

DSA APPLICATION 02-122338
**GENERAL ALTERATION TO AN EXISTING
PARKING LOT
FOR:**

WOODSON ELEMENTARY SCHOOL

CORNING – TEHAMA COUNTY – CALIFORNIA

CORNING UNION ELEMENTARY
SCHOOL DISTRICT

PROJECT MANUAL

ARCHITECT'S JOB No. 23262

SEMINGSON ARCHITECTURE & ENGINEERING, INC.
3233 Brush Street/P.O. Box 210, Cottonwood, CA 96022
P: (530) 347-5500 – F: (530) 347-7822

WOODSON ELEMENTARY SCHOOL

General Alteration to an Existing Parking Lot

For:

Corning Union Elementary School District
1005 Hoag Street
Corning, CA 96021

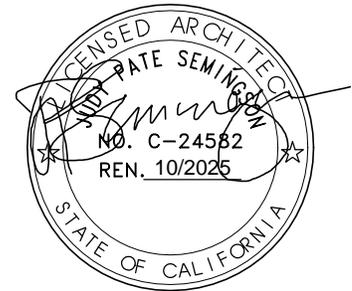
At:

Woodson Elementary School
150 Toomes Ave
Corning, CA 96021

ARCHITECT'S JOB NUMBER: 23262
DSA APPLICATION #02-122338

Prepared By:

Semingson Architecture & Engineering, Inc.
3233 Brush Street/P.O. Box 210
Cottonwood, CA 96022
(530) 347-5500



Judy P. Semingson, Architect
Reg No. C-24582

These Documents and Specifications are hereby acknowledged to be part of the Contract Documents referred to in my Contract with the therein mentioned Owner, dated _____.

Contractor
By _____

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END OF SECTION

Notice is hereby given that the **Corning Union Elementary School District.**, herein referred to as "Owner," will receive sealed bids for the following project:

General Alteration to an Existing Parking Lot for Woodson Elementary School

Such bids shall be received at the Architect's office until **Thursday, May 16, 2024, at 2:00 PM**, after which time bids will be opened and read publicly.

Each bid must conform and be responsive to this invitation, the instructions to bidders, the General Conditions, Contract, Specifications, Plans, and all other documents comprising the Contract Documents.

The Contract Documents will be made available electronically upon request. Bidders may request said documents by contacting the Architect as follows:

Semingson Architecture & Engineering, Inc., PO Box 210, Cottonwood CA, 96022
Phone: (530) 347-5500
FAX: (530) 347-7822
Email: maddy@semingson.us

A California Class A (General Engineering Contractor) or Class B (General Building Contractor) license or Class C-12 (Earthwork and Paving Contractor) is required to be held by the Contractor.

Contractor must be registered with the Department of Industrial Relations.

A mandatory pre-bid meeting at the project site will be held on **Tuesday, May 7, 2024 at 2:00 PM**. Bidders are encouraged to attend in order to familiarize themselves with the site and address any questions or concerns relative to the project.

The Contractor must ensure that employees and applicants for employment are not discriminated because of their race, color, religion, sex, or national origin.

Pursuant to Section 1700, et seq., of the California Labor Code, the Contractor shall pay no less than the prevailing rate of per diem wages as determined by the California Department of Industrial Relations.

Pursuant to Section 22300 of the California Public Contract Code, the Contractor may elect to receive 100% of payments due under the contract from time to time, without retention of any portion of the payment by the Owner to ensure Contractor's performance under the Contract, by depositing securities with the Owner. Alternatively, Contractor may request that the Owner make payment of any retained monies earned directly to an escrow agent at the expense of Contractor. The Provisions of California Public Contract Code Section 22300 are incorporated herein by reference as though set forth in full and shall govern the substitution of securities and/or an escrow account.

Owner reserves the right to accept or reject any and all Bids, to waive any irregularities in the Bids or Bidding, and to be the sole judge as to the merit, quality, and acceptability of labor and materials proposed and their compliance with the plans and specifications, if it be in the best interest of Owner.

Date: _____

By: _____
Judy P. Semingson, Owner's Representative

END OF SECTION

1. NAME OF PROJECT

General Alteration to an Existing Parking Lot
Woodson Elementary School

2. LOCATION

150 Toomes Ave, Corning, CA 96021

3. OWNER

Corning Union Elementary School District

4. PREPARATION OF BID FORMS

a. Bidder must complete all portions of the bid form. Failure to do so may result in the bid being rejected. Bidder must complete and submit with the bid form the following documents: Bid Bond and Designation of Subcontractors. Failure to submit all required documents may result in the bid being rejected. Numbers shall be stated in both words and figures, and the words shall prevail in case of a discrepancy. Documents shall be signed in longhand by the Contractor if an individual, by a member of a partnership, or by an officer of a corporation authorized to sign contracts on its behalf. If made by a corporation, the bid shall show the name of the State under the laws of which the Corporation is organized. The bid documents submitted must not contain any erasures, interlineations, or other corrections. Changes, modifications, or additions to the bid documents may result in rejection of the bid. Bidder assumes responsibility for errors or omissions on the part of the bidder in preparing their bid.

b. Owner reserves the right to waive minor technicalities and for discrepancies.

c. Owner may give contractor 24 hours.

5. BID TO INCLUDE ALL EXPENSES

The amount of the bid shall include everything necessary for the completion of construction and fulfillment of the Contract, including but not limited to furnishing all materials, equipment, tools, and labor; all federal, state, or local taxes payable on any article to be furnished under the contract; all bonds, insurance, overhead, profit, and all other items of expense.

6. CLARIFICATION OF BID DOCUMENTS/ADDENDA

If discrepancies or omissions are found in the bid documents prior to the date of bid opening, or if bidder is in doubt as to their meaning, bidder shall submit a written request for clarification or correction to:

SEMINGSON ARCHITECTURE & ENGINEERING, INC., P.O. Box 210, Cottonwood, CA 96022; or by email to: maddy@semingson.us

A response to said written request will be given, if necessary, in the form of an addendum sent to all bidders, if time permits. Otherwise, in figuring the bid, bidders shall consider that any discrepancies or conflict between the Contract documents shall be governed by those provisions of the General Conditions regarding Intent of Plans and Specifications and Conformance with Codes and Standards.

The correction of any discrepancies in or omissions from the drawings, specifications, or other Contract Documents which would impact the price of the project, or any interpretation thereof, during the bidding period will be made only by an addendum issued by the Architect. A copy of each such addendum issued by the Architect will be mailed, faxed, or delivered to each person receiving a set of the Contract Documents, and shall be covered by the bid and made a part of the Contract. Any other interpretation or explanation of such documents will not be considered binding.

7. SUBMISSION OF BID

An original of the bid form shall be submitted as the bid. Contractor should retain one copy for its records. Each bid must be submitted in a separate, sealed envelope, labeled on the outside with the name and address of the bidder shown thereon, and the name of the Project. Bid must be submitted and received at the office of **Semingson Architecture & Engineering** no later than **May 16, 2024**, at **2:00 PM**. It is the sole responsibility of the bidder to see that his bid is received prior the above time. Any bids received after this time will be returned to the bidder unopened.

8. BID SECURITY

Each bidder shall submit, along with his bid, cash, a cashier's check, a certified check, or bidder's bond of ten percent (10%) of the amount of the bid submitted, to be made payable to or signed in favor of Owner. Bid bonds shall be issued by a corporate surety duly admitted and authorized to issue bonds and undertakings by the State of California. The payment or bond shall be given as a guarantee that the bidder shall execute the contract, if it is awarded to him, in conformity with the Contract Documents, and shall provide the surety bonds as specified therein within five (5) days after notification of Owner's intent to award the Contract to bidder. Should a successful bidder fail to complete, sign, and return in strict compliance these Contract documents, the Contractor's Qualification Questionnaire (if requested to do so), or enter into a contract, bidder shall pay to the Owner such sums from said cash, bond, certified check or cashier's check as necessary to reimburse Owner for costs incurred for the bidders failure to do so. The amount of said cash, bond, cashier's check or certified check shall not be deemed a penalty or liquidated damages, and Owner is not precluded from recovering from defaulting bidder damages in excess of the amount of said cash, bond, cashier's check, or certified check.

9. LIST OF SUBCONTRACTORS

In accordance with California Public contract Code, Chapter 4, part I, Division 2 (commencing with Section 4100), each bid shall provide a form which lists, (a) the name and location of the place of business of each of the major subcontractors who will perform work or labor or render service to the general 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 general contractor, specially fabricates and installs a portion of the work or improvement according to detailed drawings contained in the plans and specifications, and (b) the portion of work which will be done by each subcontractor. Failure of bidder to specify a subcontractor for any portion of the work to be performed constitutes an agreement for bidder to do that portion of the work himself unless approved by the school Owner in writing.

10. BIDDERS INTERESTED IN MORE THAN ONE BID

No person, firm, or corporation shall be allowed to make, file, or be interested in more than one bid for the same work. Reasonable grounds for believing that any bidder is interested in more than one bid for the work will cause the rejection of all bids in which such bidder is interested. If there is reason to believe that collusion exists among the bidders, none of the participants in such collusion will be considered. A person, firm, or corporation who has submitted a sub-proposal to a bidder, or that has quoted prices on materials to a bidder, is not thereby disqualified from submitting a sub-proposal or quoting prices to other bidders.

11. MODIFICATIONS

No oral or telephone modifications to a bid shall be considered. Written modifications received prior to the bid closing date and time will be accepted.

12. WITHDRAWAL OF BIDS

Bidders may withdraw bids personally or by written request at any time prior to the time set for the bid opening. Withdrawal of a bid does not prejudice the right of a bidder to file a new proposal within the time prescribed. Negligence on the part of the bidder in preparing the bid shall not constitute grounds for withdrawal of the bid after it has been opened.

13. OPENING OF BIDS

Bids will be opened and read publicly at the time and place indicated in the Notice to Contractors.

14. AWARD OF CONTRACT

After the bids are opened and read, they will be checked for accuracy and compliance with the contract documents. The award of the Contract, if any, will be based on the evaluation and needs of the Owner.

Owner reserves the right to reject any or all bids, or to waive any irregularities in the bids or the bidding process whenever the rejection or waiver is in the best interest of Owner. The competency and responsibility of bidders and their proposed subcontractors will be considered in making the award. Bidder to whom the award is made will be notified at the earliest possible date. All bids shall remain open and subject to acceptance for a period of sixty (60) days after the bid opening date and the award, if it be awarded, will be made within that time period.

15. **CONTRACTOR QUALIFICATION QUESTIONNAIRE**

Following the public opening of bids, Owner may request in writing that the apparent low bidder complete the Contractor Qualification Questionnaire included in these Contract documents and furnish all required supporting documentation to enable owner to determine whether the apparent low bidder is qualified to perform the work described in the Contract Documents. By submission of a bid, Bidder agrees to complete and sign the Contractor Qualification Questionnaire, furnish all required attachments, and return to Owner's representative within five days of the Owner's written request. If Bidder fails or refuses to complete the Contractor Qualification Questionnaire, furnish all required attachments, sign the Contractor Qualification Questionnaire, or return it to the Owner's Representative within five days of the Owner's written request, bidder will not be considered for award of the contract. Bidder further agrees that Owner may award the work to another bidder or call for new bids. In such event, the bidder shall be liable to Owner for the difference between the amount of the disqualified bid and the larger amount for which the owner procures the work, plus any and all of owners costs, damages, expenses, and liabilities incurred as a result of Bidder's non-compliance.

If for any reason the Owner elects not to award the contract to the apparent low bidder, Owner may request in writing that the apparent second low bidder complete the Contractor Qualification Questionnaire and furnish all required supporting documentation to enable Owner to determine whether the second low bidder is qualified to perform the work described in the Contract Documents. If for any reason the Owner elects not to award the Contract to the apparent second lowest bidder, Owner may request the third lowest bidder, complete the Contractor Qualification Questionnaire and furnish all required supporting documentation, and so on.

16. **RETURN OF SECURITY**

After the award of the Contract has been made, the bid security accompanying the three lowest bids shall be retained. All other security for bids not to be further considered shall be returned. The retained securities shall be returned when the Contract is fully signed.

17. **EXECUTION OF CONTRACT**

To enter into the Contract, the Contract shall be signed by the successful bidder in a number as required by Owner/Owner, on the form provided by the Owner/Owner and returned within five days after the awarding of the Contract. One copy will be returned to the Bidder. The successful bidder shall obtain a Payment Bond and Performance Bond in the forms provided. If the bidder fails or refuses to enter into the Contract within five (5) days from the time the Contract forms are received by the contractor, Paragraph 8, regarding bid security, shall apply. Owner may then award the Contract to the next lowest bidder. If the next lowest responsible bidder fails or refuses to enter the contract, the provisions of Paragraph 8, regarding bid security, shall apply. Owner may then award the Contract to the next lowest bidder.

18. **RELIEF OF BIDDERS**

Attention is drawn to the Provisions of Public Contract Code Section 5100, et seq., concerning relief of bidders, in particular the requirement that if the bidder claims a mistake was made in the Contractor's bid, the bidder shall give the Owner written notice of the mistake within 5 days after the opening of the bids, specifying how the mistake occurred.

19. **MINIMUM QUALIFICATIONS**

The Bidder shall be licensed to do the type of work contemplated in the project, and shall be skilled and regularly engaged in the general class or type of work called for under this contract. In addition, Owner has determined that the successful low bidder must demonstrate to the satisfaction of the

owner the following minimum experience to be qualified to perform the work described in the Contract Documents:

- a. Have possessed a valid, active, State of California Department of Consumer Affairs, Contractor's License Board *General Engineering Contractor (A) License*, or *General Building Contractor (B) License*, or *Earthwork and Paving Contractor (C-12) License*, for a minimum of five (5) continuous years prior to the date of bid opening.
- b. Not have any pending disciplinary proceedings or investigations by the Contractor's State License Board.
- c. Have completed, to the owner's satisfaction, no less than five public works projects in the State of California, each with an original contract price of no less than \$350,000 within the past five years prior to the date of bid opening with scope of work similar to this project's scope.
- d. Not have any suspensions, disbarments, or similar proceedings (including stipulated agreements), restricting, limiting, or prohibiting Bidder from bidding or performing other public works for any other public agency.

Any investigations by Owner of subsurface conditions, or otherwise, are made for the purpose of design, and Owner assumes no responsibility with respect to the sufficiency or accuracy of any borings, log test borings, or other preliminary investigations or to the interpretation thereof, and there is no guarantee, either expressed or implied, that the conditions indicated are representative of those existing throughout the site, or any part of it, or that unanticipated conditions may not occur. When any such report is made available to the Bidder or included in the Contract Documents, it is done so only for the convenience of the Bidders. It is expressly understood that any such report does not constitute a part of the contract, and represents only an opinion of the Owner as to the character of the materials to be encountered. Bidders must satisfy themselves, through their own investigation, as to conditions to be encountered.

20. **EXAMINATION OF SITE AND DOCUMENTS**

Prior to submitting a bid proposal, each Bidder shall carefully examine the site of the proposed work and the Contract Documents, and shall satisfy himself as to the character, quality, and quantity of the surface and subsurface materials or obstacles to be encountered. Bidders shall thoroughly examine and be familiar with the drawings and specifications. The failure or omission of any bidder to receive or examine any contract documents, forms, instruments, addendum or other document or to visit the site and acquaint himself with conditions there existing shall in no way relieve any Bidder from any obligation with respect to his bid or to the contract. The submission of a bid proposal shall be conclusive evidence that the bidder has satisfied himself, through his own investigation, as to the conditions to be encountered; the character, quality, and scope of work to be performed; the materials and equipment to be furnished; and all requirements of the Contract Documents. By submitting a bid, the Bidder agrees and warrants that he has examined the site and all documents, drawings, and specifications, that the same are adequate to produce the required results, and that his bid covers all costs.

21. **BID PROTESTS**

Any bid protests shall be filed in writing with Owner by certified or registered mail, no later than three (3) working days after the bid opening or, if the protest is based on the selection of the apparent lowest responsible bidder, no later than three (3) working days after selection of the apparent lowest responsible bidder. The protest shall specify the reasons and facts upon which the protest is based.

