10% maximum lead content.
 - 2. Alloy E: Tin (approximately 95%) and copper (approximately 5%), having 0.10% maximum lead content.
 - 3. Alloy HA: Tin-antimony-silver-copper-zinc, having 0.10% maximum lead content.
 - 4. Alloy HB: Tin-antimony-silver-copper-nickel, having 0.10% maximum lead content.
 - 5. Alloy Sb5: Tin (9%) and antimony (5%), having 0.20% maximum lead content.
- E. Brazing Filler Metals: AWS A5.8.
 - 1. BcuP Series: Copper-phosphorus alloys.
 - 2. BAg1 Series: Silver alloy.
- F. Welding Filler Metals: Comply with AWS D10.12 for welding materials appropriate for wall thickness and chemical analysis of steel pipe being welded.
- G. Flanged, Ductile-Iron Pipe Gasket, Bolts, and Nuts: AWWA C110, rubber gasket, carbon steel bolts and nuts.
- H. Couplings: Iron body sleeve assembly, fabricated to match outside diameters of plain-end pressure pipes.
 - 1. Sleeve: ASTM A 126, Class B, gray iron.
 - 2. Followers: ASTM A 47 (ASTM A 47M), Grade 32510 or ASTM A 536 ductile iron.
 - 3. Gaskets: Rubber.
 - 4. Bolts and Nuts: AWWA C111.
 - 5. Finish Enamel Paint.

2.3 PIPING SPECIALTIES

- A. Escutcheons: Manufactured wall, ceiling, and floor plates; deep-pattern type where required to conceal protruding fittings and sleeves.
- B. Dielectric Fittings: Assembly or fitting having insulating material isolating joined dissimilar metals to prevent galvanic action.

1. Description: Combination of copper alloy and ferrous; threaded, solder, plain, and weld neck end types and matching piping system materials.
- C. Sleeves: The following materials are for wall, floor, slab, and roof penetrations:
 1. Steel Sheet-Metal: 24-gage (0.07 mm) or heavies galvanized sheet metal, round tube closed with welded longitudinal joint.
 2. Steel Pipe: ASTM A 53, Type E, Grade A, Schedule 40, galvanized plain ends.

2.4 GROUT

- A. Non-Shrink, Nonmetallic Grout: ASTM C 1107, Grade B.
 1. Characteristics: Post-hardening, volume-adjusting, dry, hydraulic-cement grout, non-staining, non-corrosive, nongaseous, and recommended for interior and exterior applications.
 2. Design Mix: 5000-psi (34.50mpa), 28-day compressive strength.
 3. Packaging: Premixed and factory-packaged.

PART 3 - EXECUTION

3.1 PIPING SYSTEMS - COMMON REQUIREMENTS

- A. General: Install piping as described below, except where system Sections specify otherwise. Individual piping system specification Sections in Division 22 & 23 specify piping installation requirements unique to the piping system.
- B. General Locations and Arrangements: Drawings (plans, schematics, and diagrams) indicate general location and arrangement of piping systems. Indicated locations and arrangements were used to size pipe and calculate friction loss, and other design considerations. Install piping as indicated, except where deviations to layout are approved on coordination drawings.
- C. Install components having pressure ratings equal to or greater than system operating pressure.
- D. Install piping free of sags and bends.
- E. Install exposed interior and exterior piping at right angles or parallel to building walls. Diagonal runs are prohibited, except where indicated.
- F. Install piping tight to slabs, beams, joists, columns, walls, and other building elements. Allow sufficient space above removable ceiling panels to allow for ceiling panel removal.
- G. Install piping to allow application of insulation plus 1-inch (25mm) clearance around insulation.

- H. Locate groups of pipes parallel to each other, spaced to permit valve servicing.
- I. Install fittings for change in direction and branch connections.
- J. Install couplings according to manufacturer's printed instructions.
- K. Install sleeves for pipes passing through concrete and masonry walls, concrete floor and roof slabs, and where indicated.
- L. Install sleeves for pipes passing through concrete and masonry walls, gypsum-board partitions, concrete floor and roof slabs, and where indicated.
- M. Fire Barrier Penetrations: Maintain indicated fire rating of walls, partitions, ceilings, and floors at pipe penetrations. Seal pipe penetrations with firestopping sealant material using methods approved by the Fire Marshall.
- N. Verify final equipment locations for roughing in.
- O. Refer to equipment specifications in other Sections for rough-in requirements.
- P. Piping Joint Construction: Join pipe and fittings as follows and as specifically required in individual piping system Sections.
 - 1. Ream ends of pipes and tubes and remove burrs. Bevel plain ends of steel pipe.
 - 2. Remove scale, slag, dirt, and debris from inside and outside of pipe and fittings before assembly.
 - 3. Soldered Joints: Construct joints according to AWE "Soldering Manual", Chapter 22 "The Soldering of Pipe and Tube"
 - 4. Brazed Joints: Construct joints according to AWS "Brazing Manual" in the "Pipe and Tube" Chapter.
 - 5. Threaded Joints: Thread pipe with tapered pipe threads according to ASME B1.20.1. Cut threads full and clean using sharp dies. Ream threaded pipe ends to remove burr and restore full inside diameter. Join pipe fittings and valves as follows:
 - a. Note the internal length of threads in fittings or valve ends, and proximity of internal seat or wall, to determine how far pipe should be threaded into joint.
 - b. Apply appropriate tape or thread compound to external pipe threads (except where dry seal threading is specified).
 - c. Align threads at point of assembly.
 - d. Tighten joint with wrench. Apply wrench to valve end into which pipe is being threaded.
 - e. Damaged Threads: Do not use pipe or pipe fittings having threads that are corroded or damaged. Do not use pipe sections that have cracked or open welds.

6. Welded Joints: Construct joints according to AWS D10.12 “Recommended Practices and Procedures for Welding Low Carbon Steel Pipe” using qualified processes and welding operators according to the “Quality Assurance” Article.
 7. Flanged Joints: Align flange surfaces parallel. Select appropriate gasket material, size, type, and thickness for service application. Install gasket concentrically positioned. Assemble joints by sequencing bolt tightening to make initial contact of flanges and gaskets as flat and parallel as possible. Use suitable lubricants on bolt threads. Tighten bolts gradually and uniformly using torque wrench.
- Q. Piping Connections: Except as otherwise indicated, make piping connections as specified below.
1. Install unions in piping 2 inches and smaller adjacent to each valve and at final connection to each piece of equipment having a 2-inch or smaller threaded pipe connection.
 2. Install flanges in piping 2-1/2 inches and larger adjacent to flanged valves and at final connection to each piece of equipment having flanged pipe connection.
 3. Dry Piping System (Gas, Compressed Air, and Vacuum): Install dielectric unions and flanges to connect piping materials of dissimilar metals.
 4. Wet Piping Systems (Water and Steam): Install dielectric coupling and nipple fittings to connect piping materials of dissimilar metals.

3.2 EQUIPMENT INSTALLATION - COMMON REQUIREMENTS

- A. Install equipment to provide the maximum possible headroom where mounting heights are not indicated.
- B. Install equipment according to approved submittal data. Portions of the Work are shown only in diagrammatic form. Refer to conflicts to the Architect.
- C. Install mechanical equipment to facilities servicing, maintenance, and repair or replacement of equipment components. Connect equipment for ease of disconnecting. With minimum of interference with other installations. Extend grease fittings to an accessible locations.
- D. Install equipment giving right-of-way to piping systems installed at a required slope.

3.3 PAINTING AND FINISHING

- A. Refer to Division 9 for field painting requirements.
- B. Damage and Touch Up: Repair marred and damaged factory-painted finishes with materials and procedures to match original factory finish.

3.4 DISCREPANCIES

- A. In the event of discrepancies in any area of Work, immediately notify the Architect. Do not proceed with installation until all such discrepancies have been full resolved.