END OF SECTION

1. GENERAL
 - A. It shall be understood that the bid submitted will not be considered complete if bid form is not completely filled out at time of bidding.
 - B. Contractor shall itemize his bid on the form provided therefore.
 - C. It is understood that by submitting a bid that the Contractor certifies his knowledge of the site. Any minor site discrepancies will be clarified prior to start of construction.
2. BASE BIDS

Base Bid shall state the amount to include all of the work complete in strict conformance with the Contract Documents. The Base Bids shall include all the work as represented on the Drawings and in the Specification Book.
3. ADDITIVE OR DEDUCTIVE ALTERNATES, If Any

Shall be utilized at the discretion of the Owner. To adjust the base bids. However, the bid award will go to the low bidder based only on the Base Bids. Once the low bidder is established, then the Owner will make their alternate bid selections.
4. SALES TAX AND OTHER EXPENSE ITEMS

All State and municipal sales taxes, all bonds, insurance, overhead, and profit and all other items of expense incidental to the Contract shall be included in all bids submitted.
5. COORDINATION & SEQUENCING

The awarded Contractor is the general and must coordinate all work with subcontractors to insure proper sequencing of all phases of work.
6. DESCRIPTION OF WORK
 1. Construction of new parking lots and associated landscaping

END OF SECTION

DATE BID SUBMITTED: _____

BID SUBMITTED BY: _____
(Name of Firm submitting Bid)

(Address)

(Telephone)

BID FOR: **GENERAL ALTERATION TO (E) PARKING LOT**
For
WOODSON ELEMENTARY SCHOOL
150 Toomes Ave, Corning, CA 96021

BID TO: **CORNING UNION ELEMENTARY SCHOOL DISTRICT**
1005 Hoag Street, Corning, CA 96021

1. The Bidder, having the appropriate active license required by the State of California; and meeting all of the requirements of the Contract Documents; and having carefully read and examined the plans, specifications, and all related bidding documents as prepared by Semingson Architects, Inc., for the above named project; and having carefully and fully examined the site of the proposed work and all other information available to Bidder, and being familiar with all the conditions related to the proposed work, including the availability of materials, equipment, and labor, hereby proposes and agrees to furnish all required labor, materials, tools, transportation, services, and equipment necessary to complete the work of the described project in accordance with the Contract Documents, and to complete all requirements of the Contract Documents for the sums quoted in this bid form. The bidder agrees that it will not withdraw its bid within sixty (60) days after the bid deadline.

2. BASE BID A: Per work shown on Drawings and this specification:
_____ Dollars (\$_____).

The Contract will be awarded based on the evaluation and needs of the Owner.

3. It is understood that the Owner reserves the right to reject this bid as specified in the Instructions to Bidders, and the bidder agrees that it will not withdraw its bid within sixty (60) days after the bid deadline.

4. There is herewith enclosed cash, a certified check or cashier's check, or a bid bond for the benefit of Owner in the amount of:
_____ Dollars (\$_____).

5. In the event the Bidder is given Notice of Intent to Award Contract, the bidder agrees, within five (5) days after the receipt of notice of selection, to sign and deliver the Contract, and to furnish the Performance Bond, the Payment Bond, Certificates of Insurance, and other required items.

6. The Owner intends for the Work to start on Friday, June 7, 2024, and to be completed by Friday, August 9, 2024. If awarded the Contract, the bidder agrees to complete the work within this timeframe, or as mutually agreed by the Owner and Contractor.

Addendum No. 4

(Signature of Bidder)

Addendum No. 5

(Signature of Bidder)

END OF SECTION

KNOW ALL MEN BY THESE PRESENTS that we as Principal, hereinafter called the Principal, and a corporation duly organized and existing under any by virtue of the laws of the State of and authorized to do business in the State of California, as Surety, hereinafter called Surety, are held and firmly bound unto the **Corning Union Elementary School District, Corning, State of California**, as Obligee, hereinafter called Obligee, in the sum of _____ DOLLARS (\$_____), Lawful money of the United States of America, for the payment of which sum well and truly to be made, the said Principal and the said Surety, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH that whereas the Principal has submitted a bid to **Corning Union Elementary School District, Corning, State of California**, for all work specifically described in the accompanying bid.

NOW, THEREFORE, if the aforesaid Principal is awarded the Contract, and within the time and manner required under the Specifications, after the prescribed forms are presented to him for signature, enters into a written contract, in the prescribed form, in accordance with the bid, and files the two bonds, one guaranteeing faithful performance and the other guaranteeing payment for labor and materials, as required by law, or if the said Principal shall fully reimburse and save harmless the Obligee from a damage sustained by the Obligee through failure of the Principal to enter into the written contract and to file the required performance and labor and materials bonds, then this obligation shall be null and void; otherwise, it shall be and remain in full force and effect.

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

IN WITNESS WHEREOF, we have hereunto set our hands and seal this ____ day of _____, **2024**.

Surety

Principal

By _____
Attorney-in-Fact

_____(Seal)

(Bidders must use this form and not a surety company form)

END OF SECTION

Bidders must meet the following minimum qualifications to bid the work of improvement contemplated herein:

1. Have possessed a valid, active, State of California Department of Consumer Affairs, Contractor's License Board:
*General Engineering Contractor (A) License; or
 General Building Contractor (B) License; or
 Earthwork and Paving Contractor (C-12) License*
 for minimum of five (5) continuous years prior to the date of bid opening.
2. Not have any pending disciplinary proceedings or investigations by the Contractor's State License Board.
3. Have completed, to the public owner's satisfaction, no less than five public works projects in the State of California, each with an original contract price of no less than \$350,000 within the past five years prior to the date of bid opening.
4. Not have any suspensions, disbarments or similar proceedings (including stipulated agreements), restricting, limiting, or prohibiting Bidder from bidding or performing other public works for any other public agency.

I declare that the Bidder meets all the minimum criteria set forth above.

Date: _____

Signature

Print Name

NON-COLLUSION AFFIDAVIT

Pursuant to Section 7106 of the Public Contract Code, _____,
(Name)

being first duly sworn, deposes and says the he or she is _____
(Title)

of _____, the party making the foregoing bid, that
(Company)

the bid is not made in the interest of, or on behalf of, any disclosed 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, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; 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 over-head, profit, or cost element of the bid price, or that of any other bidder, or to secure any advantage against the public body awarding the Contract of anyone interested in the proposed contract; all statements contained in the bid are true; and further, that the bidder has not, directly or indirectly, submitted his or her Bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof, to effectuate a collusive sham bid.

Signature of Bidder

State of California, County of _____

On _____ before me, _____
Date Name and Title of Officer (e.g. "Jane Doe, Notary Public") personally appeared

Name(s) of Signer(s)

- personally know to me
- proved to me on the basis of satisfactory evidence

to the person person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorize 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), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

Signature of Notary Public

STATEMENT OF COMPLIANCE

_____, hereinafter referred to as "prospective Contractor",

hereby certifies, _____
(Company Name),

unless specifically exempted, does and shall continue to comply with Government Code Section 12990 and California Administrative Code, Title II, Division 4, Chapter 5, in matters relating to the development, implementation, and maintenance of a non-discrimination program. Prospective contractor agrees not to unlawfully discriminate against any employee or applicant for employment because of race, religion, color, national origin, ancestry, physical handicap, medical condition, marital status, sex, sexual orientation, physical and mental disabilities, or age (over forty).

I, _____ hereby swear that I am duly authorized to legally bind the prospective contractor to the above-described certification. This certification is executed under the penalty of perjury under the laws of the State of California. Executed on

_____ at
Date

_____, California.
City

Signature

Print Title

CONTRACTOR'S CERTIFICATION REGARDING WORKER'S COMPENSATION

In accordance with Section 3700 of the Labor Code, every contractor is required to secure payment of compensation to his employees.

Each contractor to whom a public works contract is awarded is required to sign and file with the awarding body the following acknowledgement prior to performing the work of the contract.

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

By: _____

Name: _____

Title: _____

Date: _____

ACKNOWLEDGEMENT OF CHILD SUPPORT COMPLIANCE

In accordance with the provisions of Section 7110 of the Public Contract Code, every contractor is required to fully comply with all applicable State and Federal laws relating to child and family support enforcement.

Each contractor to whom a public works contract in excess of one hundred thousand (\$100,000) is awarded is required to sign and file with the awarding body the following acknowledgement prior to performing the work of the contract.

I am aware of the provisions of Section 7110 of the Public Contract Code, which require every employer to fully comply with the earnings assignment orders of all employees and provide the names of all new employees to the New Hire Registry maintained by the Employment Development Department. I have complied with such provisions, and will continue to comply during the performance of the work on this contract.

By: _____

Name: _____

Title: _____

Date: _____

FINGERPRINTING/CRIMINAL BACKGROUND CERTIFICATION

I, _____, declare as follows:

1. I/We conducted criminal background checks through the Department of Justice by submitting fingerprint cards to the Department of Justice for each and every employee assigned to work for the Owner pursuant to our Contract to provide specified services to the Owner.
2. No employee assigned to perform services for the Owner pursuant to our contract has been convicted of serious or violent felonies as defined by Penal Code Sections 1192.7(c) and 667.5(c).
3. No employee who has a record of conviction for a serious or violent felony will ever be assigned to perform services under any existing or future contract with Owner if the contract requires employees to come in contact with students.
4. I am the duly authorized representative for _____ for the purposes of providing this Certification. Only employees with completed criminal background checks will be assigned to perform service for the Owner. The employees currently assigned to perform services for the Owner pursuant to our Contract are set forth on Exhibit "A" attached hereto.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct. Executed this _____ day of _____, 2024 at _____, California

By: _____

Signature: _____

Name: _____

Title: _____

Appendix II to Part 75—Contract Provisions for Non-Federal Entity Contracts Under Federal Awards

In addition to other provisions required by the HHS agency or non-Federal entity, all contracts made by the non-Federal entity under the Federal award must contain provisions covering the following, as applicable.

A. Contracts for more than the simplified acquisition threshold currently set at \$150,000, which is the inflation adjusted amount determined by the Civilian Agency Acquisition Council and the Defense Acquisition Regulations Council (Councils) as authorized by 41 U.S.C. 1908, must address administrative, contractual, or legal remedies in instances where contractors violate or breach contract terms, and provide for such sanctions and penalties as appropriate.

B. All contracts in excess of \$10,000 must address termination for cause and for convenience by the non-Federal entity including the manner by which it will be effected and the basis for settlement.

C. Equal Employment Opportunity. Except as otherwise provided under 41 CFR part 60, all contracts that meet the definition of “federally assisted construction contract” in 41 CFR part 60-1.3 must include the equal opportunity clause provided under 41 CFR 60-1.4(b), in accordance with Executive Order 11246, Equal Employment Opportunity (30 FR 12319, 12935, 3 CFR 1964-1965 Comp., p. 339) as amended by Executive Order 11375 amending Executive Order 11246 Relating to Equal Employment Opportunity, and implementing regulations at 41 CFR part 60.

D. Davis-Bacon Act, as amended (40 U.S.C. 3141-3148). When required by Federal program legislation, all prime construction contracts in excess of \$2,000 awarded by non-Federal entities must include a provision for compliance with the Davis-Bacon Act (40 U.S.C. 3141-3144, and 3146-3148) as supplemented by Department of Labor regulations (29 CFR part 5). In accordance with the statute, contractors must be required to pay wages to laborers and mechanics at a rate not less than the prevailing wages specified in a wage determination made by the Secretary of Labor. In addition, contractors must be required to pay wages not less than once a week. The non-Federal entity must place a copy of the current prevailing wage determination issued by the Department of Labor in each solicitation. The decision to award a contract or subcontract must be conditioned upon the acceptance of the wage determination. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency. The contracts must also include a provision for compliance with the Copeland “Anti-Kickback” Act (40 U.S.C. 3145), as supplemented by Department of Labor regulations (29 CFR part 3). The Act provides that each contractor or subrecipient must be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which he or she is otherwise entitled. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency.

E. Contract Work Hours and Safety Standards Act (40 U.S.C. 3701-3708). Where applicable, all contracts awarded by the non-Federal entity in excess of \$100,000 that involve the employment of mechanics or laborers must include a provision for compliance with 40 U.S.C. 3702 and 3704, as supplemented by Department of Labor regulations (29 CFR part 5). Under 40 U.S.C. 3702 of the Act, each contractor must be required to compute the wages of every mechanic and laborer on the basis of a standard work week of 40 hours. Work in excess of the standard work week is permissible provided that the worker is compensated at a rate of not less than one and a half times the basic rate of pay for all hours worked in excess of 40 hours in the work week. The requirements of 40 U.S.C. 3704 are applicable to construction work and provide that no laborer or mechanic must be required to work in surroundings or under working conditions which are unsanitary, hazardous or dangerous. These requirements do not apply to the purchases of supplies or materials or articles ordinarily available on the open market, or contracts for transportation or transmission of intelligence.

F. Rights to Inventions Made Under a Contract or Agreement. If the Federal award meets the definition of “funding agreement” under 37 CFR 401.2 (a) and the recipient or subrecipient wishes to enter into a contract with a small business firm or nonprofit organization regarding the substitution of parties, assignment or performance of experimental, developmental, or research work under that “funding agreement,” the recipient

or subrecipient must comply with the requirements of 37 CFR part 401 and any implementing regulations issued by the awarding agency.

G. Clean Air Act (42 U.S.C. 7401-7671q.) and the Federal Water Pollution Control Act (33 U.S.C. 1251-1387), as amended—Contracts and subgrants of amounts in excess of \$150,000 must contain a provision that requires the non-Federal award to agree to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act as amended (33 U.S.C. 1251-1387). Violations must be reported to the Federal awarding agency and the Regional Office of the Environmental Protection Agency (EPA).

H. Debarment and Suspension (Executive Orders 12549 and 12689)—A contract award (see 2 CFR 180.220) must not be made to parties listed on the government-wide exclusions in the System for Award Management (SAM), in accordance with the OMB guidelines at 2 CFR part 180 that implement Executive Orders 12549 (3 CFR part 1986 Comp., p. 189) and 12689 (3 CFR part 1989 Comp., p. 235), “Debarment and Suspension.” SAM Exclusions contains the names of parties debarred, suspended, or otherwise excluded by agencies, as well as parties declared ineligible under statutory or regulatory authority other than Executive Order 12549.

I. Byrd Anti-Lobbying Amendment (31 U.S.C. 1352)—Contractors that apply or bid for an award exceeding \$100,000 must file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 1352. Each tier must also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the non-Federal award.

J. See § 75.331 Procurement of recovered materials.
[79 FR 75889, Dec. 19, 2014, as amended at 81 FR 19044, Apr. 4, 2016]

This CONTRACT is made and entered into this _____ Day of _____ between **Corning Union Elementary School District** (Owner) and _____(Contractor).

The Owner and the Contractor, for the consideration hereafter named, agree as follows:

1. Contractor agrees to perform and complete in the best workmanlike manner the construction of: **General Alteration to an Existing Parking Lot** at the **Woodson Elementary School** in conformance with the intent shown on the drawings and specified herein and as provided for and set forth in said plans, specifications, and any addendum that may be issued prior to the date of the bid, or in either of them, which said plans and specifications are hereby referred to by such reference, incorporated herein, and made a part of this Contract.
2. This Contract consists of the following documents, all of which are incorporated herein by reference as though set forth in full, and all of which are part of this contract: Notice to Contractors, Instructions to Bidders, Bid Form, this Contract, General Conditions; Supplemental Conditions, if any, Specifications and Drawings, any addenda issued, change orders, and any other documents described within these contract documents.

Upon the condition that the Contractor faithfully performs its obligations herein, Owner agrees to pay Contractor, subject to the terms and conditions of the contract documents, the sum of _____ . List of base Bids included.

IN WITNESS WHEREOF, the parties hereto have caused this agreement to be signed as of the day and year first above written.

OWNER:
Corning Union Elementary School District
 By: _____
 Print Name: _____
 Print Title: _____

CONTRACTOR:

 By: _____
 Print Name: _____
 Print Title: _____

END OF SECTION

Performance Bond

Section 00 61 13

KNOW ALL MEN BY THESE PRESENTS, THAT WHEREAS, hereinafter designated as the "obligee," has on, _____, **2024**, awarded to hereinafter designated as "Principal," a contract for the construction of, and WHEREAS said Principal is required to furnish a bond for the faithful performance of said contract.

NOW, THEREFORE, We, the Principal and _____, as Surety, are held and firmly bound unto the Obligee in the penal sum of _____ lawful money of the United States for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH that if said Principal, or his or its heirs, executors, administrators, successors, or assigns shall in all things stand to and abide by, and well and truly keep and faithfully perform the covenants, conditions, and agreement in said Contract, and any alterations made as therein provided, on his or their part to be kept and performed at the time and in the manner therein specified, and in all respects according to their true intent and meaning, and shall indemnify and save harmless the Obligee, its officers and agents as therein stipulated, then this obligation shall become null and void; otherwise it shall be and remain in full force and virtue, and Principal and surety, in the event suit is brought upon this bond, will pay to the Obligee such reasonable attorneys' fees as may be fixed by the Court.

As a condition precedent to the satisfactory completion of said contract, the above obligation in said amount shall hold good for a period of one year after the completion and acceptance of said work, during which time if the above bound Principal, his or its heirs, executors, administrators, successors, or assigns shall fail to make full, complete, and satisfactory repair and replacements or totally protect said Obligee from loss or damage made evident during said period of one year from the date of acceptance of the work, and resulting from or caused by defective materials or faulty workmanship in the prosecution of the work done, the above obligation in said sum shall remain in full force and effect. However, anything in this paragraph to the contrary notwithstanding, the obligation of the Surety hereunder shall continue so long as any obligation of the Principal remains.

The said Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration, or addition to the terms of the contract, or to the work to be performed thereunder, or the specifications accompanying the same shall, in any way, affect its obligations on this bond, and it does hereby waive notice of any such change, extension of time, alteration, or addition to the terms of the contract, or to the work or the specifications. Said Surety hereby waives the provisions of Sections 2819 and 2845 of the California Civil Code.

IN WITNESS WHEREOF, the above-bound parties have signed this instrument this _____ day of _____, **2024**.