3.5 CUTTING AND PATCHING

- A. Provide required protection including, but not necessarily limited to, shoring, bracing, and support to maintain structural integrity of the Work.
- B. Perform cutting and demolition by methods which will prevent damage to other portions of the Work and provide proper surfaces to receive installation of repair and new work.
- C. Perform fitting and adjusting of products to provide finished installation complying with the specified tolerances and finishes.
- D. Install nonmetallic non-shrink grout for mechanical equipment base bearing surfaces, pump and other equipment base plates, and anchors. Mix grout according to manufacturer's printed instructions.
- E. Clean surfaces that will come into contact with grout.
- F. Provide forms for placement of grout, as required.
- G. Avoid air entrapment when placing grout.
- H. Place grout to completely fill equipment bases.
- I. Place grout on concrete bases to provide a smooth bearing surface for equipment.
- J. Place grout around anchors.
- K. Cure placed grout according to manufacturer's printed instructions.

END OF SECTION

PLUMBING
224000

PART 1 - GENERAL

1.1 The General Conditions and Supplementary Conditions apply to this Section.

1.2 **SCOPE**

Provide plumbing where shown on the Drawings, as specified herein, and as needed for a complete and proper installation including, but not necessarily limited to:

- A. Domestic hot and cold water piping systems.
- B. Drain, waste, and vent systems.
- C. Gas, water and sewer service connections per local requirements.
- D. Plumbing fixtures and trim as shown on the Drawings.
- E. Condensate lines.

1.3 **DRAWINGS**

- A. Examine all drawings prior to starting of 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 **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.

1.5 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. Product Data: Submit seven (7) hard copies or one (1) electronic copy of the manufacturer's technical product data and installation instructions for each type of fixture, material, or piece of equipment. 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 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.

1.6 STERILIZATION CERTIFICATE

- A. Upon completion of water line sterilization, deliver to the Architect two copies of an acceptable "Certificate of Performance" for the activity.

1.7 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 lubrication, inspections required, adjustments, etc.
 2. Manufacturer's documentation with part numbers, instructions etc., for each item of equipment.
- C. Post service telephone numbers and/or addresses in an appropriate place as designated by the architect.

1.9 FIELD MEASUREMENT

- A. Make necessary measurements in the field to assure precise fit of items included in plumbing. Verify dimensions with all framing and concrete work prior to installing any components. Notify architect immediately of any discrepancies.

1.10 RECORD DRAWINGS

- 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 - MATERIALS

- 2.1 FIXTURE SCHEDULE:** (As shown on Plumbing Drawings - see Plumbing Fixture Schedule)

- 2.2 PIPE SCHEDULE:** (As shown on Plumbing Drawings - see Plumbing Material Specifications)

2.3 MISCELLANEOUS MATERIALS

- A. Gate valves: Provide solid wedge disc, rising stem, WOG; rising stem: Provide Nibco T-126 bronze, screwed, or 5-126, solder.
- B. Globe valves: Provide replaceable composition disc suitable for 200 degree F water: 2 ½ and smaller; Provide Nibco F-718-B, bronze, screwed.
- C. Gas cocks: 2" and smaller: Provide 250# bronze, screwed, square head, 125# (Rockwell Fig 142).
- D. Ball valves: two or three piece construction, forged bronze body, chrome plated brass ball, threaded ends, Teflon seats, PTFE or reinforced Teflon stem seals, lever handles. Milwaukee BA100/150, BA 300/350.

- E. Flashing: Where pipe of this Section pass through the roof, flash with 24 ga. galvanized sheet metal, counter flashing to be 24 ga. sheet metal.
- F. Traps for lavatories and sinks, except service sinks, chrome plated 17-ga. brass with clean out.
- G. Insulation:
 - 1. Provide 1" thick, 3 ½ pound per cubic foot fiberglass with all-service jacket (aluminum jacket with stainless steel bands outdoors) for all hot water and hot water returns (service at 105-140 F) up to 4" diameter.
 - 2. Pipe wrapping
 - a. Steel piping in concrete or underground:
 - (1) Wrap with 20 mil tape.
 - (2) Fittings and other joints: Wrap in the field with 20 mil tape and primer.
 - (3) Provide 50% overlap on tape weld rubber coating.
 - b. Sleeves: Where pipes pass through concrete, masonry, or stud walls, or pass through ceilings, provide a sleeve of the size required.
- H. 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.

PART 3 - EXECUTION

3.1 SURFACE CONDITIONS

- A. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions are corrected.

3.2 PLUMBING SYSTEM LAYOUT

- A. Lay out the plumbing system in careful coordination with the Drawings, determining proper elevations for all components of the system and using only a minimum number of bends to produce a satisfactorily functioning system.
- B. Follow the general layout shown on the Drawings in all cases except where other work may interfere.
- C. Lay out pipes to fall within partition, wall, or roof cavities, and to not require furring other than as shown on the Drawings.

- 3.3** Perform trenching and backfilling associated with the work of this Section in strict accordance with all provisions of these Specifications.

- A. Cut bottom of trenches to grade. Make trenches 12" wider than the greatest dimension of the pipe.
- B. Bedding and backfilling:
 - 1. Install piping promptly after trenching. Keep trenches open as short a time as practicable.
 - 2. Under the building, install pipes on a 6" bed of damp sand. Backfill to bottom of slab with damp sand.
 - 3. Outside the building, install underground piping on a 6" bed of damp sand. Backfill to within 12" of finish grade with damp sand. Backfill remainder with native soil.
 - 4. Do not backfill until installation has been approved and until Project Record Documents have been properly annotated.

3.4 INSTALLATION OF PIPING AND EQUIPMENT

- A. General:
 - 1. Proceed as rapidly as the building construction will permit.
 - 2. Thoroughly clean items before installation. Cap pipe openings to exclude dirt until fixtures are installed and final connections have been made.
 - 3. Cut pipe accurately, and work in place without springing or forcing, properly clearing windows, doors, and other openings. Excessive cutting or other weakening of the building will not be permitted.
 - 4. Show no tool marks or threads on exposed plated, polished, or enameled connections from fixtures. Tape all finished surfaces to prevent damage during construction.
 - 5. Make changes in directions with fittings; make changes in main sizes with eccentric reducing fittings. Unless otherwise noted, install water supply piping with tap tees feeding up to fixtures.
 - 6. Run horizontal sanitary and storm drainage piping at a uniform grade of 1/4" per ft, unless otherwise noted. Run horizontal water piping with an adequate pitch upwards in direction of flow to allow complete drainage.
 - 7. Provide sufficient swing joint, ball joints, expansion loops, and devices necessary for a flexible piping system, whether or not shown on the Drawings.
 - 8. Support piping independently at pumps, coils, tanks, and similar locations, so that weight or pipe will not be supported by the equipment.
 - 9. Pipe the drains from pump glands, drip pans, relief valves, air vents, and similar locations, to spill over an open sight drain, floor drain, or other acceptable discharge point, and terminate with a plain end unthreaded pipe 6" above the drain.
 - 10. Securely bolt all equipment, isolators, hangers, and similar items in place.
 - 11. Support each item independently from other pipes. Do not use wire for hanging or strapping pipes.
 - 12. Provide complete dielectric isolation between ferrous and non-ferrous metals.

13. Provide union and shut off valves suitably located to facilitate maintenance and removal of equipment and apparatus, whether shown or not.
14. Provide adequate drainage slope on condensate drains.
15. Equipment access:
 - a. Install piping, equipment, and accessories to permit access for maintenance. Relocate items as necessary to provide such access, and without additional cost to the Owner.
 - b. Provide access doors where valves, water hammer arresters, motors, or equipment requiring access for maintenance are located in walls or chases or above ceilings. Coordinate location of access doors with other trades as required.

B. Pipe Joints

1. Copper tubing:
 - a. Cut square, remove burrs, and clean inside of female fittings to a bright finish.
 - (1) Apply solder flux with brush to tubing.
 - (2) Remove internal parts of solder-end valves prior to soldering.
 - b. Provide dielectric unions at points of connection of copper tubing to ferrous piping and equipment.
 - c. For joining copper tubing, use:
 - (1) Water piping 3" and smaller: "Lead free" solder;
 - (2) Underground: "sil-fos" brazing.
2. Screwed piping:
 - a. Deburr cuts.
 - (1) Do not ream exceeding internal diameter of the pipe.
 - (2) Thread to requirements of ANSI B2.1.
 - b. Use Teflon tape on male thread prior to joining other services.
3. Leaky joints:
 - a. Remake with new material.
 - b. Remove leaking section and/or fitting as directed.
 - c. Do not use thread cement or sealant to tighten joint.