Principal

Signature

Title of Signatory

Surety

Signature

Title of Signatory

Surety

END OF SECTION

KNOW ALL MEN BY THESE PRESENTS, THAT WHEREAS _____, hereinafter designated as the "Obligee," has on _____, **2024**, awarded to _____, hereinafter designated as "Principal," a contract for the construction of _____, and WHEREAS said Principal is required to furnish a bond in connection with said contract, providing that if said Principal, or any of its subcontractors, shall fail to pay for any materials, provisions, or other supplies use in, upon, for, or about the performance of the work contracted to be done, or for any work or labor done thereon of any kind, the Surety on this bond will pay the same to the extent hereinafter set forth:

NOW, THEREFORE, We, the Principal and _____, as Surety, are held and firmly bound unto the Obligee in the penal sum of _____ lawful money of the United States for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH that if said Principal, or any of his or its subcontractors, shall fail to pay any of the persons named in Section 3181 of the California Civil Code, or any amounts due under the Unemployment Insurance Code with respect to such work or labor performed under the contract, or for any amounts required to be deducted, withheld, and paid over to the Employment Development Department of the State of California, from the wages of employees of the Principal and subcontractors pursuant to Section 13020 of the Unemployment Insurance Code of the State of California with respect to such work or labor, as required by the provisions of Section 3225 and following of the California Civil Code, then said Surety will pay the same in, or to an amount not exceeding the amount, hereinabove set forth, and also will pay, in case suit is brought upon this bond, reasonable attorneys' fees to such claimant and to the Obligee as shall be fixed by the Court.

This bond is issued pursuant to California Civil Code Sections 3247 through 3252, inclusive, and shall inure to the benefit of any and all persons, companies, and corporations named in Section 3181 of said civil code so as to give a right of action to them or their assigns in any suit brought upon this bond.

The said Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration, or addition to the terms of the contract, or to the work to be performed hereunder, or the specifications accompanying the same shall, in any way, affect its obligations on this bond, and it does hereby waive notice of any such change, extension of time, alteration, or addition to the terms of the contract, or to the work or the specifications. Said Surety hereby waives the provisions of Sections 2819 and 2845 of the California Civil Code.

IN WITNESS WHEREOF, the above-bound parties have signed this instrument this _____ day of _____, **2024**.

Principal

Signature

Title of Signatory

Surety

Signature

Title of Signatory

END OF SECTION

1. Materials and equipment incorporated in the Work under Contract shall be new. All workmanship shall be first-class and by persons qualified in the respective trades.
 - A. The Contractor shall guaranty all materials and equipment furnished and work performed for a period of one (1) year from the date of Substantial Completion. The Contractor warrants and guarantees for a period of one (1) year from the date of Substantial Completion of the system that the completed system is free from all defects due to faulty materials or workmanship and the Contractor shall promptly make such corrections as may be necessary by reason of such defects including the repairs of any damage to other parts of the system resulting from such defects. The Owner will give notice of observed defects with reasonable promptness. In the event that the Contractor should fail to make such repairs, adjustments, or other work that may be necessary by such defects, the Owner may do so and charge the Contractor the cost thereby incurred. The Performance Bond shall remain in full force and effect through the guaranty period. All special guaranties required by this specification shall be in writing and in the form required and delivered to the owner before the final payment is made.
 - B. In case of work performed by subcontractors and where guaranties are required under the various technical divisions of the specifications, warranties addressed to and in favor of the Owner shall be secured from said subcontractors and delivered to the owner upon completion of the work. The delivery of said guaranties shall not relieve the Contractor from any obligation assumed under any other provision of the Contract.
 - C. If, within any guaranty and warranty period, defects develop due to faults in materials or workmanship, the Contractor shall, within ten days after written notice to the Contractor by the owner and without additional expense to the Owner.
 1. Replace in satisfactory condition in every particular all of such guaranteed work, correct all defects therein, and;
 2. Make good all damage to the building or site, or equipment or contents thereof, which, in the opinion of the Owner is the result of the use of materials, equipment, or workmanship which are inferior, defective, or not in accordance with the terms of the Contract, and;
 3. Make good any work or material, or the equipment and contents of said building or site disturbed in fulfilling any such guaranty.
 - D. In any case wherein fulfilling the requirements of the Contract or, any guaranty embraced in or required thereby, the Contractor disturbs any work guaranteed under another contract, he shall restore such disturbed work to a condition satisfactory to the Owner and guaranteed under such other contract.

END OF SECTION

1. DEFINITIONS

A. "Architect" means Semingson Architecture & Engineering, Inc., its officers and employees.

B. "Change Order" refers to a written agreement in the form included in these Contract documents, signed by the Owner's Representative, Architect, and Contractor, modifying the Contract.

C. "Construction Change Directive" shall refer to a written directive, signed by Owner or Architect, directing Contractor to perform and/or omit certain work as specified within the Construction Change Directive. The Contractor shall promptly comply with the Construction Change Directive and promptly perform and/or omit the work specified therein.

D. "Contract" means the Contract Documents.

E. "Contract Documents" consist of all documents listed in paragraph 2 of these General Conditions.

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

F. "Contract Time" means the number of days within which the completion of the contractor's work must be achieved. The contract Time may be adjusted by Change Order.

G. "Contractor" means the person or firm identified as such in the contract, or its authorized representative.

H. "Owner's Representative" means the person designated as such by Owner.

I. "Project" means the total of the work and obligations agreed to be performed by Contractor under the Contract.

2. CONTRACT DOCUMENTS

The contract Documents consist of the Notice to Contractors, Instructions to Bidders, Bid Form, the Contract, General Conditions of the Contract, Supplementary Conditions of the Contract (if any), required Bonds, Drawings, Specifications, any Addenda issued, Change Orders, Contractor Qualification Form, Non-Collusion Affidavit, Statement of Compliance; Designation of Subcontractors, Contractor's Certification Regarding Workers' Compensation, Acknowledgement of Child Support Compliance, Fingerprinting/Criminal Background Certification, Contractor Qualification Questionnaire (where requested) and any other documents described as such within these contract documents.

3. PAYMENT AND PERFORMANCE BONDS

Within five (5) days of Contractor's receipt of Contract signed by Owner, the Contractor shall furnish, at Contractor's expense, corporate surety bonds to the benefit of Owner, issued by a surety company acceptable to Owner and authorized and admitted to do business in the State of California, as follows:

a) Faithful Performance Bond in a sum no less than one hundred percent 100% of the total contract price as set forth in the Contract to guarantee the Contractor's faithful performance of all covenants and stipulations of the contract. The bond shall contain a provision that the surety waives the provisions of Sections 2819 and 2845 of the California Civil Code.

b) Payment bond in a sum no less than one hundred percent 100% of the total contract price as set forth in the Contract to guarantee the payment of wages and bills contracted for materials, supplies, or equipment used in the performance of the Contract. The bond shall be in accordance with the provisions of Sections 3225, 3226 and 3247 to 3252, inclusive, of the California Civil Code, and Section 13020 of the Unemployment code of the State of California. The bond shall contain a provision that the surety waives the provisions of Sections 2819 and 2845 of the California Civil Code.

Said bonds shall be on forms provided by Owner.

4. NOTIFICATION OF SURETY COMPANIES

The Surety companies shall familiarize themselves with the provisions and conditions of the contract. It is understood that the surety or sureties waive the right of special notification of any modifications or alterations, omissions or reductions, extra or additional work, extensions of time, or any other acts or acts by the Owner or its authorized agents under the terms of the Contract, and any failure to do so, notify the surety companies of such changes, and shall in no way relieve the surety or sureties of their obligations under this Contract.

5. INSURANCE

Within five (5) days of Contractor's receipt of a contract signed by Owner, the Contractor shall furnish a Certificate of Insurance substantiating the fact that Contractor has procured the insurance hereinafter set forth for the period covered by the contract with an insurance carrier acceptable to and under terms acceptable to Owner. The Certificate of Insurance or Binder shall bear an endorsement precluding the cancellation or reduction of coverage before the expiration of thirty (30) days after Owner and Architect receive notification of cancellation or reduction. Contractor shall furnish copies of its insurance policies under this contract to Owner upon request. Contractor shall not be allowed on the work site without said Certificate of insurance.

All insurance policies shall include Owner, Owner's agents, employees, inspectors, project managers, consultants, and each of them as additional insured's to protect from, as well as provide the defense of, from all suits, actions, damages, liability, or claims of every type and description to which they may be subjected by reason of, or resulting from, Contractor's performance of the Contract. Contractor's insurance shall apply as primary insurance, and any other insurance carried by additional insured's identified above shall apply as excess and will not contribute with this insurance.

The minimum insurance coverage's to be obtained by the contractor are as follows:

a) Public Liability and Property Damage Insurance as shall protect Owner and Contractor from all claims arising out of Personal Injury, Bodily Injury, and Property damage. Coverage is to include premises, operations, products or completed operations, owned and non-owned auto liability. Limits of liability shall be no less than a combined single limit for bodily injury property damage, and personal

injury liability of \$1,000,000 per occurrence, \$2,000,000 aggregate.

b) Worker's Compensation and Employer's Liability insurance coverage. The Contractor shall be a qualified self insurer or shall carry full Workers' Compensations and Employers' Liability insurance coverage, either through the State Compensation Insurance Fund or a standard approved policy obtained from a licensed insurance carrier for all persons employed, either directly or through subcontractors, in carrying out the work under this contract. Employers' limits of liability shall be the prevailing statutory limits of liability.

6. INTENT OF PLANS AND SPECIFICATIONS

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. The prices paid for the various items in the bid shall include full compensation for furnishing all labor, materials, tools, equipment, overhead, profit, incidentals, and doing all work necessary to complete the finished product as provided in the Contract Documents.

The specifications and drawings are intended to be explanatory of each other. Any work shown on the drawings and not in the specifications, or vice versa, is to be treated as if indicated in both. In case of conflict or inconsistency, the Supplementary 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 costly or 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 drawings shall not control contractor in dividing the work among subcontractors or 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.

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 limit, define, or prescribe the scope or intent of the Contract Documents or any subdivision thereof.

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 criterion specified for each item. Contractor shall also assume responsibility for temporary structures used to implement construction such as shoring and scaffolding.

7. CLARIFICATION OF CONTRACT DOCUMENTS

Should it appear that the work to be done, or any of the matters relative thereto, are 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 decision thereon. The Contractor shall thoroughly review all Requests for Information (RFI's) submitted by subcontractors prior to submission to the Architect to determine whether such RFI is already answered in the Contract Documents. Contractor represents that, by submission of an RFI to Architect, Contractor has thoroughly reviewed the RFI and thoroughly reviewed the Contract Documents, and determined that the RFI is not answered or reasonably inferable in the contract document, that the RFI 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 the RFI is answered or reasonably inferable from the Contract Documents, contractor agrees to pay the architect and Owner the reasonable cost for their time and expense associated with reviewing and responding to the RFI. In the event of a disagreement over such compensation; the judgment of the Owner's representative shall control.

8. PLANS AND SPECIFICATIONS TO BE FURNISHED

The Contractor will be furnished, free of charge, ten copies of the Contract Documents. Contractor shall retain an approved set of plans and specifications on the job at all times during the progress of the work.

9. SUPPLEMENTAL DRAWINGS AND INSTRUCTIONS

In addition to the drawings incorporated in the Contract at the time of the signing, the Architect may furnish such working drawings and supplemental drawings from time to time as may be necessary to make clear, or define in greater detail, the intent of the Contract drawings and specifications. In furnishing such additional drawings and or instructions, the architect shall have authority to make minor changes in the work, not involving extra cost, and not inconsistent with the nature of the work. These working drawings and supplemental drawings shall become a part of the contract Documents.

10. CONFORMANCE WITH CODES AND STANDARDS

All work and materials shall be in full accordance with the latest adopted standards code and regulations used by the local agency. 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 nonconformance, and to not proceed with nonconforming work. When the work detailed in the contract documents differs from governing codes, it is understood and agreed that the Contract Sum is based on the more costly or expensive standard.

11. COMPLIANCE WITH LAWS AND REGULATIONS

Contractor shall observe and comply with, and shall cause any and all persons employed by Contractor or under it, to observe and comply with all State and Federal laws, and County and municipal ordinances, regulations, orders and decrees which in any manner affect those engaged or employed in the work, or the materials used in the work, or which in any way affect the conduct of the work, including but not limited to Labor Laws, Prevailing Wage, Worker's Compensation, Occupational Health and Safety, Use of Pesticides, Air Pollution Control, Water Pollution Control, Sound Control requirements.

12. PERSONAL ATTENTION AND SUPERVISION

Contractor shall give Contractor's personal attention to, and shall supervise the work to the end that it shall be faithfully prosecuted. Contractor shall keep on the work at all times throughout its progress a competent superintendent who shall represent contractor in Contractor's absence, and shall have complete authority to represent and act for the Contractor. Whenever the Contractor or superintendent is not present on a particular part of the work, the Architect or Owner may stop the work until the Contractor or contractor's superintendent arrives.

The Contractor shall be liable for the faithful observation of any instructions delivered to Contractor or Contractor's authorized representatives. Any order not required to be in writing will, at the request of Contractor, be given or confirmed by Owner in writing.

13. BEGINNING OF WORK

The Notice to Proceed shall constitute authority for the Contractor to enter upon the site of the work and to begin operations, upon the condition that the Contractor has strictly complied with all the requirements of these contract Documents, including but not limited to, furnishing all required documentation and certificates of insurance. If Contractor has not provided Owner with all required documents as of the date of the notice to proceed, Contractor shall not be allowed on the site of the

work or allowed to start work on the project.

When the Contractor has started work on the project, the contractor shall diligently prosecute the work to completion within the time limit provided in the contract Documents. The Counting of working days shall begin on the date of the Notice to Proceed.

14. PROGRESS SCHEDULE

Owner shall establish with contractor construction schedules and meetings as required.

15. RESPONSIBILITY FOR ACCURACY

Contractor shall obtain all necessary measurements, check dimensions, elevations, and grades for all layout and construction work, and shall supervise such work, the accuracy of which Contractor shall be responsible. Each subcontractor shall adjust, correct, and coordinate contractor's work with the work of others so that no discrepancies result in the whole work. Contractor is responsible for verifying that all information and data contained in Contractor's submittals comply in all respects with the Contract documents.

16. PHYSICAL CONDITIONS OF WORKSITE

Contractor shall promptly, and before disturbing said condition, notify the Owner's representative and Architect, in writing, of any:

- a) 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 provisions of existing law, including, but not limited to, PDB's, lead, or asbestos.
- b) Subsurface or latent physical conditions at the site differing from those indicated.
- c) 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.

Owner shall promptly cause an investigation of 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, shall issue a Change Order or a Construction Change Directive.

In the event that a dispute arises between the Owner 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 the time required for, performance of any part of the work, the contractor shall not be excused from any scheduled completion date, but shall proceed with all work to be performed under the Contract.

Nothing contained within this section or the Contract Documents relieves the Contractor of its obligations regarding examination and inspection of the site and documents, as set forth in the Instructions to Bidders.

17. EFFECT OF INSPECTION OR USE

Neither the inspection by an inspector, Owner's representative, or by the architect, nor any measurement, approved modification, submittals, shop drawing, order or certificate, nor acceptance of any part or whole of the work, or payment of money, nor any possession or use by the Owner or its agents shall operate as a waiver of any provisions of the Contract, nor shall the waiver of any breach of the contract be held to be a waiver of any subsequent or other breach.

18. INSPECTION

All work done and all materials and equipment furnished under this contract shall be subject to the inspection and approval of the Architect and/or Owner. They shall at all times have access to the work during its construction, and shall be furnished with every reasonable facility and assistance for ascertaining that the materials and workmanship are in accordance with the requirements and intent of the contract Documents. Any work constructed without inspection as provided above, except with the written consent or approval of the Architect, or constructed contrary to the instructions or orders of the Architect must, if requested by Architect, be uncovered for examination and properly restored at Contractor's expense.

19. MEANS AND METHODS

Neither Architect nor Owner will have control over or be in charge of construction means, methods, techniques, sequences, or procedures, or for the safety precautions and programs in connection with the work, since they are solely Contractor's responsibility, unless otherwise required by the Contract Documents.

20. DELAYS/LIQUIDATED DAMAGES

Contractor agrees to complete all of its work within the time specified in the bid form, subject to Change Orders increasing or decreasing the time specified. It is agreed by the parties that time is of the essence in the performance of this Contract by Contractor, and that in case all work is not completed in all respects and requirements within the time called for in the Contract Documents, plus any agreed extensions of time, damage will be sustained by Owner, and it is and will be impracticable to determine the actual amount of damage by reason of such delay, and the Contractor agrees to pay the Owner, as liquidated damages, the sum of \$500 for each consecutive calendar day the work remains uncompleted beyond the time specified in the Contract for completion. Contractor agrees that Owner may deduct and retain that amount of money from any monies due the Contractor under the Contract.

21. EXTENSION OF TIME

- a) Extensions will be approved only if the Contractor can show how a specific delay relates to the critical path on the projects approved schedule.
- b) The granting of an extension of time for the completion of the work on account of delays which, in the judgment of Architect, are unavoidable delays, or granted for the performance of additional work, shall not operate as a waiver by Owner of any rights under this Contract.
- c) Extensions of time do not allow Contractor to claim money for General Conditions.