C. Pipe Supports:

1. Support suspended piping with clevis or trapeze hangers and rods. Pipe supports shall be spaced per California Plumbing Code requirements.
2. Provide sway bracing on hangers longer than 18".
3. Support vertical piping with riser clamps secured to the piping and resting on the building structure. Provide at partition top plates.
4. Provide insulation continuous through hangers and rollers. Protect insulation by galvanized steel shields.
5. Arrange pipe supports to prevent excessive deflection, and to avoid excessive bending stress.
6. Support piping from inserts or anchors in concrete slabs.

7. Hubless piping:
 - a. Provide hangers on the piping at each side of, and within 6" of, hubless pipe coupling so that coupling will bear no weight.
 - b. Do not provide hangers on couplings.
 - c. Provide hangers adequate to maintain alignment and to prevent sagging of the pipe.
 - d. Make adequate provision to prevent shearing and twisting of the pipe and the joint.
- D. Sleeves and Openings
 1. Provide sleeves for each pipe passing through walls, partitions, floors, roofs, and ceilings.
 - a. Set pipe sleeves in place before concrete is placed.
 - b. For uninsulated pipe, provide sleeves two pipe sizes larger than the pipe passing through, or provide a minimum of ½" clearance between inside and outside of the pipe.
 - c. For insulated pipe, provide sleeves of adequate size to accommodate the full thickness of pipe covering, with clearance for packing and caulking.
 2. Caulk the space between sleeve and pipe or pipe covering, using a noncombustible, permanently plastic, waterproof, non-staining compound which leaves a smooth finished appearance, or pack with noncombustible asbestos cotton, rope, or fiberglass to within ½" of both wall faces, and provide the waterproof compound described above.
 3. Finish and escutcheons:
 - a. Smooth up rough edges around sleeves with plaster or spackling compound.
 - b. Provide 1" wide chrome or nickel plated escutcheons on all pipes passing through walls, floors, partitions, ceilings, and similar locations.
 - c. Size the escutcheons to fit pipe and covering.
 - d. Hold escutcheons in place with set screw.
- E. Cleanouts:
 1. Secure the Architect's approval of locations for cleanouts in finished areas prior to installation.
 2. Provide cleanouts of same nominal size as the pipes they serve.
 3. Make cleanouts accessible. After pressure tests are made and approved, thoroughly graphite the cleanout threads.
- F. Valves:
 1. Provide valves in water and gas systems. Locate and arrange so as to give complete regulation of apparatus, equipment and fixtures.
 2. Provide valves in at least the following locations:
 - a. In branches and/or headers of water piping serving a group of fixtures.
 - b. On both sides of apparatus and equipment.

- c. For shutoff of risers and branch mains.
 - d. For flushing and sterilizing the system.
 - e. Where shown on the Drawings.
 - 3. Locate valves for easy accessibility and maintenance.
- G. Backflow Prevention:
 - 1. Protect plumbing fixtures, faucets with hose connections, and other equipment having plumbing connection, against possible back-siphonage.
 - 2. Arrange for testing of backflow devices as required by the governmental agencies having jurisdiction.
- H. Plumbing Fixture Installation
 - 1. Installation:
 - a. Set fixtures level and in proper alignment with respect to walls and floors, and with fixtures equally spaced.
 - b. Provide supplies in proper alignment with fixtures and with each other.
 - c. Provide flush valves in alignment with the fixture, without vertical or horizontal offsets.
 - 2. Grout wall and floor mounted fixtures watertight where the fixtures are in contact with walls and floors.
 - 3. Caulk deck-mounted trim at the time of assembly, including fixture and casework mounted. Caulk self-rimming sinks installed in casework.
- I. Disinfection of Water Systems
 - 1. Disinfect hot and cold water systems.
 - a. Notify the Architect at least 48 hours prior to start of the disinfection process.
 - b. Upon completion of disinfecting, secure and submit the Certificate of Performance required under Article 2a of this Section, stating system capacity, disinfectant used, time and rate of disinfectant applied and resultant residuals in ppm at completion.
 - 2. When disinfection operation is completed, and after final flushing, securing, and analysis, based on water samples from the system, showing test negative for coli-aerogene organisms. Provide a total plate count of less than 100 bacteria per cc, or equal to the control sample.
 - a. Upon completion of disinfecting, secure and submit the Certificate of Performance required by the County Health Dept, stating system capacity, disinfectant used, time and rate of disinfectant applied and resultant residuals in ppm at completion.
 - b. Use disinfectant method approved by the Owner.
 - 3. If analysis results are not satisfactory, repeat the disinfection procedures and retest until specified standards are achieved.

- J. Other Testing and Adjusting.
1. Provide personnel and equipment, and arrange for the pay the costs of, all required tests and inspections required by governmental agencies having jurisdiction.
 2. Where tests show materials or workmanship to be deficient, replace or repair as necessary, and repeat the tests until the specified standards are achieved.
 3. Adjust the system to optimum standards of operation.

END OF SECTION

ELECTRICAL GENERAL REQUIREMENTS

SECTION 260000

PART 1 - GENERAL

1.1 INCLUSION OF GENERAL CONDITIONS AND DIVISION ONE

- A. The General Conditions, Supplemental Conditions, and Division 1, 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.

1.2 SCOPE

- A. Work under this Section includes all labor, materials, tools, plant equipment, transportation and perform all operations necessary for proper execution and completion of all electrical work whether specifically mentioned or not; all as indicated, specified herein, and/or implied thereby to carry out apparent intent thereof. Items of work include, but are not limited to, the following:
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 materials and labor to avoid omissions and delays.
 2. Complete system of wiring distributions including panelboards, transformers and all power hookups to relocatable, as shown on the drawings.
 3. Addition to existing Fire Alarm system and all modifications.
 4. Addition to existing Phone system.
 5. Addition to existing Data system.
 6. Excavation, backfill, framing and other associated work required for the installation of the electrical system.
 7. Submission of shop drawings.
 8. As-Built drawings.
 9. Tests.
 10. Prepare day-by-day record of "as-built" changes as specified hereinafter.
 11. Furnish, install and connect all line voltage wiring to mechanical equipment and other electrical equipment.

1.3 WORK NOT INCLUDED

- A. The following work as outlined is not included in the Electrical Contract; however, this Contract shall cooperate with other contractors involved and shall be responsible to give complete directions on sizes of openings, locations, etc., and to insure that the completed electrical installations shall be of a good workmanship and in accordance with drawings and specifications.

- B. Equipment or work indicated “NIC” or “By Others.”

1.4 PERMITS AND ORDINANCES

- A. Comply with all codes, ordinances, and authorities having jurisdiction, including all local public utility requirements, the California Building Code and the California Electrical Code. Electrical Contractor shall procure and pay for all permits, licenses, etc. required to carry on and complete the work.

1.5 SPECIFICATION AND CONTRACT DRAWINGS

- A. 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 Contract and exact locations, distances, levels, etc., will be governed by the building and the Contractor shall accept same with the understanding.
- B. Drawings and specifications may be superseded by later detail specifications and detail drawings prepared by the Architect, and the Contractor shall conform to them and to such reasonable changes in the Contract drawings as may be called for those revised drawings without extra cost to the Owner. Where work called for exceeds code requirements, drawings and specifications shall take precedence.
- C. 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.
- D. Should Contractor proceed with work without so reporting the 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 the same is installed and no extra materials are required.

1.6 STRUCTURAL REQUIREMENTS

- A. Installation under this Section shall comply with the California Building Code and Title 24.

1.7 EXAMINATION OF SITE

- A. The Contractor shall be held to have visited the site and satisfied himself as to the conditions under which the work is to be performed. He shall check existing conditions which may affect his work. No allowance shall subsequently be made in his behalf for

extra expense to which he may be put due to failure or neglect to discover conditions affecting his work.

1.8 MANUFACTURER'S DIRECTIONS

- A. Follow manufacturer's directions where these directions cover points not included in the drawings or in the specifications.

1.9 CLEANING

- A. After all work has been accomplished such as sanding, painting, etc., lighting fixtures, panelboards, and switchboards shall be cleaned to remove all dust, dirt, grease, paint, or other marks. All electrical equipment shall be left in a clean condition inside and outside, satisfactory to the Architect.

1.10 WORKMANSHIP

- A. Workmanship shall be of the best quality and shall be performed by skilled craftsmen to insure long and trouble-free service. The requirements of the Codes and Safety Orders are minimum standards.

1.11 REVIEW SUBMITTALS

- A. Materials List: Submit to the Architect for review, seven (7) copies of submittals covering the following items to be furnished under this Section. This submittal shall specifically include:
 - 1. Service switchboards.
 - 2. Panelboards.
 - 3. Fire Alarm system addition.
- B. 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 submittals which contain 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.
- C. 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.
- D. Shop drawings and all supporting data shall be submitted as instruments of the Contractor. Contractor shall place his stamp on the cover sheet of submittals 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.

- E. Should the original submittal of a proposed substitution be rejected, the specified item shall be furnished.
- F. 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, light fixtures, fire alarm system, signals systems and miscellaneous systems. Submittals which consist of all brochures for all classifications of equipment to be furnished bound in one single book shall be returned unreviewed. Proposed substitutions shall be accompanied by catalog cuts, ratings, sizes, performances 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 Xerox copies. Fax submittals are not acceptable and will be returned unreviewed.
- G. 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 relived by approval 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 future reference.
- H. 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 number and nameplates shall be in table form. Terminal cabinet submittals shall include elevations with terminal strip mounting arrangement.
- I. 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 on 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 manufacture of the equipment and who has nationally distributed catalog covering ratings and specifications of said equipment.
- J. Electrical materials shall bear the label of, or be listed by, the Underwriters' Laboratories unless a type for which label or listing service is not provided.
- K. Materials and components shall conform to industrial standards including:

1. N.E.M.A - National Electrical Manufacturers' Associations.
 2. A.S.A - American Standards Association
 3. A.S.T.M. - American Society of Testing Materials
 4. I.P.C.E.A. - Insulated Power Cable Engineers' Association.
 5. C.B.M. - Certified Ballast Manufacturers.
- L. Sample of fixtures, materials and equipment shall be submitted for approval of Architect if requested.

1.12 CUTTING AND PATCHING

- A. Obtain the Architect's and DSA approval before performing any cutting and patching of concrete, masonry, or wood structure by this installation and including provisions for holes in concrete before concrete is poured.

1.13 PROTECTION

- A. The Contractor shall protect from damage during construction, the work, and materials of other trades as well as the electrical work and materials. Electrical equipment stored and installed on the job site shall be protected from dust, water, or any other damage.

1.14 IDENTIFICATION OF EQUIPMENT

- A. Nameplates shall be installed on electrical equipment. Equipment to be labeled shall include the following:
1. Individuals enclosures such as disconnect switches, time switches, pushbuttons, contractors, relays, motor starters, etc.
 2. Group mounted equipment such as panelboards, switchboards, motor control devices.
 3. Individual circuit breakers on switchboards.
 4. Wall switches for lighting or other use where the control function is not self-evident.
 5. Existing panel boards, disconnects, etc which are reused shall be re-labeled in accordance with this section. All old labeling, if any, shall be removed.
- B. Each panel shall be labeled externally to provide the following information as a minimum:
1. Panel name.
 2. Size of feeder feeding the panel.
 3. Rated voltage, amps and phases.
- C. Each main service switchboard and distribution panel shall be labeled to provide the following information as a minimum:
1. Rated voltage, amps and phases.

2. Main switch rating.
 3. Feeder circuit breaker rating with name of panel or equipment fed and size of feeder to this equipment.
- D. Nameplates shall adequately describe the item and its' function or use of the particular equipment involved.
- E. Manufacturers label shall include date of manufacture.
- F. Nameplate material shall be laminated phenolic plastic, black front and back with white core. Engraving shall be through the outer layer. Embossed plastic pressure sensitive labels are not acceptable.
- G. In lieu of plastic plates, device plates shall be engraved directly with lettering filled with black enamel.
- H. Nameplates shall be securely fastened to the equipment with #4 Philips round head cadmium plated steel self-tapping screws.

1.15 EXCAVATION AND BACKFILL

- A. Perform excavation and backfill required for electrical installation. Restore surfaces roadways, walks, curbs, walls, existing underground installations or original conditions in an acceptable manner.
- B. Excavation: Dig trenches straight and true to line and grade, with bottom smoothed of any rock points. Support conduit of entire length on undisturbed, original earth. Minimum conduit depth of pipe crown shall be twenty-four (24") below finished or natural grade.
- C. Backfill: Provide all necessary backfill material placement and compaction for trenches. Backfill may be sand or native soil.

1.16 TESTS

- A. The entire electrical installation shall be free from short circuits and improper grounds. Test all wiring and connections for continuity and grounds before any fixtures or equipment are connected and where such tests 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 panelboard. Rotation of all motors shall be checked and corrected, if necessary, after final connections are made. Demonstrate to the Owner and the Engineer that the entire installation is complete, in proper operating condition and that the Contract has been properly and fully executed. Provide all instruments to make such tests.

- B. All signal systems listed and described in Part 2 shall be tested in the presence of the Owner's representative or the enforcing authority as applicable and provide a completion certificate and successful test report to the Architect. Three copies shall be provided. Provide minimum of five days notice prior to tests.
- C. System test shall be performed only by an individual who has attended 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 the manufacturer; testing by means other than the manufacturer's procedures will not be acceptable unless agreed to by the Owner, specifying Engineer and the Manufacturer.

1.17 WORKING SPACE

- A. Adequate working space shall be provided around electrical equipment in strict compliance with California Electrical Code and Electrical Safety Orders, with particular reference to CEC Article 110-16 and 384-4. 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 (42") for 480 volts.

1.18 AS-BUILT DRAWINGS

- 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 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, pull boxes, 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.
- 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.

1.19 GUARANTEE

- A. Acceptance of the Contract for this work includes this guarantee: The Contractor guarantees that he has performed the work in accordance with the Contract Documents. Contractor agrees to replaced or repair, as new, any defective work, materials, or part which may appear within one year (1) year of final acceptance, if, in the opinion of the Architect or the Owner, the defect is due to workmanship or material.

1.20 WARRANTIES, GUARANTEES, CERTIFICATES, ETC.

- A. 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 acceptance of the work by the Owner and shall be delivered to the Architect.

1.21 COOPERATION AND COORDINATION

- A. Cooperate and coordinate with other crafts in putting the installation in place at a time when the space required by this installation is accessible. Work done without regard to other crafts shall be moved at the Contractor's expense.

1.22 FLASHING AND SEALING

- A. 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.

1.23 ELECTRICAL WORK FOR MOTORS AND APPLIANCES FURNISHED BY OTHERS:

- A. 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 at his own risk and shall alter work if required at his own expense.
- B. Mechanical and Plumbing Contractors shall furnish written or printed specifications, dimension sheets and diagrams for the electrical work applying to the actual equipment being installed. Electrical Contractor shall be responsible for obtaining this information in a timely manner and shall assist other Contractors in testing of their systems, 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.

1.24 ACCEPTANCE BY GOVERNING AUTHORITIES

- A. Upon the completion of the electrical work, and as a condition of its acceptance, this Contractor 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.

1.25 CLEANING UP

- A. Keep the premises in a neat, safe and orderly condition 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. All items removed from the existing installation shall be removed from the site.

1.26 OPERATIONS AND MAINTENANCE MANUALS

- A. Submit the following prior to final acceptance and request for final payment for Division 16 work, in conformance with the Project Closeout requirements of the General Provisions.
 - 1. As-Built Drawings.
 - 2. Operation and Maintenance Manuals.
- B. Provide four complete sets of Operation and Maintenance Manuals including, but not limited to, the following:
 - 1. Shop Drawing and Installation, Operation and Maintenance Manuals for all power distribution and control equipment including service and distribution equipment, branch panels, etc.
 - 2. Schematics diagrams, installation wiring diagrams and instructions and Operation and Maintenance Manuals for all communications, special systems, signaling and control systems and equipment.
 - 3. Copies of certificates of code authority acceptance, and test data and other special guarantees, warranties, etc. specified elsewhere herein and/or indicated on the Drawings.
- C. Assemble each set in standard hardback, 3-ring binders. Do not exceed binder fill of 50 percent; i.e., 1-inch thickness of paper in 2-inch binder. Use tabular dividers to organize the materials in the same order as this Specification. Mark each divider according to (sub)section number and name.