22. CLAIMS

A claim is a request by Contractor to adjust, alter, modify, or otherwise change the Contract Sum, the Contract Time, or both. A claim must be stated with specificity, including the event or occurrence giving rise to the claim, the date of the event, and the asserted affect on the Contract Sum and/or Contract Time. The Claim shall include supporting data, including scheduling data demonstrating the impact of the event on completion of the project and a cost breakdown of items included in the claim. Claim must relate directly to work on critical path of the schedule.

All claims shall be submitted to Owner and Architect for decision within ten (10) days after the event or occurrence giving rise to the claim. Claims must be submitted before the date of final payment.

Contractor hereby expressly waives all claims not made within the aforesaid time limits. Contractor shall submit all claims before proceeding to perform the work giving rise to such claim or forfeit right for money and time.

Notwithstanding the making of any claim or the existence of any dispute regarding any claim, Contractor shall not cause any delay in, cessation of, or termination of Contractor's performance of the work, but shall diligently proceed with performance of the work in accordance with the Contract Documents.

California Penal Code Section 72 provides that any person who presents for payment with intent to defraud any Owner board or officer any false or fraudulent claim, bill, account, voucher, or writing is punishable by fines not exceeding \$10,000 and/or imprisonment.

Government Code Sections 12650 et seq. pertain to civil penalties that may be recovered for presenting a false claim to an officer or employee of a political subdivision of the State of California. Penalties include liability for three times the amount of damages of the political subdivision, plus a civil penalty, plus costs.

All claims by contractor shall include the following certification, executed by Contractor or an officer of Contractor:

I, _____, BEING THE _____ (OFFICER) OF _____, 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 TRUTHFUL AND ACCURATE; THAT THE AMOUNT REQUESTED ACCURATELY REFLECTS THE CONTRACT ADJUSTMENT FOR WHICH THE OWNER IS LIABLE; AND, FURTHER, THAT I AM FAMILIAR WITH CALIFORNIA PENAL CODE SECTION 72 AND CALIFORNIA GOVERNMENT CODE SECTION 12650, 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.

23. CHANGES

The Owner or Architect may order changes, deductions, or additions to the Contract at any time during progress of the work through a written change order. Such an order does not invalidate the Contract.

The Contractor shall assume all expense and responsibility for any change made without a change order. Adjustment, if any, in the amount to be paid the Contractor by reason of any modification of the work as set forth in a Change Order, Construction Change Directive, or arising from Claims, shall be based on the fair and reasonable value of the modification, as determined at the discretion of Owner in one or more of the following ways:

- A. By acceptable lump sum proposal from contractor;
- B. By unit prices contained in Contractor's original bid or fixed by subsequent agreement between Owner and Contractor; or
- C. By cost of labor, equipment and materials utilized to make such change, and a 15% allowance for overhead and profit.

24. PAYMENTS

Contractor shall, before the first application for payment, submit to the Architect a cost breakdown of the various parts of the work, including quantities, aggregating the total sum of the Contract, divided so as to facilitate payments to subcontractors. This schedule, when approved by the Architect, shall be used as a basis for certificates of payment. In applying for payments, contractor shall submit a statement based upon this schedule. The Contractor shall submit, with each application for payment, receipts or other vouchers showing his payments for materials and labor. Applications for payments shall be submitted no later than ten (10) days before each payment falls due.

If the contractor has made application for payment as above, the Architect shall, no later than the date

when each payment falls due, issue a Certificate for Payment to the Contractor for such amount as he decides to be properly due, or state in writing his reasons for withholding a certificate. Progress payments shall be made in the amount of ninety (90) percent of the value of labor and material incorporated in work, less the aggregate of previous payments. Ten percent (10%) shall be retained by Owner until final payment. Certificates for Payment should be issued monthly.

The final Certificate for Payment shall be issued thirty-five (35) days after the filing of the Notice of Completion, provided that:

- a. The Contractor furnishes satisfactory evidence that all claims for labor and materials have been paid;
- b. No claim shall have been presented to Owner based on any acts or omissions of contractor, and no liens or withhold notices shall have been filed against the work or the property;
- c. Record drawings, guaranties, and bonds, have been received by Architect;
- d. Testing affidavits have been received by the Office of the State Architect and their final approval given.

Acceptance by Contractor of this final payment constitutes a waiver of all claims against the owner arising from this Contract. No certificates issued or payments made to the Contractor shall be an acceptance of any work or materials not in accordance with the Contract.

25. PAYMENTS WITHHELD

The Architect may withhold a sufficient amount of any payment otherwise due to Contractor as in its judgment may be necessary on account of any of the following:

- a. Defective work not remedied;
- b. Claims filed against the work or reasonable evidence indicating the probable filing of claims;
- c. Failure of the Contractor to make payments to subcontractors or for material and labor;
- d. Damage to another Contractor;
- e. Neglect of the Contractor to properly prosecute the work;
- f. Any other failure of Contractor to perform its obligations under the Contract documents;
- g. Lack of a reviewable construction schedule.

When the above grounds are removed, payment shall be made for amounts withheld.

26. ACCESS TO RECORDS

Architect and/or Owner, or their authorized representatives, shall have access, upon reasonable notice, during business hours, to Contractor and subcontractors' books, documents, and accounting records directly or indirectly pertinent to the work, to verify and evaluate the accuracy of cost and pricing data submitted with any Change Order or Claim for payment. Such access includes the right to examine and audit such records, and make excerpts, transcriptions, and/or photocopies at Owner's

expense.

27. EMPLOYEES: FELONIES/FINGERPRINTING

By submission of a bid proposal, Contractor represents, warrants, and certifies that neither Contractor, nor any employee of Contractor, nor any employee of anyone whom Contractor is responsible for, who has been convicted of a felony as defined in Section 45122.1 of the Education Code will be allowed on the site of the work. Before Contractor, or anyone who is employed by Contractor, or anyone employed by anyone whom Contractor is responsible for, shall be allowed on the work site by the Contractor, Contractor shall submit or have submitted their fingerprints, along with such fee as may be required, to the Department of Justice, and shall have verified through the Department of Justice that such person does not have pending nor has been convicted of a felony as defined in Section 45122.1 of the Education Code. Contractor agrees to furnish such documentation and evidence as Owner may request to substantiate compliance with this section.

28. TERMINATION OF UNSATISFACTORY SUBCONTRACTS

When any portion of the work that has been subcontracted by the Contractor is not being prosecuted in a satisfactory manner, the subcontract for such work shall be terminated immediately by Contractor upon written notice from the Architect or Owner.

29. TEMPORARY SUSPENSION OF WORK

Architect or Owner shall have the authority to suspend the work in whole or in part for such period as it may deem necessary, due to unsuitable weather, or any other conditions it deems unfavorable for the suitable prosecution of the work, or for Contractor's failure to perform any provisions of the Contract, or for any other reason. Contractor shall immediately comply with a written order suspending the work, and work shall resume only when ordered or approved in writing by Architect or Owner.

If suspension of the work is ordered by the Owner due to the failure of Contractor to carry out orders or perform any provision of the Contract, the days on which the suspension order is in effect shall be considered working days, and shall not 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.

30. TERMINATION OF CONTRACT BY OWNER

Whenever, in the opinion of Architect or Owner, the Contractor has failed to supply an adequate force of labor, equipment, or materials of proper quality, or has failed in any other respect to prosecute the work with diligence, or if Contractor should refuse or fail to comply with any laws, ordinances, or the directions of architect, or if Contractor fails to make prompt payments to subcontractors or for labor or materials or otherwise be in breach of this Contract, Owner or Architect may give written notice of at

least five days notice to Contractor and Contractor's Sureties that if the defaults are not remedied within a time specified in such notice, the Contractor's control over the work will be terminated.

If Contractor should be adjudged a bankrupt, or make an assignment for the benefit of Contractor's creditors, or if a receiver should be appointed on account of Contractor's insolvency, the Owner may declare the Contractor's control over the work terminated, and so notify the Contractor and Contractor's sureties as above.

Such termination is without prejudice to any other right or remedy. Upon such termination, Owner may take possession, and use all or part of contractor's materials, tools, equipment, and appliances upon the premises and complete the work by whatever method is most expedient.

Owner assumes responsibility for relinquishing such equipment at the conclusion of the work, or sooner, at its option, in as good a condition as when it was taken over, reasonable wear and tear excepted, and the Owner agrees to pay for such materials and the use of the equipment at a reasonable compensation.

Upon such termination, Owner may direct the surety to complete or cause to be completed the contract work. If Surety fails to complete or cause to be completed, it is agreed that damage will be sustained by Owner, and it is impracticable to determine the actual amount of damage by reason of such acts, and Contractor and surety agree that, in addition to any other damages Owner may sustain and may be recovered pursuant to these contract documents, including but not limited to other liquidated damages for delay or actual damages, the sum of seven hundred fifty dollars (\$750.00) is a reasonable amount to be charged for each day surety fails or refuses to complete or cause the Contract work to be completed. It is further agreed that the Owner may deduct and retain the amount thereof from any monies due the Contractor under the Contract.

If the Contractor's control over the work is terminated as provided above, the contractor is not entitled to receive any portion of the amount to be paid under the Contract until it is fully completed. After completion, if the unpaid balance of the Contract Price exceeds the expense of finishing the work, such excess shall be paid to the Contractor. If such expense exceeds the unpaid balance, the Contractor and Contractor's surety shall pay the difference to the Owner. If the surety completes the Contract work, such surety shall be subrogated to money due under the Contract. However, Contractor and Surety agree that any subrogation rights of surety are subordinate and inferior to rights of Owner.

Owner reserves the right to terminate the work upon written notice to Contractor. In such event, the Contractor shall be paid its reasonable costs for the work performed to the date of termination, reasonable costs associated with demobilization, plus fifteen percent (15%) of all such costs for

overhead and profit.

31. FINAL INSPECTION

The Contractor shall notify the Architect in writing of the completion of the work, and the Architect shall promptly inspect the work. Contractor will be notified in writing of any defects to be remedied prior to final acceptance. Within ten days of such notification, contractor shall proceed to correct such defects or deficiencies. When notified that this work has been completed, Owner may accept the work. Final acceptance by Owner shall cause commencement of guarantee periods. Within 10 days of completion of all work, a notice of completion shall be filed with the County Recorder.

32. SURVEYS, PERMITS, LICENSES AND FEES

Contractor shall procure all permits and licenses necessary for the normal conduct of its business and construction operations, and all costs associated therewith shall be paid by Contractor. Contractor shall secure and pay for all licenses of a temporary nature, including encroachment permits, necessary for prosecution of the work.

Construction staking shall be done by contractor.

33. PATENTS

Contractor shall assume all costs arising from the use of patented materials, equipment, devices, or processes used on or incorporated in the work.

34. BRAND NAMES

When any materials or equipment are indicated or specified by patent or proprietary name, it is considered as used for convenience in describing the material or equipment desired. The use of an alternative material or equipment of equal quality may be permitted. Request for such substitution shall be made within thirty (30) days of the Notice to Proceed, or Contractor agrees to furnish only the materials or equipment listed in the Contract Documents. No deviations from the specifications shall be allowed, unless approved by the Architect. The Architect shall be the sole judge of the quality and suitability of alternative materials or equipment.

35. PROPERTY RIGHTS

Nothing in this Contract shall be construed as vesting in the contractor any right of property in the materials used after they have been installed, attached, or affixed to the work, and all such materials cannot be removed from the work without consent of the Owner.

36. CLEAN UP

Throughout the construction period, Contractor shall keep the work site in a presentable condition,

dispose of any surplus materials, clean out drainage ditches and structures, and repair any property damaged during the progress of the work. Upon completion of the work, the Contractor shall thoroughly clean the site of the work of all rubbish, excess material, and equipment, and all portions of the work shall be left in a neat and orderly condition. The final inspection will not be made until this has been accomplished. If contractor fails to fulfill these obligations, Owner may clean or cause the property to be cleaned, and withhold the cost of performing these obligations, plus an additional fee of twenty-five percent (25%) for administrative costs, from payments to Contractor.

37. ASSIGNMENT

The performance of the Contract may not be assigned, except on written consent of the Owner, and no assignment shall be permitted which would relieve the original Contractor or Contractor's Surety of their responsibilities under the Contract.

38. NON-RECOGNITION OF SUBCONTRACTORS

No subcontractor will be recognized as such, and all persons engaged in the work under this contract will be considered as employees of the contractor. Owner and its representatives will deal only with the Contractor, who shall be responsible for proper performance of the entire work.

39. CONTRACTOR NOT AN AGENT OF OWNER

The right of general supervision shall not make the Contractor an agent of the Owner, and the liability of the Contractor for all damages to persons or to property arising from the performance of the work shall not be lessened because of such general supervision.

40. THIRD PARTY CLAIMS

Contractor shall be responsible for all third-party claims, and for costs or injuries incurred by a third party that result from the operations of the Contractor or its performance under the Contract.

41. GUARANTEE

Should any failure of the work occur within a period of one year after recordation of the notice of Completion of the project, which failure can be attributed to faulty materials, poor workmanship, or defective equipment, Contractor shall promptly make the needed repairs at Contractor's expense. Owner is authorized to make such repairs if the contractor fails to make or undertake with due diligence the aforesaid repairs within ten days after contractor is given written notice of said failure, or in case of emergency, and the Contractor shall pay the entire costs thereof.

42. ASSIGNMENT OF ANTITRUST ACTIONS

Pursuant to Section 4552 of the California Government Code, the following provision shall be a part of this contract: In entering into a public works contract or a subcontract to supply goods, services, or

materials pursuant to a public works contract, , the contractor or subcontractor offers and agrees to assign to the awarding body 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 the subcontract. This assignment shall be made and become effective at the time the awarding body tenders final payment to the contractor without further acknowledgement by the parties.

43. INDEMNIFICATION

Contractor shall defend, indemnify, and hold harmless Owner, Owner's representative, and Architect (including their inspector, project managers, trustees, officers, agents, members, employees, affiliates, consultants, and representatives), and each of them from any and all claims, demands, suits, causes of action, damages, costs, expenses, attorneys' fees, losses, or liability, in law or in equity, of every kind and nature whatsoever arising out of or in connection with Contractor's operations to be performed under this Contract, including but not limited to:

- a. Personal injury or property damage caused or alleged to be caused in whole or in part by any negligent act or omission of Contractor, Owner, or Architect, or anyone directly or indirectly employed by them, or anyone for whose acts they may be liable;
- b. Penalties threatened, sought, or imposed due to the violation of any law, order, citation, rule, regulation, ordinance, or statute, caused by the action or inaction of Contractor;
- c. Alleged infringement of any patent rights that may be brought arising out of Contractor's work;
- d. Claims and liens for labor performed or materials furnished to be used on the job;
- e. Contractor's failure to fulfill any of the covenants set forth in these Contract Documents.

44. MISCELLANEOUS PROVISIONS

This Contract shall bind and inure to the heirs, devisees, assignees, and successors in interest of Contractor and Owner. This contract shall be governed by the laws of the State of California. If one or more of the provisions contained in the contract should be invalid, illegal, or unenforceable in any respect, the validity, legality, and enforceability of the remaining provisions shall not in any way be affected or impaired thereby. This Contract constitutes the full and complete understanding of the parties, and supersedes any previous agreements or understandings, oral or written, with respect to the subject matter hereof. The Contract may only be modified by a written instruments signed by both parties.

45. PUBLIC CONTRACT CODE SECTION 20104, ET SEQ.

Public Contract Code section 20104, et seq., requires that the following language be set forth herein:
Section 20104. Application of Article; provisions included in plans and specifications

- (i) (1) This article applies to all public works claims of three hundred seventy-five thousand dollars (\$375,000) or less which arise between a contractor and a local agency.
(2) This article shall not apply to any claims resulting from a contract between a contractor and a public agency when the public agency has elected to resolve any disputes pursuant to Article 7.1 (commencing with Section 10240) of Chapter 1 of Part 2.
- (ii) (1) "Public work" has the same meaning as in Sections 3100 and 3106 of the Civil Code, except that "public work" does not include any work or improvement contracted for by the State or the Regents of the University of California.
(2) "Claim" means a separate demand by the contractor for (A) a time extension, (B) payment of money or damages arising from work done by, or on behalf of, the contractor pursuant to the contract for a public work and payment of which is not otherwise expressly provided for or the claimant is not otherwise entitled to, or (C) an amount the payment of which is disputed by the local agency.
- (iii) The provisions of this article or a summary thereof shall be set forth in the plans or specification for any work which may give rise to a claim under this article.