END OF SECTION

ELECTRICAL DISTRIBUTION SYSTEM
SECTION 260110

PART 1 - GENERAL

1.1 DISCONNECT SWITCHES

- A. Units shall be heavy duty fused disconnect switches, tow or three pole type, where indicated on the Drawings or as required by Code. Switches and fuses shall be as required by the loads serving.
- B. Fuse rating shall be the maximum indicated on the nameplate of the equipment.

1.2 TERMINAL CABINETS

- A. Terminal cabinets shall be of panelboard type construction and finish.
- B. Trim shall be fitted with hinged door and flush latch.
- C. Doors shall provide maximum size openings to box interior.
- D. Boxes shall be provided with half inch ($\frac{1}{2}$ ") backboard having a two coat insulating varnish finish.
- E. Top of cabinet shall be 6'-6" above finished floor.
- F. Flush terminal cabinet installed adjacent to flush panelboards shall be of the same physical size and trim as the panelboard.
- G. Terminal cabinets for signal systems to be mounted outdoors shall have tamper proof screws.

END OF SECTION

RACEWAYS AND FITTINGS

SECTION 260533

PART 1 - GENERAL

1.1 RACEWAYS

- A. All wiring shall be in raceways unless otherwise so specifically noted. Raceways shall be run in slabs, walls, above ceilings or exposed as indicated on drawings. Acceptable raceways and their limitations of use are as follows:
1. Rigid Steel Conduit may be used in all areas.
 - a. Standard weight, zinc coated on outside by hot dipped or sherardized process, with either zinc coating or other approved corrosion resistant coating on the inside.
 - b. Fittings shall be threaded and finished similar to conduit. Threadless fittings shall not be used.
 - c. Conduits connected to boxes and cabinets shall be fitted with two locknuts and insulated bushing, OA "A" Series.
 - d. Conduits not connected with locknuts and bushings shall be fitted with grounding bushing, OZ "BL" Series, U.L. approved and bonded.
 - e. Conduit stubs underground shall be capped with coupling, nipple, coupling and plug.
 - f. Conduits connected to boxes, cabinets, etc., exposed to weather or in areas subject to excessive moisture shall be fitted with watertight sealing hubs of steel or malleable iron with sealing ring and insulated throat, T & B 370 Series, Efcor 40-50B Series or equal.
 - g. Conduit shall be wrapped with black 10 mil PVC tape for underground installation. Not required to be concrete encased when run underground except at road or alley crossings.
 - h. Only conduit approved for use on roof and within 8 feet of grades on exterior walls.
 2. Electrical Metallic Tubing (EMT):
 - a. Rolled steel, zinc coated outside with either zinc-coating or other approved corrosion-resistant coating on the inside.
 - b. Coupling shall be rain compression type Appleton TWC-CS series or equal.
 - c. Connectors shall be raintight compression type with insulated throat Appleton TW-CS1 Series or equal.
 - d. May be used:
 1. Concealed in drywall partitions.
 2. Exposed in telephone and electrical equipment room above six foot elevation.
 3. Concealed above furred ceilings.

4. Exposed in fan rooms and/or plenum chambers provided location is dry.
- e. May not be used:
 1. Any location subject to physical damage.
 2. Normal exposed locations on exterior walls, within 8 ft. of grade or roofs.
 3. In boiler and mechanical rooms.
 4. Any other areas not listed under (5) above unless specifically otherwise noted on the plans.
3. Flexible Metal Conduit may be used only for indoor final connections to mechanical equipment (not to exceed 36") and final connections to recessed fluorescent lighting fixtures (not to exceed 72") unless otherwise noted on drawings.
 - a. Minimum trade size - one-half inch (1/2").
 - b. Connectors - T & B "Tite Bite" insulated.
 - c. Suitable for connection of recessed fixtures, control and mechanical equipment. Not permitted where exposed to weather or other wet or corrosive conditions.
 - d. Length shall be a practical minimum, but to allow for movement of equipment connected without restricting flexibility of conduit.
4. Liquid Tight Flexible Metal Conduit - Sealtight: May be used only for outdoor final connections to mechanical equipment and to surface panels and boxes on portable classrooms which are not anchored and tied down to bases.
 - a. Minimum trade size - one-half inch (1/2")
 - b. Connectors - Appleton STB Series through two inch trade size and ST Series with insulated bushings over two inch trade size. Appleton, Crouse-Hinds or equal may be used.
 - c. Length shall be practical minimum, but to allow for movement of equipment connected without restricting flexibility of Sealtight.
5. Poly-Vinyl-Chloride Schedule 40
 - a. Minimum trade size - Three-fourths inch (3/4")
 - b. Joints shall be solvent welded.
 - c. All portions shall be below grade.
 - d. Not suitable for conduit stub for future extension.
 - e. A copper bonding conductor shall be pulled in each power raceway and bonded to equipment at each end with approved lugs.
 - f. Continuation of run above concrete slab or into building interior from underground shall be with rigid steel elbow or bend.
 - g. Connection to steel conduit shall be made with approved threaded adapters.
6. Surface Wiremold: May be used only for indoor installations at locations specifically permitted on the plans.
 - a. Shall be Wiremold #500 with matching connectors and accessories.
 - b. Paint raceway to match wall or ceiling finish.

- c. Non-metallic raceways are not approved.
- 7. Conduit Support:
 - a. Conduit shall be supported with straps, with galvanized malleable split ring and rod for individual runs or with Kindorf, Unistrut, or equal channel for multiple runs. Distance between supports shall not exceed 10 feet. Conduit shall be supported independently of one another.
 - b. Conduits run on roof shall be fastened to a 4" x 6" length as required fire retardant redwood block set in mastic on roof structure using galvanized double hole straps and screws. Multiple conduit runs shall be gathered neatly in straight lines and fastened individually to the redwood block.
- 8. Conduit straps for individual runs shall be secured by toggle bolts on hollow masonry, expansion shields and machine screws on solid concrete or masonry, machine screws or bolts on metal surfaces and wood screws on wood construction. Use of nails to anchor straps on wood construction is prohibited. Straps shall be two holes malleable iron or snap type steel with ribbed back, galvanized or cadmium plated. Use of perforated strap iron or nail type straps is prohibited.
- 9. Conduit Fittings: Except where otherwise noted, conduit fittings shall be Appleton. Unilets shall be malleable iron and fitted with covers and gaskets. Aluminum fittings are not acceptable.
- 10. Telephone and signal conduit bends where required shall have a radius of ten times the conduit trade size.
- 11. Underground conduit bends shall have a minimum radius of twelve times the conduit trade size.
- 12. Conduits shall be capped during construction.
- 13. Provide pull wires in empty conduits. Pull wires shall be #12 TW in conduits 1" and smaller and 3/16" polypropylene rope in conduits 1-1/4" and larger.
- 14. Minimum size underground conduit shall be 3/4".

1.2 BOXES

- A. Boxes shall be of the shape and size best suited for the particular application and shall be supported directly to structural members, framing or blocking by means of screws, anchors, bolts or embedded in masonry.
- B. Switch and receptacle box shall be one piece drawn steel boxes. Minimum size shall be four inches (4") square. Boxes shall be fitted with flush device covers, plastic rings, or tile switch rings in masonry. In areas where exposed wiring is permissible, boxes shall be fitted with surface type covers.
- C. Lighting outlets shall be four inch (4") octagon, minimum fitted with three-eighths inch (3/8") malleable fixture studs.

- D. Floor Boxes: Hubbell dual level fully adjustable round type standard or shallow type as required. Provide multi service box where so indicated.
- E. Weatherproof boxes shall be Appleton FD Series and fitted with gasketed cast covers.
- F. Telephone and television outlet boxes shall be 4-11/16" x 2-1/2" deep minimum, fitted with plaster rings.
- G. Boxes for special equipment shall be suitable for the particular equipment.
- H. Boxes shall be located and placed according to architectural and structural requirements.