Section 20104.2 Claims: requirements: tort claims excluded

For any claim subject to this article, the following requirements apply:

- (i) The claim shall be in writing and include the documents necessary to substantiate the claim. Claims must be filed on or before the date of final payment. Nothing in this subdivision is intended to extend the time limit or supersede notice requirements otherwise provided by contract for the filing of claims.
- (ii) (1) For claims of less than fifty thousand dollars (\$50,000), the local agency shall respond in writing to any written claim within 45 days of receipt of the claim, or may request, in writing, within 30 days of receipt of the claim, any additional documentation supporting the claim or relating to defenses to the claim the local agency may have against the claimant.
(2) If additional information is thereafter required, it shall be requested and provided pursuant to this subdivision, upon mutual agreement of the local agency and the claimant.
(3) The local agency's written response to the claim, as further documented, shall be submitted to the claimant within 15 days after receipt of the further documentation or within a period of time no greater than that taken by the claimant in producing the additional information, whichever is greater.
- (iii) (1) For claims of over fifty thousand dollars (\$50,000) and less than or equal to three hundred seventy-five thousand dollars (\$375,000), the local agency shall respond in writing to any written claim within 60 days of receipt of the claim, or may request, in writing, within 30 days of receipt of the claim, any additional documentation supporting the claim or relating to defenses to the claim the local agency may have against the claimant.
(2) If additional information is thereafter required, it shall be requested and provided pursuant

to this subdivision, upon mutual agreement of the local agency and the claimant.

- (3) The local agency's written response to the claim, as further documented, shall be submitted to the claimant within 30 days after receipt of the further documentation or within a period of time no greater than that taken by the claimant in producing the additional information, whichever is greater.
- (iv) If the claimant disputes the local agency's written response, or the local agency fails to respond within the time prescribed, the claimant may so notify the local agency, in writing, either within 15 days of receipt of the local agency's response or within 15 days of the local agency's failure to respond within the time prescribed, respectively, and demand an informal conference to meet and confer for settlement of the issues in dispute. Upon a demand, the local agency shall schedule a meet and confer conference within 30 days for settlement of the dispute.
- (v) Following the meet and confer conference, if the claim or any portion remains in dispute, the claimant may file a claim as provided in Chapter 1 (commencing with section 900) and Chapter 2 (commencing with section 910) of Part 3 of Division 3.6 of Title 1 of the Government Code. For purposes of those provision, the running of the period of time within which a claim must be filed shall be tolled from the time the claimant submits his or her written claim pursuant to subdivision (a) until the time that claim is denied as a result of the meet and confer process, including any period of time utilized by the meet and confer process.
- (vi) This article does not apply to tort claims and nothing in this article is intended nor shall be construed to change the time periods for filing tort claims or actions specified by Chapter 1 (commencing with section 900) and Chapter 2 (commencing with section 910) of Part 3 of Division 3.6 of Title 1 of the Government Code.

Section 20104.4 Civil action procedures; mediation and arbitration; trial de novo; witnesses

The following procedures are established for all civil actions filed to resolve claims subject to this article:

- (i) Within 60 days, but no earlier than 30 days, following the filing of responsive pleadings, the court shall submit the matter to non-binding mediation unless waived by mutual stipulation of both parties. The mediation process shall provide for the selection within 15 days by both parties of a disinterested third person as mediator, shall be commenced within 30 days of the submittal, and shall be concluded within 15 days from the commencement of the mediation unless a time requirement is extended upon good cause showing to the court or by stipulation of both parties. If the parties fail to select a mediator within the 15-day period, any party may petition the court to appoint a mediator.
- (ii) (1) If the matter remains in dispute, the case shall be submitted to judicial arbitration pursuant to Chapter 2.5 (commencing with Section 1141.10) of Title 3 of Part 3 of the Code of Civil Procedure, notwithstanding Section 1141.11 of that code. The Civil Discovery Act of 1986

(Article 3(commending with section 2016) of Chapter 3 of Title 3 of Part 4 of the Code of Civil Procedure) shall apply to any proceeding brought under this subdivision consistent with the rules pertaining to judicial arbitration.

(2) Notwithstanding any other provision of law, upon stipulation of the parties, arbitrators appointed for purposes of this article shall be experienced in construction law, and, upon stipulation of the parties, mediators and arbitrators shall be paid necessary and reasonable hourly rates of pay not to exceed their customary rate, and such fees and expenses shall be paid equally by the parties, except in the case of arbitration where the arbitrator, for good cause, determines a different division. In no event shall these fees or expenses be paid by state or county funds.

(3) In addition to Chapter 2.5 (commencing with Section 1141.10) of Title 3 of Part 3 of the Code of Civil Procedure, any party who, after receiving an arbitration award requests a trial de novo but does not obtain a more favorable judgment shall, in addition to payment of costs and fees under that chapter, pay the attorney's fees of the other party arising out of the trial de novo.

(4) The court may, upon request by any party, order any witnesses to participate in the mediation or arbitration process.

Section 20104.6 Payment on undisputed portion of claim; interest on arbitration awards or judgments

- (i) No local agency shall fail to pay money as to any portion of a claim which is undisputed except as otherwise provided in the contract.
- (ii) In any suit filed under Section 20104.4, the local agency shall pay interest at the legal rate on any arbitration award or judgment. The interest shall begin to accrue on the date the suit is filed in a court of law.

END OF SECTION

1. DEFINITIONS

The Project Representative (Inspector) as the duly authorized personal representative of the Owner shall provide competent, adequate and continuous inspection as required by Title 24, California Code of Regulations.

2. CODES, RULES, AND REGULATIONS

- A. In addition to the law of the place of the building, all work and materials shall be in accordance with the latest requirements of:
1. Title 21, California Code of Regulations.
 2. Any prevailing rules and regulations pertaining to the adequate protection and/or guarding or any moving parts or otherwise hazardous locations.
 3. California Building Code, 2022
 4. Federal and State Laws.
 5. California State Industrial Accident Commission's Safety Orders.
 6. California State Labor Code.
 7. California State Fire Marshal's Regulations, T-19.
 8. 2022 T24, Pt. 5, California Plumbing Code/ and Calif. Mechanical Code (Part 4).
 9. California Electric Code, 2022 (Part 3).
 10. Title 24, California Code of Regulations.
 11. Occupational Safety and Health Act Regulations - CAL OSHA.
- B. In case of a conflict between the referenced regulations, or between the referenced regulations and the law of the place of the building, or between any of the foregoing and the project specifications, the most restrictive requirements shall govern.
- C. The Contractor shall keep one copy of Title 24 Parts 1-5, California Code of Regulations, on the job at all times, in good order, and available to all having jurisdiction.

3. DRAWINGS AND SPECIFICATIONS ON THE WORK

Only Drawings, Specifications, Addenda, and Change Orders bearing the approval of the Owner (except Addenda), and the Architect shall be used in executing the work. All such items not so approved shall not be permitted on the job site.

4. SUBSTITUTIONS

- A. Where materials or products are specified and/or indicated on the Drawings by trade name, manufacturer's name or catalog number, bids shall be based upon said specified and/or indicated materials or products, except that the substitutions are approved in accordance with the requirements hereinafter prescribed. For the purpose of the bid, no requests for substitutions will be considered if received by the Architect less than fourteen (14) days before the date set for the bid opening.
- B. After the award of the General Contract, if the Contractor or any subcontractor desires to make a substitution, requests shall be made in the manner and within the time limits hereinafter prescribed. Bidders are cautioned that proposals based on materials or products not approved prior to bid opening, as above required, shall be the sole responsibility of the bidder; that acceptance of the bid does not imply or guaranty approval of such unapproved materials or products, and that rejection of such unapproved materials or products shall not be cause for an increase in the Contract amount or an extension of the Contract time.
- C. The Contractor requesting the substitution shall bear the responsibility and all costs for tests, supporting data and samples required to determine the equality of such substitution. Said Contractor shall also bear fully the equality of such substitution. Said Contractor shall also bear fully responsibility for coordination of approved substitute materials or products with architectural, structural, mechanical, and electrical drawings and the work. Any changes required for installation or approved substitutions shall be made without additional cost to Owner.
- D. After award of the General Contract, thirty-five (35) days shall be allowed for submission of requests of substitutions and of data substantiating the request. After such time, no requests for substitution will be considered.

- E. Only one request for substitutions will be considered on each item of materials or equipment.
- F. All transactions with manufacturers, suppliers, dealers, or subcontractors shall be through the Contractor.
- G. The Contractor shall apply in writing for each proposed substitution stating the manufacturer, brand name, etc., and provide supporting data and samples as required. State the credit involved. If the cost is less for an approved substitution, credit shall be taken so the Owner obtains the benefit derived there from. No substitution approved shall be deemed cause for an increase in the Contract amount or for an extension of the Contract time, unless such substitution is requested by the Owner or the Architect.
- H. When the term "or approved equal" is used, it shall mean "Approved Equal" in the opinion of the Architect.
- I. Substitutions are subject to the approval of the Architect through addenda or change order process. Substitutions related to SSS, ACS, and FLS are considered as changes, and may require submission to the County for review and approval.

5. MATERIALS, APPLIANCES AND EMPLOYEES

- A. Alien Labor: The Contractor shall forfeit, as penalty to the Owner, \$10 for each alien knowingly employed in the execution of the Contract, by him or by any subcontractor under him, upon any of the work for each calendar day or portion thereof, during which such alien is permitted or required to labor in violation of the provisions of the Labor Code and in particular, Section 1850 to 1854, thereof, inclusive.
- B. The Contractor shall comply with the California Labor Code pertaining to the employment of aliens.
- C. Claims and disputes pertaining to labor classifications shall be decided by the Owner unless local law provides otherwise. The Contractor shall diligently proceed with the work pending settlement of any dispute which might otherwise delay completion.
- D. A legal day's work shall be eight hours of labor.
 - 1. No workman or mechanic employed by the Contractor or any subcontractor shall be required or permitted to work more than eight hours in any one calendar day except as provided by the California Labor Code. The Contractor shall forfeit to the Owner, as penalty, \$25 (twenty-five dollars) for each workman employed by the Contractor or any subcontractor, for each calendar day during which said workman is required or permitted to labor more than eight hours, if said labor is in violation of the California Labor Code.
 - 2. The Contractor shall file all necessary reports and complaints with all applicable provisions of the California Labor Code if due to an emergency, any workmen is required or permitted to work over eight (8) hours in one calendar day.

6. CHANGES IN WORK

- A. The approval of the Architect and Owner is required before a Change Order shall be effective. It shall be first signed by the Owner, and then submitted to the Architect for approval before initiating any changes in the work.
- B. There shall be no extra compensation without duly authorized written Change Order.

7. APPLICATION FOR PAYMENT

Estimate periods shall end on the 25th day of each month, and applications for payment shall be submitted to the Architect not more than 7 days later.

8. ARCHITECT'S STATUS

- A. The Architect shall be the Owner's representative during the construction period and he will observe the work in process on behalf of the Owner. He shall have the authority to act on behalf of the Owner only to the extent expressly provided in the Contract Documents or otherwise in writing, which shall be shown to the Contractor. He shall have the authority to stop the work whenever such stoppage may be necessary, in his reasonable opinion, to insure proper execution of the Contract.
 - 1. The architect shall be, in the first instance, the interpreter of the conditions of the Contract and judge of its performance. He shall side neither with Owner nor with the

Contractor, but shall use his powers under the contract to enforce its faithful performance by both.

2. In case of the termination of employment of the Architect, the Owner shall appoint a capable and reputable Architect, against whom the Contractor makes no reasonable objection, whose status under the Contract shall be that of the former Architect. Any dispute in connection with such appointment shall be subject to arbitration.

9. SUBCONTRACTS

The General Contractor's failure to specify a subcontractor in the Bid for any portion of the work in excess of one-half of one percent of his total bid shall constitute an agreement for him to perform such portion himself.

10. WAGE RATES (DAVIS-BACON ACT)

Work performed at the building site shall comply with the following requirements. Work performed at the building site is defined to include altering, remodeling and installation at the work site of items fabricated off the site (where such installation is necessary to the construction or renovation); painting and decorating; manufacturing or furnishing of materials or equipment on the site of the building or work; and transportation between actual construction location and a facility which is dedicated to such construction and deemed a part of the work.

A. MINIMUM WAGES

Refer to Code of Federal Regulations, Labor Standards Clauses - 29 CFR '5.5

All laborers and mechanics employed or working upon the site of the Work (or under the United States Housing Act of 1937 or under the Housing Act of 1949 in the construction or development of the Project) will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR Part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made part hereof, regardless of any contractual relationship which may be alleged to exist between the Contractor and such laborers and mechanics. Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions below; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds or programs which cover the particular weekly period are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of Work actually performed, without regard to skill, except as provided in Paragraph 27.d. Laborers or mechanics performing Work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein, provided that the employer's payroll records accurately set forth the time worked in each classification in which Work is performed. The wage determination (including any additional classification and wage rates conformed under requirements below and the Davis Bacon poster (WH 1321)) shall be posted at all times by the Contractor and its Subcontractors at the site of the Work in a prominent and accessible place where it can be easily seen by the workers. The Contracting officer shall require that any class of laborers or mechanics which is not listed in the wage determination and which is to be employed under the Contract shall be classified in conformance with the wage determination. The Contracting officer shall approve an additional classification and wage rate and fringe benefits therefor only when the following criteria have been met:

- i. The Work to be performed by the classification requested is not performed by a classification in the wage determination; and
- ii. The classification is utilized in the area by the construction industry; and
- iii. The proposed wage rate, including any bona fide fringe benefits, bears a reasonable

relationship to the wage rates contained in the wage determination.

If the Contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the Contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the Contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, D.C. 20210. The Administrator, or an authorized representative, will approve, modify or disapprove every additional classification action within 30 days of receipt and so advise the Contracting officer or will notify the Contracting officer within the 30 day period that additional time is necessary.

In the event the Contractor, the laborers or mechanics to be employed in the classification or their representatives, and the Contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the Contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the Contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the Contracting officer or will notify the Contracting officer within the 30day period that additional time is necessary.

The wage rate (including fringe benefits where appropriate) determined pursuant to the above shall be paid to all workers performing Work in the classification under this Contract from the first day on which Work is performed in the classification.

Whenever the minimum wage rate prescribed in the Contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the Contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

If the Contractor does not make payments to a trustee or other third person, the Contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, provided that the Secretary of Labor has found, upon the written request of the Contractor, that the applicable standards of the Davis Bacon Act have been met. The Secretary of Labor may require the Contractor to set aside in a separate account asset for the meeting of obligations under the plan or program.

Refer to Section 00 80 00 of this specification section.

11. INDEMNITY

The Contractor will hold harmless, indemnify and defend the Owner, the Architect and his consultants, and each of their officers and employees and agents, from any and all liability claims, losses or damages, and expenses; accountants', consultants', and experts' fees and expenses, arising out of or resulting from the performance of the work attributable to bodily injury, sickness or death, or to injury to or destruction of tangible property, including the loss of the use resulting there from, and caused in whole or in part by any negligent or other act or omission of Contractor, any subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, regardless of whether indemnification shall extend to claims, demands, or liability for injuries occurring after completion of the Project as well as during the Work's progress. Such obligation shall not be construed to negate, abridge or otherwise reduce any other obligation of indemnity which otherwise exists under the Contract Documents of at law as to any party or person described in this paragraph or otherwise. This indemnity applies to both active and passive acts or other conduct of the parties indemnified hereunder.

12. APPROVED EQUAL

Specifications as written often refer to specific brands or manufacturers. Such reference is made to establish quality standards only and not to suggest preference for those brands or manufacturers.

13. FIRE INSURANCE

- A. The Owner shall procure and maintain in full force until the final payment, a Builder's Risk Fire Insurance Policy including extended coverage, vandalism, theft and malicious mischief endorsements which shall be at all times equal to the Completed value of the Contract, including items of labor and materials connected therewith whether in or adjacent to the structure insured, materials in place to be as a part of the permanent site, filling, excavation and grading.
1. Exclusions shall be any tools owned by mechanics, or any item owned or rented by the Contractor, the capital value of which is not included in the cost of the work.
 2. The loss, if any, shall be made adjustable with and payable to the Owner, Contractor and subcontractors. If required in writing by any party in interest, the Owner as Trustee shall, upon occurrence of loss, give bond for the proper performance of his duties; distribute any money received from the insurance in accordance with such agreement as the parties in interest may reach.
 3. If, after loss, no special agreement is made, replacement of injured work shall be ordered and executed as provided or under CHANGES IN WORK.
- B. All policies shall be open to inspection by the Contractor. If the Owner fails to show them on request, or fails to effect or maintain insurance as above, the Contractor may insure his own interest and charge the cost thereof to the Owner. If the Contractor is damaged by failure of the Owner to maintain such insurance, he may recover as stipulated in the Contract for recovery of damages.

14. SALVAGE

- A. All removed equipment, cabinetry, or reusable items shall remain the property of the Owner. The Contractor is responsible for these items to be stacked in a location to be designated.
- B. All removed drywall, ruined cabinetry, or non-reusable items shall be trucked to the county dump for disposal. Burning on the premises shall not be allowed, except in an approved incinerator, approved by the Local Fire Chief.

15. PROGRESS REPORTS

The Contractor shall submit verified progress reports to the Architect on the First Day of February, May, August, and November, and at other times as required by Title 21, California Code of Regulations. Reports shall be submitted on Form 6 of the Architect. At the completion of the Contract, or upon suspension of work for a period of more than one month, a report shall be submitted in duplicate on Form 6. One additional copy of each report shall be sent to the Architect.