1.3 PULL OR JUNCTION BOXES

- A. Install where indicated, or as required by Code, pull boxes and junction boxes of sufficient size and capacity to facilitate all wiring. Boxes shall be sized to properly accommodate all conductors entering same.

1.4 SUPPORTS

- A. Furnish all necessary foundations, supports, backing, etc., for all electrical enclosures, conduits and equipment.
- B. Attach all boxes, cabinets, etc. to wood with wood or lag screws, to metal with machine screws or bolts and to concrete with expansion anchors and machine screws or bolts.
- C. Electrical lighting fixtures weighing 50 lbs. Or more shall not be installed using wood screws for supports to the ceiling. Each such fixture shall have pre-stretched galvanized wires or rods anchored to the roof or structural member of the building.

1.5 CONDUCTORS

- A. Deliver to the site in unbroken packages, plainly marked with the manufacturer's name date of manufacture (not more than six months old), voltage size and classification number.
- B. Branch circuit conductors shall be copper conductors, Type THHN/THWN, unless otherwise noted.
- C. Conductors for feeders and branch circuits installed on the roof shall be copper conductors, Type THWN/THHN, unless otherwise noted.
- D. Minimum size of all conductors shall be #12 AWG unless otherwise indicated on the drawings.

- E. All wiring in continuous rows of fluorescent fixtures shall be Type TEW/AWM.
- F. Conductors shall be as manufactured by Essex, American, Rome Cable Co., or equal.

1.6 SPLICES

- A. Splices of #10 and smaller, including fixture tape, shall be made with Scotchlok connectors, T & B “Piggys” or equal.
- B. Splices of #8 through #4 shall be split bolt service connectors “Kerneys”, T&B “Lock Tites” or equal, insulated with Scotch #88 or Okewelf four-purpose tape.
- C. Splices #2 and larger shall be OZ “ST” Series insulated with Scotchfil and Scotch #88 or Okeweld.
- D. Splices in underground pull boxes shall be Scotchcast cast resin splices.
- E. Wire splicing devices shall be sized according to manufacturer’s recommendations.

1.7 CONDUCTORS IN PANELS

- A. Conductors in panels, motor control centers, etc. shall be laced with T & B Ty-raps.
- B. LUBRICANT: Lubricant for conductor installation shall be powdered soapstone, Y-er EAS, Minerallac “Pull-In” compound or other U.L. approved lubricant. Flax soap is not approved and not permitted on the job.

1.9 SIGNAL CONDUCTORS

- A. Signal conductors shall be as listed on drawings and hereinafter specified.
- B. Connections in terminal cabinets shall be on terminal blocks suitable for the system being installed.

1.10 EXPOSED WIRING

- A. All wiring that is permitted per this specifications to be installed exposed shall be low-smoke plenum-rated. Such exposed wiring shall only be installed in accessible ceiling space.
- B. Wall drops for such wiring shall be in raceways, installed concealed in wall in all new walls and preferably in existing walls as well.

- C. Such cables shall be gathered neatly and tied into bundles every three feet and hung from “J” hangers attached to building structure every six feet. Do not lay these cables over T-bar ceiling or drape them over HVAC ducts. All such runs shall be parallel or perpendicular to building walls.

1.11 CABLE IDENTIFICATION

- A. Non-ferrous identifying tags or pressure sensitive labels shall be securely fastened to all cables, feeders and power circuits in pull boxes and manholes. Tags or labels shall be stamped or printed to correspond with markings on drawings or marked so that feeder or cable may be readily identified.

END OF SECTION

**FIRE ALARM SYSTEM
SECTION 284620**

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

- A. The Contractor shall add to the existing fire alarm system as specified herein and on the drawings for the entire school in compliance with the current California Electrical Code and California Building Code to produce a single complete and fully operational fire alarm system.
- B. The fire alarm system addition shall be an electrically supervised, battery standby, two wire Class B system.
- C. The additional fire alarm system equipment shall be the product of one manufacturer, as specified on the approved plans and compatible with the existing system.
- D. The fire alarm equipment shall have been listed by the California State Fire Marshal.
- E. The fire alarm system shall conform to CBC Sections 305.9 & CEC Article 760 and CFC Article 10.
- F. The successful contractor shall have a minimum of five years experience in the field of school fire alarm systems installation and service. The contractor must also have completed similar systems in the past five years.
- G. It is the contractor's responsibility to provide the School District with a complete and working system that meets the intent of these specifications. Omissions in the written specifications and/or plans will not relieve the contractor of this responsibility.
- H. Contractor must be a factory authorized distributor for the equipment to be installed.
- I. Contractor shall supply the School District with three copies of operation and maintenance manuals, and three sets of keys required to operate or maintain system. The manual shall be bound in a 3 ring binder with instructions necessary for proper operation and servicing of the system and as-built installation drawings. The binder shall have project name/address and name and address of the installing contractor; a copy of all warranties.
- J. The successful bidder must have a service facility within a 100 mile radius of the project. On-the-premises maintenance shall be provided for a period of twelve (12) months from date of completion of installation.

- K. All wiring shall be in conduit, per manufacturer's requirements. Minimum size of conduit shall be ½" indoors. Minimum size of underground conduit shall be 1". Cables shall be as noted on the plans. Minimum size shall be as noted on the plans. Surface wiremold may be used indoors as noted on the plans. All conduits installed underground and on exterior surfaces of a building shall have water tight fittings.

1.2 SUBMITTALS

- A. Submittals for DSA approval are not required for the system specified and shown on the plans as it has already been approved by DSA. Minimum submittals as noted below are required for the review and approval by the Architect/ Engineer to confirm that the system to be installed is the same as the system specified. Such submittals shall have the following as a minimum:
1. Index, including project title, DSA project number, scope of project and address and name of firm submitting the proposal.
 2. Copy of authorized distributor's valid California State Contractor's License, letters of factory authorization and guarantee of service and list of projects of equal scope.
 3. A statement by the installing contractor that the system to be provided is the one specified on the plans and specifications, including all components and devices.

1.3 EQUIPMENT: SCOPE OF WORK/ INSTALLATION

- A. Verify all existing conditions at the site prior to bid.
- B. The campus has, at present, one fire alarm system that will be modified.
- C. Provide horns (exterior and interior), smoke detectors, as shown on plans.
- D. Audible devices shall be a least 15dBA above average ambient sound level but not less than 75dBA at 10ft. Or more than 110dBA in total throughout. The new audible devices shall produce the same basic sound and pattern as existing devices.
- E. Provide cables as required and as shown for system operation. Provide additional pull boxes, conduits, raceways as required for this. Reconnect all devices and the fire alarm control panel to provide a complete and fully functional single fire alarm system for the entire school.
- F. Upon completion of the installation of the fire alarm system, a satisfactory test of the entire system shall be made in the presence of, and witnessed by, the local Fire Authority and the DSA Inspector of Record.

- G. Provide 3 copies of a certificate to the Architect that the fire alarm system components and system installed is in accordance with the approved plans and specifications. Such as certificate shall be signed by the DSA Inspector, the owner's representative, and the installing Contractor. Such a certificate shall also state that the fire alarm system was tested successfully. Provide a Certificate of Completion per NFPA.
- H. See operation matrix on the plans.
- I. Equipment:
 - 1. Fire alarm speaker/strobe.
 - 2. Fire alarm smoke detectors/heat detectors.
 - 3. All system programming.
 - 4. Conduits, cables, pullboxes and all other accessories as required to provide a complete and fully functional system. All fire alarm system devices which are to be surface mounted shall be provided with compatible, red, surface box. Regular outlet boxes are not acceptable for this use. All new devices to be mounted on existing flush or semi-flush devices boxes shall be provided with a red wallplate to hide irregularities in the wall opening.

END OF SECTION

HOT-MIX ASPHALT PAVING SECTION 321216

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplemental Conditions and Division 1 Specification Sections, apply to this Section.
- B. Division 2 - Pavement Marking Paint

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Hot-mix asphalt patching.
 - 2. Hot-mix overlays.

1.3 SYSTEM DESCRIPTION

- A. Provide hot-mix asphalt pavement according to the materials, workmanship and other applicable requirements of the standard specifications of the state of authorities having jurisdiction.
 - 1. Standard Specifications: as indicated.
 - 2. Measurement and payment provisions and safety program submittals included in standard specifications do not apply to this Section.

1.4 SUBMITTALS

- A. Product Data: For each product specified, include technical data and tested physical and performance properties.
- B. Job-Mix Designs: Certification, by authorities having jurisdiction of approval of each job mix proposed for the work.
- C. Job-Mix Designs: For each job mix proposed for the work.
- D. Shop Drawings: Indicate pavement markings, lane separations and defined parking spaces. Indicate dedicated handicapped spaces with international graphics symbol.

- E. Qualifications Data: For firms and persons specified in the “Quality Assurance” Article to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of Architects and Owners and other information specified.
- F. Material Test Reports: Indicate and interpret test results for compliance of materials with requirements indicated.
- G. Material Certificates: Certificates signed by manufacturers certifying that each material complies with requirements.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: Engage an experienced installer who has completed hot-mix asphalt paving similar in material, design and extent to that indicated for this project and with a record of successful in service performance.
- B. Manufacturer’s Qualifications: Engage a firm experienced in manufacturing hot-mix similar to that indicated for this project and with a record of successful in-service performance.
 - 1. Firm shall be a registered and approved paving mix manufacturer with authorities having jurisdiction or with the DOT of the state in which project is located.
- C. Testing Agency Qualifications: Demonstrate to Architect’s satisfaction, based on Architect’s evaluation of criteria conforming to ASTM D 3666, that the independent testing agency has the experience and capability to satisfactorily conduct the testing indicated without delaying the Work.
- D. Regulatory Requirements: Conform to applicable standards of authorities having jurisdiction for asphalt paving work on public property.
- E. Asphalt-Paving Publication: Comply with AI’s “The Asphalt Handbook”, except where more stringent requirements are indicated.
- F. Preinstallation Conference: Conduct conference at project site to comply with requirements of Division 1, Section “Project Meetings” review methods and procedures related to asphalt paving including, but not limited to the following:
 - 1. Review proposed sources of paving materials, including capabilities and location of plant will manufacture hot-mix asphalt.
 - 2. Review condition of substrate and preparatory work performed by other trades.
 - 3. Review requirements for protecting paving work, including restriction of traffic during installation period and for remainder of construction period.

4. Review and finalize construction schedule for paving and related work. Verify availability of materials, paving installer's personnel, and equipment required to execute the work without delays.
5. Review inspection and testing requirements, governing regulations and proposed installation procedures.
6. Review forecasted weather conditions and procedures for coping with unfavorable conditions.

1.6 DELIVERY, STORAGE AND HANDLING

- A. Deliver pavement-marking materials to project site in original packages with seals unbroken and bearing manufacturer's labels containing brand name and type of material, date of manufacture and directions for storage.
- B. Store pavement-marking materials in a clean, dry, protected locations and within temperature range required by manufacturer. Protect stored materials from direct sunlight.

1.7 PROJECT CONDITIONS

- A. Environmental Limitations: Do not apply asphalt materials if substrate is wet or excessively damp or if the following conditions are not met:
 1. Prime and Tack Coats: Minimum surface temperature of 60 degrees Fahrenheit (15.5 degrees Celsius).
 2. Slurry Coat: Comply with weather limitations of ASTM D 3910.
 3. Asphalt Base Course: Minimum surface temperature of 40 degrees Fahrenheit (4 degree Celsius) and rising at time of placement.
 4. Asphalt Surface Course: Minimum surface temperature of 60 degrees Fahrenheit (15.5 degree Celsius) at time of placement.
- B. Pavement-Marking Paint: Proceed with pavement marking only on clean, dry surfaces and at a minimum ambient or surface temperature of 40 degrees Fahrenheit (4 degrees Celsius) for oil-based materials, 50 degrees Fahrenheit (10 degrees Celsius) for water based materials and not exceeding 95 degrees Fahrenheit (35 degrees Celsius).

PART 2 - PRODUCTS

2.1 AGGREGATES

- A. General: Use materials and gradations that have performed satisfactorily in previous installations.
- B. Coarse Aggregate: Sound; angular crushed stone; crushed gravel; or properly cured, crushed blast-furnace slag; complying with ASTM D 692.

- C. Fine Aggregate: Sharp-edged natural sand or sand prepared from stone; gravel, properly cured blast furnace slag or combinations thereof; complying with ASTM D 1073.
 - 1. For hot-mix asphalt, limit natural sand to a maximum of 20 percent by weight of the total aggregate mass.
- D. Mineral Filler: Rock or slag dust, hydraulic cement or other inert material complying with ASTM D 242.

2.2 ASPHALTIC MATERIALS

- A. Asphalt cement: ASTM D 3381 for viscosity-graded material; ASTM D 946 for penetration-graded material.
- B. Asphalt Cement: ASTM D 3381 for viscosity-graded material.
- C. Undersealing Asphalt: ASTM D 3141, pumping consistency.
- D. Prime Coat: ASTM D 2027; medium-curing cutback asphalt; MC-30, MC-70 or MC-250.
- E. Prime Coat: Asphalt emulsion prime conforming to state DOT requirements.
- F. Prime Coat: ASTM D 977, emulsified asphalt of ASTM D 2397, cationic emulsified asphalt, slow setting, factory diluted in water, of suitable grade and consistency for application.
- G. Tack Coat: ASTM D 977, emulsified asphalt or ASTM D 2397, cationic emulsified asphalt, slow setting, factory diluted in water of suitable grade and consistency for application.
- H. Fog Seal: ASTM 977, emulsified asphalt or ASTM D 2397, cationic emulsified asphalt, slow setting, factory diluted in water, of suitable grade and consistency for applications.
- I. Water: Potable.

2.3 AUXILIARY MATERIALS

- A. Herbicide: Commercial chemical for weed control, registered by Environmental Protection Agency (EPA). Provide granular, liquid or wettable powder form.
- B. Sand: ASTM D 1073, Grade nos. 2 or 3.
- C. Paving Geotextile: Nonwoven polypropylene, specifically designed for paving applications, resistant to chemical attack, rot and mildew.

2.4 MIXES

- A. Hot-Mix Asphalt: Provide dense, hot-laid, hot-mix asphalt plant mixes approved by authorities having jurisdiction and designed according to procedures in AI's "Mix Design Methods for Asphalt Concrete and Other Hot-Mix Types".
 - 1. Provide mixes with a history of satisfactory performances in geographical area where project located.
 - 2. Provide mixes complying with the composition, grading and tolerance requirements of ASTM D 3515 for the following nominal, maximum aggregate sizes:
 - a. Base Course: 1" (25 mm).
 - b. Surface Course: ½" (13 mm).
- B. Sealers:
 - 1. In accordance with Section 37, "Bituminous Seals", SS-CDOT.
 - 2. Slurry Seal for on-site parking lots and driveways:
 - a. "Guardtop"TM by CALMAT/INDUSTRIAL ASPHALT, or approved equivalent.
 - 3. Play courts, tennis and basketball courts, walkways and playgrounds.
 - a. "Guardtop"TM by CLAMAT/INDUSTRIAL ASPHALT or approved equivalent.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that subgrade is dry and in suitable condition to support paving and imposed loads.
- B. Proof-roll subbase using heavy, pneumatic-tired rollers to locate areas that are unstable or that require further compaction.
- C. Notify Architect in writing of any unsatisfactory conditions. Do not begin paving installation until these conditions have been satisfactorily corrected.

3.2 SURFACE PREPARATION

- A. General: Immediately before placing asphalt materials, remove loose and deleterious material from substrate surfaces. Ensure that prepared subgrade is ready to receive paving.
 - 1. Sweep loose granular particles from surface of unbound-aggregate base course. Do not dislodge or disturb aggregate embedded in compacted surface of base course.
- B. Herbicide Treatment: Apply herbicide according to manufacturer's recommended rates and written application instructions. Apply to dry, prepared subgrade or surface of compacted-aggregate base before applying paving materials.