16. APPRENTICESHIP REGULATIONS FOR PUBLIC CONTRACTS

- A. The Owner shall comply with the following California Labor Code, Division 2, Part 7, Chapter I, Article 2, Section 17773.3 requirements:
1. "An awarding agency whose public works contract falls within the jurisdiction of Section 1777.5 shall, within five days of the award, send a copy of the award to the Division of Apprenticeship Standards. When specifically requested by a local joint apprenticeship committee, the division shall notify the local joint apprenticeship committee regarding all such awards applicable to the joint apprenticeship committee making the request. Within five days of a finding of any discrepancy regarding the ratio of apprentices to journeymen, the awarding agency shall notify the Division of Apprenticeship Standards." (Added by Stats. 1978, Ch. 1249)
 2. Submission of the "Extract of Public Works Contract Award" DAS 13 form will satisfy the above noted requirement. See appendixes page.
Also note Labor Code Section 1776(g), 1777.5 and 1777.5.
- B. The Contractor shall comply with the following labor code requirements:
1. Payroll Records: Each Contractor and subcontractor shall keep an accurate payroll record, showing the name, address, social security number, work week, and the actual per diem wages paid to each journeyman, apprentice, worker, or other employee employed by him in connection with the public work. Such records shall be certified

and available for inspection at all reasonable hours at the principal place of the Contractor as required by Labor Code Subsection 1776.

2. Use of Apprentices: Contractor agrees to comply with Chapter 1, Part 7, Division 2, and Subsection 1777.5 et. seq. of the California Labor Code. These sections require contractors and subcontractors to employ apprentices in apprenticeable occupations in a ratio of not less than one apprentice for each five journeymen (unless an exception is granted in accordance with Subsection 1777.5), and that Contractors and subcontractors shall not discriminate among otherwise qualified employees as apprentices solely on the ground of sex, race, religion, creed, national origin, ancestry or color. Only apprentices as defined in Subsection 3077, who are in training under apprenticeship standards and who have written apprentice agreements will be employed on public works in apprentice able occupations. The responsibility for compliance with these provisions is fixed with the prime contractor for all apprentice able occupations.

17. COVID-19 & SOCIAL DISTANCING PROTOCOLS

The Contractor must prepare, post, and implement a Social Distancing Protocol in compliance with *Appendix A* to the new *Shelter-In-Place Orders*. Contractors must provide documentation to the Owner demonstrating how they are complying with this portion of the Orders. At a minimum, the Social Distancing Protocol must include:

- posting signage and taking measures to protect employee health;
- preventing crowds from gathering;
- keeping people six feet apart;
- preventing unnecessary contact; and
- increased sanitization.

The Contractor is solely responsible for the determination and implementation of said protocols.

END OF SECTION

PART 1 GENERAL

1.01 WORK COVERED BY CONTRACT DOCUMENTS/REQUIREMENTS INCLUDED

The work of the contract comprises the

General Alteration to an Existing Parking Lot for Woodson Elementary School, and the Corning Union Elementary School District, Corning, Tehama County, California as defined herein.

1.02 RELATED REQUIREMENTS

Conditions of the Contract: Additional responsibilities of all parties.

1.03 CONTRACTS

The work of this Contract comprises the construction specified in this set and that so identified in the Drawings.

1.04 WORK SEQUENCE

Work on this site will be executed per Owner's request.

1.05 CONTRACTOR'S USE OF PREMISES

A. Contractor shall limit his use of the premises for work and for storage, to allow for:

1. Work by other Contractors
2. Owner occupancy
3. Use of existing adjacent school facilities

B. Coordinate use of premises under direction of Owner.

C. Assume full responsibility for the protection and safekeeping of products under this Contract, stored on the site.

D. Move any stored products, under Contractor's control, which interfere with operations of the Owner or separate Contractor.

1.06 OWNER OCCUPANCY

A. Owner will occupy most of the premises during the entire period of construction for the conduct of his normal operations. Cooperate with Owner's Representative in all construction operations to minimize conflict, and to facilitate Owner's usage in the existing toilets.

B. Contractor shall at all times conduct his operations as to insure the least inconvenience to the general public.

PART 1 GENERAL**1.01 REQUIREMENTS INCLUDED**

- A. Coordinate work of trades and schedule elements of alterations and renovation work by procedures and methods to expedite completion of the Work.
- B. In addition to demolition specified in Section 02 07 20, and that specifically shown, cut, more or remove items as necessary to provide access to or allow alterations and new work to proceed. Include such items as:
 - 1. Repair or removal of hazardous or unsanitary conditions.
 - 2. Removal of abandoned items and items serving no useful purpose, such as abandoned piping, conduit and wiring.
 - 3. Removal of unsuitable or extraneous materials not marked for salvage, such as abandoned furnishings and equipment, and debris such as rotted wood, rusted metals and deteriorated concrete.
 - 4. Cleaning of surfaces, and removal of surface finishes as needed to install new work and finishes.
- C. Patch, repair, and refinish existing items to remain, to the specified condition for each material, with a workmanlike transition to adjacent new items of construction.

1.02 RELATED REQUIREMENTS

- A. Section 01 01 00: Summary of Work
- B. Section 01 32 16: Construction Schedules
- C. Section 01 71 00: Cleaning

1.03 SEQUENCE AND SCHEDULES

Schedule work in the sequences and within times specified in Section 01 01 00.

1.04 ALTERATIONS, CUTTING, AND PROTECTION

- A. Assign the work of moving, removal, cutting and patching, to trades qualified to perform the work in a manner to cause least damage to each type of work, and provide means of returning surfaces to appearance of new work.
- B. Perform cutting and removal work to remove minimum necessary, and in a manner to avoid damage to adjacent work.
 - 1. Cut finish surfaces such as roofing and siding, by methods to terminate surfaces in a straight line at a natural point of division.
- C. Perform cutting and patching as specified in Section 02 07 20.
- D. Protect existing finishes, equipment, and adjacent work which is scheduled to remain, from damage.
 - 1. Protect existing and new work from weather and extremes of temperature.
 - a. Maintain existing interior work above 60 degrees F.
 - b. Provide weather protection, waterproofing, heat, and humidity control as needed to prevent damage to remaining existing work and to new work.

PART 2 PRODUCTS**2.01 SALVAGED MATERIALS**

- A. Salvage sufficient quantities of cut or removed material to replace damaged work of existing construction, when material is not readily obtainable on current market.
 - 1. Use particular care in removal and salvage of equipment.
 - 2. Store salvaged items in a dry, secure place on site.
 - 3. Items not required for use in repair of existing work shall remain the property of Owner.
 - 4. Do not incorporate salvaged or used material in new construction.

2.02 PRODUCTS FOR PATCHING, EXTENDING AND MATCHING**A. General Requirements that work is complete:**

1. Provide same products or types of construction as that in existing items as needed to patch, extend or match existing work.
 - a. Generally, contract documents will not define products or standards of workmanship present in existing construction; Contractor shall determine products by inspection and any necessary testing, and workmanship by use of the existing as a sample of comparison.
2. Presence of a product, finish, or type of construction, requires that patching, extending or matching shall be performed as necessary to make work complete and consistent to identical standards of quality.

PART 3 EXECUTION**3.01 PERFORMANCE**

Patch and extend existing work using skilled mechanics who are capable of matching existing quality of workmanship. Quality of patched or extended work shall be not less than that specified for new work.

3.02 DAMAGED SURFACES

- A. Patch and replace any portion of an existing finished surface which is found to be damaged, lifted, discolored, or shows other imperfections, with matching material.
1. Provide adequate support of substrate prior to patching the finish.
 2. Refinish patched portions of painted or coated surfaces in a manner to produce uniform color and texture over entire surface.

3.03 TRANSITION FROM EXISTING TO NEW WORK

- A. When new work abuts or finishes flush with existing work, make a smooth and workmanlike transition. Patched work shall match existing adjacent work in texture and appearance so that the patch or transition is invisible at a distance of five feet.
1. When finished surfaces are cut in such a way that smooth transition with new work is not possible, terminate existing surface in a neat manner along a straight line at a natural line of division, and provide trim appropriate to finished surface.

3.04 CLEANING

- A. Perform periodic and final cleaning as specified in Section 01 71 00.
1. Clean owner-occupied areas daily.
 2. Clean spillage, over spray, and heavy collection of dust in owner-occupied areas immediately.
- B. At completion of work of each trade, clean area and make surfaces ready for work of successive trades.
- C. At completion of alterations work in each area, provide final cleaning and return space to a condition suitable for use by Owner.

PART 1 GENERAL1.01 REQUIREMENTS INCLUDED

Abbreviations and acronyms used in Contract Documents to identify reference standards.

1.02 QUALITY ASSURANCE

- A. Application: When a standard is specified by reference, comply with requirements and recommendations stated in that standard, except when requirements are modified by the Contract Documents, or applicable codes establish stricter standards.
- B. Public Date: The publication in effect on the date of issue of Contract Documents, except when a specific publication date is specified.

1.03 ABBREVIATIONS, NAMES, AND ADDRESSES OF ORGANIZATIONS

- A. Obtain copies of referenced standards direct from publication source, when needed for proper performance of work or when required for submittal by Contract Documents.

AA	Aluminum Association
AABC	Associated Air Balance Council
AASHTO	American Association of State Highway and Transportation and Transportation Officials
AIA	American Institute of Architects
ACI	American Concrete Institute
AGA	American Gas Association
AI	Asphalt Institute
AISC	American Institute of Steel Construction
AITC	American Institute of Timber Construction
AISI	American Iron and Steel Institute
AMCA	American Movement and Control Association
ANSI	American National Standards Institute
ARI	Air-Conditioning and Refrigeration Institute
ASA	American Standards Association
ASHRAE	American Society of Heating, Refrigerating and Conditioning Engineers
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
AWWA	American Water Works Association
AWI	Architectural Woodwork Institute
AWPA	American Wood-Preservers' Association
AWS	American Welding Society
CBC	California Building Code
CCR	California Code of Regulations
CEC	California Electric Code
CLFMI	Chain Link Fence Manufacturers Institute
CMC	California Mechanical Code
CPC	California Plumbing Code
CRSI	Concrete Reinforcing Steel Institute
CSI	Construction Specifications Institute
FM	Factory Mutual System
FS	Federal Specification
	General Services Administration
	Specifications and Consumer Information
	Distribution Section (WFSIS)
GA	Gypsum Association
IAPMO	International Association Plumbing Mechanical Officials
ICC	International Code Council
MIL	Military Specification
	Naval Publications and Forms Center

Reference Standards

Section 01 09 00

MLSFA	Metal Lath/Steel Framing Association
NAAMM	National Association of Architectural Metal Manufacturers
NIST	National Institute of Standards & Technology
NEBB	National Environmental Balancing Bureau
NEC	National Electric Code
NEMA	National Electrical Manufacturer's Association
NFPA	National Fire Protection Association
PCA	Portland Cement Association
PS	Product Standard
RIS	Redwood Inspection Service: November 2000 Edition
SDI	Steel Door Institute
SIGMA	Sealed Insulating Glass Manufacturers Association
SMACNA	Sheet Metal and Air Conditioning Contractor's National Association
TAS	Technical Aid Series
TCA	Tile Council of America, Inc.
UL	Underwriters' Laboratories, Inc.
WIC	Woodwork Institute of California
WCLIB	West Coast Lumber Inspection Bureau, Rules 17
WWPA	Western Wood Products Association

PART 1 GENERAL**1.01 REQUIREMENTS INCLUDED**

Submit Applications for Payment to Architect in accord with the schedule established by Conditions of the Contract and Agreement between Owner and Contractor.

1.02 RELATED REQUIREMENTS

- A. Agreement Between Owner and Contractor: Lump sum and unit prices.
- B. Conditions of the Contract: Progress payments, retainages and final payment.
- C. Section 01 77 00: Contract Closeout.

1.03 FORMAT AND DATA REQUIRED

Submit itemized applications typed on AIA Document G702, Application and Certification for Payment, and continuation sheets G702A.

1.04 PREPARATION OF APPLICATION FOR EACH PROGRESS PAYMENT

- A. Application Form:
 - 1. Fill in required information, including that for Change Orders approved prior to date of submittal of application.
 - 2. Fill in summary of dollar values to agree with respective totals indicated on continuation sheets.
 - 3. Execute certification with signature of a responsible officer of Contract firm.
- B. Schedule:
 - 1. A revised/updated schedule must be provided and attached to the application form.

1.05 SUBSTANTIATING DATA FOR PROGRESS PAYMENTS

- A. When the Owner or the Architect requires substantiating data, Contractor shall submit suitable information, with a cover letter identifying:
 - 1. Project.
 - 2. Application number and date.
 - 3. Detailed list of enclosures.
 - 4. For stored products:
 - a. Item number and identification as shown on application.
 - b. Description of specific material.

1.06 PREPARATION OF APPLICATION FOR FINAL PAYMENT

- A. Fill in Application for as specified for progress payments.
- B. Provide Architect with evidence of compliance with Section 00 71 00, 23.E.

1.07 SUBMITTAL PROCEDURE

- A. Submit Applications for Payment to Architect at the times stipulated in the Agreement.
- B. Number: Three copies of each Application.
- C. When Architect finds Application properly completed and correct, he will transmit certificate for payment to Owner, with copy to Contractor.

TO OWNER: PROJECT: APPLICATION NO: Distribution to:
 FROM CONTRACTOR: VIA ARCHITECT: PERIOD TO: OWNER
 ARCHITECT
 CONTRACTOR
 PROJECT NOS:
 CONTRACT FOR: CONTRACT DATE:

CONTRACTOR'S APPLICATION FOR PAYMENT

Application is made for payment, as shown below, in connection with the Contract. Continuation Sheet, AIA Document G703, is attached.

The undersigned Contractor certifies that to the best of the Contractor's knowledge, information and belief the Work covered by this Application for Payment has been completed in accordance with the Contract Documents, that all amounts have been paid by the Contractor for Work for which previous Certificates for Payment were issued and payments received from the Owner, and that current payment shown herein is now due.

- 1. ORIGINAL CONTRACT SUM \$ _____
- 2. Net change by Change Orders \$ _____
- 3. CONTRACT SUM TO DATE (Line 1 ± 2) \$ _____
- 4. TOTAL COMPLETED & STORED TO DATE (Column G on G703) \$ _____
- 5. RETAINAGE:
 - a. _____ % of Completed Work \$ _____
(Column D + E on G703)
 - b. _____ % of Stored Material \$ _____
(Column F on G703)
 - Total Retainage (Lines 5a + 5b or Total in Column I of G703) \$ _____
- 6. TOTAL EARNED LESS RETAINAGE (Line 4 Less Line 5 Total) \$ _____
- 7. LESS PREVIOUS CERTIFICATES FOR PAYMENT (Line 6 from prior Certificate) \$ _____
- 8. CURRENT PAYMENT DUE \$ _____
- 9. BALANCE TO FINISH, INCLUDING RETAINAGE (Line 3 less Line 6) \$ _____

CONTRACTOR:

By: _____ Date: _____

State of: _____ County of: _____
 Subscribed and sworn to before me this _____ day of _____
 Notary Public:
 My Commission expires: _____

ARCHITECT'S CERTIFICATE FOR PAYMENT

In accordance with the Contract Documents, based on on-site observations and the data comprising the application, the Architect certifies to the Owner that to the best of the Architect's knowledge, information and belief the Work has progressed as indicated, the quality of the Work is in accordance with the Contract Documents, and the Contractor is entitled to payment of the AMOUNT CERTIFIED.

AMOUNT CERTIFIED \$ _____

(Attach explanation if amount certified differs from the amount applied. Initial all figures on this Application and on the Continuation Sheet that are changed to conform with the amount certified.)
 ARCHITECT:

By: _____ Date: _____

This Certificate is not negotiable. The AMOUNT CERTIFIED is payable only to the Contractor named herein. Issuance, payment and acceptance of payment are without prejudice to any rights of the Owner or Contractor under this Contract.

CHANGE ORDER SUMMARY	ADDITIONS	DEDUCTIONS
Total changes approved in previous months by Owner		
Total approved this Month		
TOTALS		
NET CHANGES by Change Order		

CONTINUATION SHEET

AIA DOCUMENT G703

PAGE OF PAGES

AIA Document G702, APPLICATION AND CERTIFICATION FOR PAYMENT, containing Contractor's signed certification is attached.

APPLICATION NO:
APPLICATION DATE:

In tabulations below, amounts are stated to the nearest dollar.

PERIOD TO:

Use Column I on Contracts where variable retainage for line items may apply.

ARCHITECT'S PROJECT NO:

A ITEM NO.	B DESCRIPTION OF WORK	C SCHEDULED VALUE	D WORK COMPLETED		F MATERIALS PRESENTLY STORED (NOT IN D OR E)	G		H BALANCE TO FINISH (C - G)	I RETAINAGE (IF VARIABLE RATE)
			FROM PREVIOUS APPLICATION (D + E)	THIS PERIOD		TOTAL COMPLETED AND STORED TO DATE (D+E+F)	% (G ÷ C)		
GRAND TOTALS		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		\$0.00	

Users may obtain validation of this document by requesting of the license a completed AIA Document D401 - Certification of Document's Authenticity

REQUEST FOR INFORMATION (RFI) PROCESS:

If during the course of construction the Contractor encounters on site situations which are not adequately covered in the approved drawings a request for information (RFI) shall be issued by the Contractor in writing to the Architect. These RFI's shall be numbered in sequence issued and an RFI log shall be created and tracked by the Contractor.

Responses by the Architect and Engineering team and Owner (if required) shall be timely but Contractor will allow sufficient time for a proper response. RFI's issued for work being done that day will be considered as late coming from the Contractor.

RFI's which relate to Contractor's ways and means and/or can be answered simply by referring to the approved drawings will be considered a nuisance RFI and the time required to answer these will be back charged to the Contractor.

No time extensions will be considered unless the Contractor can clearly demonstrate how the RFI/RFI response directly affects work on the critical path.

FIELD CHANGE DIRECTIVE PROCEDURES:1.01 REQUIREMENTS INCLUDED

- A. Promptly implement Field Change Directive procedures.
 - 1. Provide full written data required to evaluate changes.
 - 2. Maintain detailed records of work done on a time and material/force account basis.
 - 3. Provide full documentation to Architect on request.
- B. Designate in writing the member of Contractor's organization:
 - 1. Who is authorized to accept changes in the work?
 - 2. Who is responsible for informing others in the Contractor's employ of the authorization of changes in the work?

1.02 RELATED REQUIREMENTS

- A. Agreement: The amounts of established unit prices.
- B. Conditions of the Contract: Sections 00 72 13-13, 14 and 00 73 00-7.
 - 1. Methods of determining cost or credit to Owner resulting from changes in work made on a time and material basis.
 - 2. Contractor's claims for additional costs.
- C. Section 01 15 20: Applications for Payment.
- D. Section 01 32 16: Construction Schedules.
- F. Section 01 60 00: Material and Equipment.
- G. Section 01 72 00: Project Record Documents.

1.03 DEFINITIONS

- A. Field Change Directive: A written order to the Contractor, signed by Owner, and Architect and approved by DSA (having been submitted as a CCD – Construction Change Document), which amends the Contract Documents as described, and authorizes Contractor to proceed with a change which affects the contract sum or the contract time.
- B. Architect's Supplemental Instructions: A written order, instructions, or interpretations, signed by Architect making minor changes in the work not involving a change in contract sum, or contract time, or structural modifications.

1.04 PRELIMINARY PROCEDURES

- A. Owner may have the Architect initiate changes by submitting a proposal request to Contractor. Request will include:
 - 1. Detailed description of the Change, Products, and location of the change in the project.

2. Supplementary or revised drawings and specifications.
 3. The projected time span for making the change and a specific statement as to whether overtime work is, or is not, authorized.
 4. A specific period of time during which the requested price will be considered valid.
 5. Such request is for information only, and is not an instruction to execute the changes, nor to stop work in progress.
- B. Contractor may initiate changes by submitting a written notice to Architect containing:
1. Description of the proposed changes.
 2. Statement of the reason for making the changes.
 3. Statement of the effect on the contract sum and the contract time.
 4. Statement of the effect on the work of separate contractors.
 5. Documentation supporting any change in contract sum or contract time, as appropriate.

1.05 DOCUMENTATION OF PROPOSALS AND CLAIMS

- A. Support each quotation for a lump-sum proposal, and for each unit price which has not previously been established, with sufficient substantiating data to allow Architect to evaluate the quotation.
- B. On request provide additional data to support time and cost computations:
1. Labor required.
 2. Equipment required.
 3. Products required.
 - a. Recommended source of purchase and unit cost.
 - b. Quantities required.
 4. Taxes, insurance, and bonds.
 5. Credit for work deleted from Contract, similarly documented.
 6. Overhead and profit.
 7. Justification for any change in Contract Time.
- C. Support each claim for additional costs, and for work done on a time-and-material/force account basis, with documentation as required for a lump-sum proposal, plus additional information:
1. Name of Owner's authorized agent who ordered the work, and date of the work.
 2. Dates and times work was performed, and by whom.
 3. Time record, summary of hours worked, and hourly rates paid.
 4. Receipts and invoices for:
 - a. Equipment used, listing dates and times of use.
 - b. Products used, listing of quantities.
 - c. Subcontractors.
- D. Document requests for substitutions for products as specified in Section 01 60 00.
- E. It is understood by all parties that "General Condition Costs", as required by each Field Change Directive are incorporated into each Field Change Directive.

1.06 PREPARATION OF FIELD CHANGE DIRECTIVES

- A. Architect will prepare each Field Change Directive.
- B. Form: Field Change Directive form developed by Architect will be used.
- C. Field Change Directive will describe changes in the work, both additions and deletions, with attachments of revised Contract Documents to define details of the change.
- D. Field Change Directive will provide an accounting of the adjustment in the contract sum and in the contract time.

1.07 LUMP-SUM/FIXED PRICE FIELD CHANGE DIRECTIVE

- A. Content of Field Change Directive will be based on, either:
1. Architect's Proposal Request and Contractor's responsive proposal as mutually agreed between Owner and Contractor.
 2. Contractor's proposal for a change, as recommended by Architect.
- B. After approval of a CCD (Construction Change Document) by DSA, the Owner and Architect will approve the Field Change Directive as authorization for the Contractor to proceed with the changes.
- C. Contractor will sign and date the Field Change Directive to indicate agreement with the terms

therein.

- D. By signing a Field Change Directive, Contractor waives his right to request extra money for General Conditions the end of the project.

1.08 UNIT PRICE CHANGE ORDER

- A. Content of Field Change Directive will be based on either:
1. Architect's definition of the scope of the required changes.
 2. Contractor's proposal for a change, as recommended by Architect.
 3. Survey of completed work.
- B. The amounts of the unit prices to be:
1. Those stated in the Agreement.
 2. Those mutually agreed upon between Owner and Contractor.
- C. When quantities of each of the items affected by the Field Change Directive can be determined prior to start of the work:
1. Architect will obtain DSA approval of a CCD (Construction Change Document), with which the Owner and Architect will approve the Field Change Directive as authorization for Contractor to proceed with the changes.
 2. Contractor may sign and date the Field Change Directive to indicate agreement with the terms therein.
- D. When quantities of the items cannot be determined prior to start of the work:
1. Architect or Owner will issue a field change authorization directing Contractor to proceed with the change on the basis of unit prices, and will cite the applicable unit prices.
 2. At completion of the change, Architect will determine the cost of such work based on the unit prices and quantities used.
 3. Architect will sign and date the Field Change Directive to establish the change in contract sum and in contract time.
 4. Owner and Contractor will sign and date the Field Change Directive to indicate their agreement with the terms therein.

1.09 CORRELATION WITH CONTRACTOR'S SUBMITTALS

- A. Periodically revise Schedule of Values and Request for Payment forms to record each change as a separate item of work, and to record the adjusted contract sum.
- B. Periodically revise the Construction Schedule to reflect each change in contract time.
1. Revise subschedules to show changes for other items of work affected by the changes.
- C. Upon completion of work under a Field Change Directive, enter pertinent changes in record documents.

1.10 GENERAL CONDITIONS COSTS

- A. Field Change Directive's as developed and approved include "General Condition" costs and acceptance of such Field Change Directive disallows further claims by Contractor for additional General Condition claims either for time or money.

END OF SECTION

PART 1 GENERAL**1.01 REQUIREMENTS INCLUDED**

- A. Submit to the Architect a Schedule of Values allocated to the various portions of the work, within ten days after award of contract.
- B. The Schedule of Values, unless objected to by the Architect shall be used only as the basis for the Contractor's Applications for Payment.
- C. Schedule of values must be tied into schedule.

1.02 RELATED REQUIREMENTS

- A. Conditions of the Contract.
- B. Section 01 15 20: Application for Payment.
- C. Section 01 32 16: Construction Schedules.

1.03 FORM AND CONTENT OF SCHEDULE OF VALUES

- A. Type schedule on 8-1/2" x 11" white paper; Contractor's standard forms and automated printout will be considered for approval by Architect upon Contractors request. Identify schedule with:
 - 1. Title of project and location.
 - 2. Architect and project number.
 - 3. Name and address of Contractor.
 - 4. Contract designation.
 - 5. Date of submission.
- B. Schedule shall list the installed value of the component parts of the work in sufficient detail and incorporated into the schedule to serve as a basis for computing values for progress payments during construction.
- C. Follow the table of contents of this Specification as the format for listing component items.
 - 1. Identify each line item with the number and title of the respective major section of the specifications.
- D. For each major line item list sub-values of major products or operations under the item.
- E. For the various portions of the work:
 - 1. Each item shall include a directly proportional amount of the Contractor's overhead and profit.
 - 2. For items on which progress payments will be requested for stored materials, break down the value into:
 - a. The cost of the materials, delivered and unloaded, with taxes paid.
 - b. The total installed value.
- F. The sum of all values listed in the schedule shall equal the total contract sum.

END OF SECTION

PART 1 GENERAL**1.01 REQUIREMENTS INCLUDED**

- A. Contractor shall schedule and administer the pre-construction meeting, periodic progress meetings, and specially called meeting throughout progress of the work.
 - 1. Prepare agenda for meetings.
 - 2. Distribute written notice of each meeting four days in advance of meeting date.
 - 3. Make physical arrangements for meetings.
 - 4. Preside at meetings.
 - 5. Record the minutes; include significant proceedings and decisions.
 - 6. Reproduce and distribute copies of minutes within three days after each meeting.
 - a. To participants in the meeting.
 - b. To parties affected by decisions made at the meeting.
 - c. Furnish three copies of minutes to Architect.
- B. Representatives of Contractors, subcontractors and suppliers attending meetings shall be qualified and authorized to act on behalf of the entity each represents.
- C. Architect may attend meetings to ascertain that work is expedited consistent the Contract Documents and construction schedules.

1.02 RELATED REQUIREMENTS

- A. Instruction to Bidders: Pre-bid conferences.
- B. Section 01 32 16: Construction schedules.
- C. Section 01 34 00: Shop drawings, product data and samples.
- D. Section 01 72 00: Project record documents.
- E. Section 01 73 00: Operating and maintenance data.

1.03 PRE-CONSTRUCTION MEETING

- A. Schedule within 15 days after date of Notice to Proceed.
- B. Location: A central site, convenient for all parties, designated by contractor.
- C. Attendance:
 - 1. Owner's Authorized Agent.
 - 2. Architect and his professional consultants as needed.
 - 3. Resident Project Representative (Inspector).
 - 4. Contractor's Superintendent.
 - 5. Major subcontractors.
 - 6. Major suppliers if necessary.
 - 7. Others as appropriate.
- D. Suggested Agendum:
 - 1. Distribution and discussion of:
 - a. List of major subcontractors and suppliers.
 - b. Projected construction schedules.
 - 2. Critical work sequencing.
 - 3. Major equipment deliveries and priorities.
 - 4. Project coordination.
 - a. Designation of responsible personnel.
 - 5. Procedures and processing of:
 - a. Field decisions.
 - b. Proposal requests.
 - c. Submittals.
 - d. Change Orders.
 - e. Applications for payment.
 - 6. Adequacy of distribution of Contract Documents.
 - 7. Procedures for maintaining record documents.
 - 8. Use of premises:

- a. Office, work, and storage areas.
- b. Owner's requirements.
9. Construction facilities, controls and construction aids.
10. Temporary utilities.
11. Safety and first-aid procedures.
12. Security procedures.
13. Housekeeping procedures.
14. Project closeout.

1.04 PROGRESS MEETINGS

- A. Schedule regular periodic meetings, as required.
- B. Hold called meetings as required by progress of the work.
- C. Location of the meetings; project field office of Contractor.
- D. Attendance:
 1. Architect and his professional consultants as needed.
 2. Subcontractors as appropriate to the agenda.
 3. Suppliers as appropriate to the agenda.
 4. Others.
- E. Suggested Agendum:
 1. Review, approval of minutes of previous meeting.
 2. Review of work progress since previous meeting.
 3. Field observations, problems, and conflicts.
 4. Problems which impede Construction Schedule.
 5. Review of off-site fabrication, delivery schedules.
 6. Corrective measures and procedures to regain projected schedule.
 7. Revisions to Construction Schedule.
 8. Progress, schedule, during succeeding work period.
 9. Coordination of schedules.
 10. Review submittal schedules; expedite as required.
 11. Maintenance of quality standards.
 12. Pending changes and substitutions.
 13. Review proposed changes for:
 - a. Effect on Construction Schedule and on completion date.
 - b. Effect on other contracts of the project.

END OF SECTION

PART 1 GENERAL**1.01 REQUIREMENTS INCLUDED**

- A. Promptly after award of the Contract, prepare and submit to Architect estimated construction progress schedules for the Work, with sub schedules of related activities which are essential to its progress.
- B. Submit revised progress schedules monthly.
- C. Contractor must use Primavera system or equal.

1.02 RELATED REQUIREMENTS

- A. Conditions of the Contract.
- B. Section 01 11 00: Summary of Work.
- C. Section 01 31 19: Project Meetings.
- D. Section 01 34 00: Shop Drawings, Product Data and Samples.

1.03 FORM OF SCHEDULES

- A. Prepare schedule in the form of a horizontal bar chart schedule.
 - 1. Provide separate horizontal bar for each function of work.
 - 2. Horizontal time scale: Identify the first work day of each week.
 - 3. Scale and spacing: To allow space for notations and future revisions.
- B. Format of listings: The chronological order of the start of each item of work.
- C. Use Primavera schedule.

1.04 CONTENT OF SCHEDULES

- A. Construction Progress Schedule:
 - 1. Show the complete sequence of construction by activity.
 - 2. Show the dates for the beginning, and completion of, each major element of construction. Specifically list but not limiting:
 - a. Site clearing.
 - b. Site utilities.
 - c. Foundation work.
 - d. Structural framing.
 - e. Subcontractor Work.
 - f. Building installations.
 - g. Utility connections.
 - 3. Show projected percentage of completion for each item, as of the first day of each month.
- B. Submittals Schedule for shop drawings, product data and samples. Show:
 - 1. The dates for Contractor's submittals.

1.05 PROGRESS REVISIONS

- A. Indicate progress of each activity to date of submission.
- B. Show changes occurring since previous submission of schedule:
 - 1. Major changes in scope.
 - 2. Activities modified since previous submission.
 - 3. Revised projections of progress and completion.
 - 4. Other identifiable changes.
- C. Provide a narrative report as needed to define:
 - 1. Problem areas, anticipated delays, and the impact on the schedule.
 - 2. Corrective action recommended and its effect.
 - 3. The effect of changes on schedules or other prime contractors.

1.06 SUBMISSIONS

- A. Submit initial schedules within 10 days after award of Contract.
 - 1. Architect will review schedules and return review copy within 10 days after receipt.
 - 2. If required, resubmit within 7 days after return of review copy.
- B. Construction will not start until a mutually agreed to schedule is accepted by Owner.
- C. Submit revised progress schedules with each application for payment.
- D. Submit the number of opaque reproductions which the Contractor requires, plus two copies which will be retained by the Architect.
- E. Submit one reproducible transparency and one opaque reproduction.

1.07 DISTRIBUTION

- A. Distribute copies of the review schedules to:
 - 1. Job site file.
 - 2. Subcontractors.
 - 3. Project Representative.
- B. Instruct recipients to report promptly to the Contractor, in writing, any problems anticipated by the projections shown in the schedules.

1.08 CONSTRUCTION SCHEDULE

- A. Be it known that the construction schedule as developed and reviewed by the Owner and Architect is the most critical component of this work. Without a schedule and its monthly revisions this project will not progress.
- B. Owner reserves the right to withhold payment if the schedule is not maintained by the Contractor and updated on a monthly basis.

END OF SECTION

GENERAL**SUMMARY**

Section Includes:

Wherever possible throughout the Contract Documents, the minimum acceptable quality of workmanship and materials has been defined either by manufacturer's name and catalog number or reference to recognized industry standards.

To ensure that the specified products are furnished and installed in accordance with the design intent, procedures have been established for advance submittal of design data for its review and approval or rejection by the Architect.

This Section specifies administrative and procedural requirements for submittals required for performance of the work, including:

- a. Contractor's Progress Schedule
- b. Shop Drawings, Product Data, and Samples
- c. Letters of Conformance
- d. Certificates
- e. Manufacturer Installation Instructions

Substitution Procedures

Manuals

Miscellaneous Submittals

Related Documents:

Letter of Conformance Form

Contractor's Substitution Request Form

Related Sections:

Contractual Requirements for Submittals: General Conditions

Two (2) copies of all Submittals, plus number of copies to be returned to Contractor, shall be submitted unless otherwise specified.

Provide additional copies as required for use in Project Record Documents.

Section 01 77 00 (01770) - Contract Closeout

Individual Submittals Required: Pertinent Sections of these Specifications.

SUBMITTALS

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.

Refer to General Conditions, Article 16, for additional requirements.

Coordinate each Submittal with fabrication, purchasing, testing, delivery, other Submittals and related activities that require sequential activity.

Coordinate transmittal of different types of Submittals for related elements of the work so processing will not be delayed by the need to review Submittals concurrently for coordination.

The Architect reserves the right to withhold action on a Submittal requiring coordination with other Submittals until related Submittals are received.

No extension of Contract Time will be authorized because of failure to transmit Submittals to the Owner's Representative sufficiently in advance of the work to permit processing.

Deliver Submittals to the Architect.