1. Mix herbicide with prime coat when formulated by manufacturer for that purpose.

3.3 HOT-MIX ASPHALT PLACING

- A. Machine place hot-mix asphalt mix on prepared surface, spread uniformly, and strike off. Place asphalt mix by hand to areas inaccessible to equipment in a manner that prevents segregation of mix. Place each course to required grade, cross section and thickness, when compacted.
 1. Place hot-mix asphalt base course in number of lifts and thicknesses indicated.
 2. Place hot-mix asphalt surface course in single lift.
 3. Spread mix at minimum temperature of 250 degrees Fahrenheit (121 degrees Celsius).
 4. Begin applying mix along centerline of crown for crowned sections and on high side of one-way slopes, unless otherwise indicated.
 5. Regulate paver machine speed to obtain smooth, continuous surface free of pulls and tears in asphalt-paving mat.
- B. Place paving in consecutive strips not less than 10' (3 m) wide, except where infill edge strips of a lesser width are required.
 1. After first strip has been placed and rolled, place succeeding strips and extend rolling to overlap previous strips. Complete asphalt base course for a section before placing asphalt surface course.
- C. Promptly correct surface irregularities in paving course behind paver. Use suitable hand tools to remove excess material forming high spots. Fill depressions with hot-mix asphalt to prevent segregation of mix; use suitable hand tools to smooth surface.

3.4 JOINTS

- A. Construct joints to ensure continuous bond between adjoining paving sections. Construct joints free of depressions with same texture and smoothness as other sections of hot-mix asphalt course.
 1. Clean contact surfaces and apply tack coat.
 2. Offset longitudinal joints in successive courses a minimum of 6" (150 mm).
 3. Offset transverse joints in successive courses a minimum of 24" (600 mm)
 4. Construct transverse joints by bulkhead method or sawed vertical face method as described in AI's the "The Asphalt Handbook".
 5. Compact joints as soon as hot-mix asphalt will bear roller weight without excessive displacement.
 6. Compact asphalt at joints to a density within 2 percent of specified course density.

3.5 COMPACTION

- A. General: Begin compaction as soon as placed hot-mix paving will bear roller weight without excessive displacement. Compact hot-mix paving with hot, hand tampers or vibratory-plate compactors in areas inaccessible to rollers.
 - 1. Complete compaction before mix temperature cools to 185 degrees Fahrenheit (85 degrees Celsius).
- B. Breakdown Rolling: Accomplish breakdown or initial rolling immediately after rolling joints and outside edge. Examine surface immediately after breakdown rolling for indicated crown, grade and smoothness. Repair surfaces by loosening displaced material, filling with hot-mix asphalt, and rerolling to required elevations.
- C. Intermediate Rolling: Begin intermediate rolling immediately after breakdown rolling, while hot-mix asphalt is still hot enough to achieve specified density. Continue rolling until hot-mix asphalt course has been uniformly compacted to the following density:
 - 1. Average Density: 96 percent of reference laboratory density according to ASTM D 1559, but not less than 95 percent nor greater than 100 percent.
 - 2. Average Density: 92 percent of reference maximum theoretical density according to ASTM D 2041, but not less than 90 percent nor greater than 95 percent.
- D. Finish Rolling: Finish roll paved surfaces to remove roller marks while hot-mix asphalt is still warm.
- E. Edge Shaping: While surface is being compacted and finished, trim edges of pavement to proper alignment. Bevel edges while still hot, with back of rake or smooth iron. Compact thoroughly using tamper or other satisfactory method.
- F. Repairs: Remove paved areas that are defective or contaminated with foreign materials. Remove paving course over area affected and replace with fresh, hot-mix asphalt. Compact by rolling to specified density and surface smoothness.
- G. Protection: After final rolling, do not permit vehicular traffic on pavement until it has cooled and hardened.
- H. Erect barricades to protect paving from traffic until mixture has cooled enough not to become marked.

3.6 INSTALLATION TOLERANCES

- A. Thickness: Compact each course to produce the thickness indicated within the following tolerances.
 - 1. Base Course: Plus or minus ½" (13 mm).
 - 2. Surface Course: Plus 1/4" (6 mm), no minus.

- B. Surface Smoothness: Compact each course to produce a surface smoothness within the following tolerances as determined by using a 10' (3 m) straightedge applied transversely or longitudinally to paved areas:
1. Base Course: 1/4" (6 mm).
 2. Surface Course: 1/8" (3 mm).
 3. Crowned Surfaces: Test with crowned template centered and at right angle to crown. Maximum allowable variance from template is 1/4" (6 mm).

3.7 SEALER

- A. Allow Asphaltic Concrete to cure twenty one (21) days minimum.
- B. Broom clean asphaltic concrete.
- C. Sealer Type:
1. Slurry Seal on-site parking lots and driveways:
 - a. "Guardtop"TM by CALMAT/INDUSTRIAL ASPHALT, or approved equivalent.
 2. Playcourts, tennis and basketball courts, walkways and playgrounds:
 - a. "Guardtop"TM by CALMAT/INDUSTRIAL ASPHALT, or approved equivalent.
- D. Apply two (2) coats of asphalt based seal coat for the type of application indicated above.
1. First coat shall have added to a silica sand mineral filler, which has passed a 50 mesh screen, at a rate of 2 to 3 pounds per one gallon of concentrated water.
 2. When the first coat is dry enough to walk on without picking the material up a second shall be applied without mineral filler.
 3. If the manufacturer indicates that the product may be diluted, it may be diluted with no more than 20 percent by volume clean fresh water with the prior approval of the Architect.
 4. The total application rate shall be a minimum of 35 to 45 gallons of undiluted product per 1,000 square feet as directed by the Architect.
 5. The finished surface shall be smooth and uniform in appearance.
 6. If existing depressions are such that the aggregate still protrudes after the second coat of asphalt based sealer has been applied, the Contractor shall apply a third coat when so directed by the Architect.
 7. Seal Coat (for new pavement) - a minimum of twenty (20) gallons of undiluted product per 1,000 square feet as directed by the Architect.

3.8 PAVEMENT MARKING

- A. Do not apply pavement-marking paint until layout, colors and placement have been verified with Architect.
- B. Allow paving to cure for thirty (30) days before starting pavement marking.
- C. Sweep and clean surface to eliminate loose material and dust.
- D. Apply two (2) coats of paint with mechanical equipment to produce pavement markings of dimensions indicated with uniform, straight edges. Apply at manufacturer's recommended rates to provide a minimum wet film thickness of 15 mils (0.4 mm).

3.9 FIELD QUALITY CONTROL

- A. Testing Agency: Owner will engage a qualified independent testing agency to perform field inspections and tests and to prepare test reports.
 - 1. Testing agency will conduct and interpret tests and state in each report whether tested work complies with or deviates from specified requirements.
- B. Additional testing, at Contractor's expense, will be performed to determine compliance of corrected work with specified requirements.
- C. Thickness: In-place compacted thickness of hot-mix asphalt courses will be determined according to ASTM D 3549.
- D. Surface Smoothness: Finished surface of each hot-mix asphalt course will be tested for compliance with smoothness tolerances.
- E. In-Place Density: Samples of uncompacted paving mixtures and compacted pavement will be secured by testing agency according to ASTM D 979.
 - 1. Reference laboratory density will be determined by averaging results from four(4) samples of hot-mix asphalt-paving mixture delivered daily to site, prepared according to ASTM D 1559 and compacted according to job-mix specifications.
 - 2. Reference maximum theoretical density will be determined by averaging results from four (4) samples of hot-mix asphalt-paving mixture delivered daily to site, prepared according to ASTM D 2041, and compacted according to job-mix specifications.
 - 3. In-place density of compacted pavement will be determined by testing core samples according to ASTM D 1188 or ASTM D 2726.
 - a. One core sample will be taken for every 1000 sq. yd. (836 sq. m) or less of installed pavement, but in no case will fewer than three (3) cores be taken.
 - b. Field density of in-place compacted pavement may also be determined by nuclear method according to ASTM D 2950 and correlated with ASTM D 1188 or ASTM D 2726.

- F. Remove and replace or install additional hot-mix asphalt where test results or measurements indicate that it does not comply with specified requirements.

END OF SECTION