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.

Provide a space approximately 10" x 10" on the label or beside the title block on Shop Drawings to record the Contractor's and Architect review and approval markings and the action taken.

Include the following information on the label for processing and recording action taken:

Project Name

Name of the Owner

Date

Name and Address of Architect

Name and Address of Contractor

Name and Address of Subcontractor or Vendor

Location Where Item is to be Used

Name of Manufacturer

Drawing Number and Detail References, as Appropriate

Certification by the Contractor

Submittal Transmittal: Package each Submittal appropriately for transmittal and handling. Transmit each Submittal from Contractor to Architect. Submittals received from sources other than the Contractor will be returned without action.

Transmit each submittal to the Architect with "AIA Document G810 - Transmittal Letter" and "Letter of Conformance".

Sequentially number the transmittal form. Revise submittals with original number and a sequential alphabetic suffix.

Identify Project, Contractor, Subcontractor or supplier; pertinent drawing and detail number, and specification section number, as appropriate.

On the transmittal, record relevant information and requests for data. On the form, or separate sheet, record deviations from Contract Document requirements, including minor variations and limitations. Include Contractor's certification that information complies with Contract Document requirements.

After Architect review of Submittal, revise and resubmit as required, identifying changes made since previous Submittal.

When re-submittal is required for any reason, transmit under new letter of transmittal, indicating by reference to a previous Submittal that this is a re-submittal.

Identify on submittal all changes made since previous submission.

Distribute copies of reviewed Submittals to concerned persons. Instruct recipients to promptly report any inability to comply with provisions.

All Submittals shall bear the stamp of approval of the Contractor submitting same as evidence that they have been checked by him, or they will be rejected.

Must be signed or initialed certifying that review, verification of Products required, field dimensions, adjacent construction Work, and coordination of information, is in accordance with the requirements of the Work and Contract Documents.

Schedule submittals to expedite the Project, and deliver to Architect. Coordinate submission of related items. Instruct parties to promptly report any inability to comply with provisions.

PROGRESS SCHEDULES

Submit initial Construction Progress Schedule in duplicate within 14 days after date of Owner-Contractor Contract. Submit in the form required by the General Conditions of the Contract.

Revise and resubmit as required.

Submit revised schedules with each Application for Payment, identifying changes since previous version.

LETTERS OF CONFORMANCE

Letter of Conformance: Short-form informational submittals which are to be used instead of shop drawings, product data and samples. They are also to be used to supplement shop drawings, product data and samples. A sample "Letter of Conformance" is located at the end of this Section. Use copies of this form for each submittal unless a more specific Letter of Conformance is located at the end of a particular Specification Section.

Within 30 days after date of Owner-Contractor Agreement, submit all Letters of Conformance indicating Contractor's selections for products proposed for use, with name of manufacturer, trade name, and model number of each product. For products specified only by reference standards, give manufacturer, trade name, model or catalog designation, and reference standards.

Procedure:

Submit the number of copies which the Contractor requires, plus two copies which will be retained by the Architect.

Submit completed Letter of Conformance for products selected as indicated within each Section.

Fill-in required information on form and sign in ink by person authorized to sign on behalf of the Contractor.

Clearly identify applicable products, characteristics, models, and options. Attach supplemental information including product data to each Letter of Conformance as necessary to communicate all information specific to the product.

No modifications to form permitted.

Letters of Conformance are not to be used for substitution requests.

By submitting a Letter of Conformance, Contractor declares that the product identified by manufacturer's name and model number:

Is one of the product(s) specified

Is suitable for the intended use as defined within the Contract Documents, and

Will be provided and placed in operational condition in accordance with the Contract Documents and manufacturer's published instructions.

SHOP DRAWINGS

Where Shop Drawings are required, 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.

Shop Drawings shall be drawn at a scale to clearly indicate all of the above conditions and allow for corrections or modifications which the Architect may wish to make. The Architect shall be the sole judge as to the acceptability of manufacturer's literature and catalog sheets as Shop Drawings.

Shop Drawings shall clearly indicate all dimensional data for all parts of the item; types and materials for all connections; finishes; the exact relation of the item to adjacent materials and equipment in the completed structure including clearance, any necessary isolation, and fastening methods and devices; and mechanical and electrical connections.

Shop Drawings include fabrication and installation Drawings, setting diagrams, schedules, patterns, templates, and similar Drawings. Include the following information:

Dimensions

Identification of Products and Materials Included

Compliance with Specified Standards

Notation of Coordination Requirements

Notation of Dimensions Established by Field Measurement

Sheet Size: Except for templates, patterns, and similar full-size Drawings, submit Shop Drawings on sheets at least 8-1/2" x 11", but no larger than 36" x 48".

Submit in the form of one reproducible transparency and one opaque reproduction, or three opaque reproductions plus required amount to be returned to Contractor. After review, reproduce and distribute to appropriate parties.

Do not permit Shop Drawing copies, without an appropriate final "Action" marking by the Architect, to be used in connection with the work.

The Contractors shall be responsible for distribution of additional prints to vendors, etc.

PRODUCT DATA

Where Product Data is required, collect Product Data into a single submittal for each element of construction or system. Product Data includes printed information such as manufacturer's installation instructions, catalog cuts, standard color charts, roughing-in diagrams and templates, standard wiring diagrams and performance curves. Where Product Data must be specially prepared because standard printed data is not suitable for use, submit as "Shop Drawings."

Mark each copy to show applicable choices and options. Where printed Product Data includes information on several products, some of which are not required, mark copies to indicate the applicable information. Include the following information:

Manufacturer's Printed Recommendations

Compliance with Recognized Trade Association Standards

Compliance with Recognized Testing Agency Standards

Application of Testing Agency Labels and Seals

Notation of Dimensions Verified by Field Measurement

Notation of Coordination Requirements

Type and Model Numbers

Do not submit Product Data until compliance with requirements of the Contract Documents has been confirmed.

Distribution: Furnish copies of final Submittal to installers, subcontractors, suppliers, manufacturers, fabricators, and others required for performance of construction activities. Show distribution on transmittal forms.

Do not proceed with installation until a copy of Product Data applicable is in the installer's possession.

Do not permit use of unmarked copies of Product Data in connection with construction.

SAMPLES

Where Samples are required, submit full-size, fully fabricated Samples cured and finished as specified and physically identical with the material or product proposed. Samples include partial sections of manufactured or fabricated components, cuts or containers of materials, full color-range sets, and swatches showing color, texture, and pattern.

Mount, display, or package Samples in the manner specified to facilitate review of qualities indicated. Include the following:

Generic Description of the Sample

Sample Source

Product Name or Name of Manufacturer

Compliance with Recognized Standards

Availability and Delivery Time

Colors:

General: Unless the precise color and pattern is specifically described in the Contract Documents, whenever a choice of color or pattern is available in a specified product, submit accurate color charts and pattern charts to the Architect for his review and selection.

Submit Samples for review of kind, color, pattern, and texture for a final check of these characteristics with other elements and for a comparison of these characteristics between the final Submittal and the actual component as delivered and installed.

Where variation in color, pattern, texture, or other characteristics are inherent in the material or product represented, submit multiple units (not less than 3) that show approximate limits of the variations.

Refer to other Specification Sections for requirements for Samples that illustrate workmanship, fabrication techniques, details of assembly, connections, operation, and similar construction characteristics.

Refer to other Sections for Samples to be returned to the Contractor for incorporation in the work. Such Samples must be undamaged at time of use. On the transmittal, indicate special requests regarding disposition of Sample Submittals.

Preliminary Submittals: Where Samples are for selection of color, pattern, texture, or similar characteristics from a range of standard choices, submit a full set of choices for the material or product.

Preliminary Submittals will be reviewed and returned with the Architect's mark indicating selection and other action.

Maintain sets of Samples, as returned, at the Project site for quality comparisons throughout the course of construction.

Unless noncompliance with Contract Document provisions is observed, the Submittal may serve as the final Submittal.

Sample sets may be used to obtain final acceptance of the construction associated with each set.

Distribution of Samples: Prepare and distribute additional sets to Subcontractors, manufacturers, fabricators, suppliers, installers, and others as required for performance of the work.

Field Samples specified in individual Sections are special types of Samples. Field Samples are full-size examples erected on site to illustrate finishes, coatings, or finish materials and to establish the standard by which the work will be judged.

Comply with submittal requirements to the fullest extent possible. Process transmittal forms to provide a record of activity.

CERTIFICATES

When specified in individual specification sections, submit certification by manufacturer to Architect, in quantities specified for Product Data.

Indicate material or Product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.

Certificates may be recent or previous test results on material or Product, but must be acceptable to Architect.

MANUFACTURER INSTALLATION INSTRUCTIONS

When specified in individual specification sections, submit printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing to Architect.

Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.

PRODUCTS**SUBSTITUTIONS**

Source Limitations: To the greatest extent possible for each unit of work, provide products, materials, or equipment of a singular generic kind from a single source.

Compatibility of Options: Where more than one choice is available as options for Contractor's selection of a product or materials, select an option which is compatible with other products and materials already selected (which may have been from among options for those other products and materials). Total compatibility among options, if not assured by limitations within contract documents, must be provided by Contractor. Compatibility is a basic general requirement of product/material selections.

Owner's Approval Required:

1. In addition to the following, refer to the General Conditions, Article 4, for additional requirements.
2. The Contract is based on the materials, equipment, and methods described in the Contract Documents.
3. The Contract Drawings and Specifications establish the "minimum standard of quality" each product and/or system must meet to be considered acceptable. Products of other manufacturers will be considered if the product and/or system meets or exceeds the "minimum standard of quality" established by the Contract Documents.
4. The Owner will consider proposals for substitutions under the "or approved substitution" and the "or approved equal" provision of materials, equipment, and methods, only when such proposals are accompanied by full and complete technical data and all other information required by the Owner and Architect to evaluate the proposed substitutions.
 - a. It will be the responsibility of the submitting Contractor to prove equality.
 - b. It will be the responsibility of the submitting Contractor to cover all costs associated with receiving CCD approval at DSA for the substitution.
 - c. Request must include "Contractor's Substitution Request" Form, a copy of which is attached to this Section.
 - d. The Submittal shall include a line-by-line, item-by-item description of the specified and proposed product.
5. Requests for substitutions must be submitted to the Architect NO later than 14 days prior to bid date.
6. DO NOT SUBSTITUTE MATERIALS, EQUIPMENT, OR METHODS UNLESS SUCH SUBSTITUTIONS HAVE BEEN SPECIFICALLY APPROVED FOR THIS WORK IN WRITING.

"Or Approved Equal" or "Or Approved Substitution"

Where the phrase "or approved equal" or "approved substitution" occurs in the Contract Documents, do not assume that material, equipment, or methods will be approved as equal by the Owner and Architect unless the item has been specifically approved for this work by the Owner.

- a. Color choices will be one of the determining factors for approval.

The decision of the Owner will be final.

Availability of Specified Items:

Verify prior to bidding that all specified items will be available in time for installation during orderly and timely progress of the work.

In the event specified item or items will not be so available, so notify the Architect prior to the receipt of Bids.

Costs of delay caused on non-availability of specified items, when such delays could have been avoided by the Contractor, will be back-charged as necessary and shall not be borne by the Owner.

Whenever the Contractor secures approval for changing any items and such change involves a corresponding change or adjustment in any adjacent or related item, the responsibility for making the required change, or seeing that it is made, rests with the Contractor. The cost of these changes and/or adjustments shall be paid for by the Contractor unless it is otherwise agreed, in writing, at the time the change is approved. The acceptance of any change will not, in any way, relieve the Contractor from full compliance with the Contract Documents.

MANUALS

General: Where Manuals are required to be submitted covering items included in this work, prepare all such Manuals in durable plastic binders approximately 8-1/2 x 11 inches in size with at least the following:

1. Identification on or readable through the front cover stating the general nature of the Manual.
2. Neatly typewritten index near the front of the Manual furnishing immediate information as to location of all emergency data regarding the installation.
3. Complete instructions regarding operating and maintenance of all equipment involved.
4. Complete nomenclature of all replaceable parts, their part numbers, current cost, and name and address of nearest vendor of parts.
5. Copy of all guarantees and warranties issued.
6. Copy of approved Shop Drawing(s) with all data concerning all changes made during construction

MISCELLANEOUS SUBMITTALS

Inspection and Test Reports Not Performed by Owner: Classify each inspection and test report as being either "Shop Drawings" or "Product Data" depending on whether the report is specially prepared for the project or a standard publication of workmanship control testing at the point of production. Process inspection and test reports accordingly.

EXECUTION

TIMING OF SUBMITTALS

General

Make all Submittals enough in advance of scheduled dates for installation to provide all required time for reviews for securing necessary approvals, for possible revision and Resubmittals, and for placing orders and securing delivery.

In scheduling, allow a minimum of fourteen (14) full calendar days for the Architect's initial review following receipt of the Submittals. Allow additional time if the Architect requires coordination with subsequent Submittals.

The Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until all related Submittals are received.

If an Intermediate Submittal is necessary, process the same as the initial Submittal. Allow fourteen (14) calendar days for reprocessing each Submittal.

END OF SECTION

LETTER OF CONFORMANCE

PROJECT: _____ PROJECT NO.: _____

CITY: _____ STATE: _____

CONTRACTOR: _____

The following product(s) has been selected for use in the above referenced project from the list of specified items.

Section Number: _____ Section Name: _____

Drawing Number(s): _____ Detail Number(s): _____

SPECIFIED ITEM TO BE USED:

Statement of Conformance:

This Letter of Conformance is provided as a Submittal for Information in accordance with Section 01 33 00 - Submittals and Substitutions. The undersigned hereby declares that the Product identified above by manufacturer's name and model number is (one of) the product(s) specified and is suitable for the intended use as defined within the Contract Documents and will be provided and placed in operational condition in accordance with the manufacturer's published instructions and the Contract Documents.

SUBCONTRACTOR/SUPPLIER:

(Contact name of subcontractor/supplier offering above product) Phone Number: () _____

(Subcontractor / Supplier name and address)

CONTRACTOR:

(Contact name of Contractor) _____
(Contractor signature and Title of Signatory)

CONTRACTOR'S SUBSTITUTION REQUEST

(Use separate form for each request)

Date: _____ Request No.: _____

TO: Architect _____
Phone: _____ Fax: _____

PROJECT: _____ Project No.: _____
CONTRACTOR _____

SPECIFIED ITEM: _____

Section: _____ Page: _____ Paragraph: _____ Description: _____
Drawing Number(s): _____ Detail Number(s): _____

The undersigned request consideration of the following:

PROPOSED SUBSTITUTION: _____

REASON FOR NOT GIVING PRIORITY TO SPECIFIED ITEMS: _____

SAVINGS or CREDIT to OWNER for ACCEPTING SUBSTITUTE: \$ _____

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

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

The undersigned certifies that the following paragraphs, unless modified by attachments, are correct:

1. Proposed substitution has been fully checked and coordinated with the Contract Documents.
2. The proposed substitution does not affect dimensions shown on Drawings.
3. The proposed substitution does not require revisions to mechanical or electrical work.
4. The undersigned will pay for changes to the building design, including architectural and engineering design, detailing, and construction costs caused by the requested substitution.
5. The proposed substitution will have no adverse affect on other trades, the construction schedule, or specified warranty requirements.
6. Maintenance and service parts will be locally available for the proposed substitution.
7. The proposed substitution will have no adverse effect on LEED credits established through the CFRST LEED Volume Program. (Applies to CFRST LEED Volume Program Projects ONLY)

The undersigned further states that the function, appearance, and quality of the proposed substitution are equivalent or superior to the specified item.

Attachments: The attached data is furnished herewith for evaluation of the proposed substitution.

Catalog Drawings Samples Reports Tests Other: _____

Submitted by:

(Firm) (Authorized Legal Signature)

(Address) (Telephone)

For use by the Architect: Accepted Accepted as Noted Rejected: Submit Specified Item

BY: _____
(Authorized Signature)

Date: _____ Remarks: _____

PART 1 GENERAL**1.01 REQUIREMENTS INCLUDED**

Submit shop drawings, product data and samples required by Contract Documents.

1.02 RELATED REQUIREMENTS

- A. Conditions of the Contract: Definitions, and additional responsibilities of parties.
- B. Section 01 32 16: Construction Schedules.
- C. Section 01 72 00: Record Documents.
- D. Designate in the construction schedule, or in a separate coordinated schedule, the dates for submission and the dates that reviewed shop drawings, product data and samples will be needed.

1.03 SHOP DRAWINGS

- A. Drawings shall be presented in a clear and thorough manner.
 - 1. Details shall be identified by reference to sheet and detail, schedule or room number shown on contract drawings.
 - 2. Dimensions to be field verified by Contractor.
- B. Minimum sheet size: 8-1/2" x 11".

1.04 PRODUCT DATA

- A. Preparation
 - 1. Clearly mark each copy to identify pertinent products or models.
 - 2. Show performance characteristics and capacities.
 - 3. Show dimensions and clearances required.
 - 4. Show wiring or piping diagrams and controls.
- B. Manufacturer's standard schematic drawings and diagrams:
 - 1. Modify drawings and diagrams to delete information which is not applicable to the work.
 - 2. Supplement standard information to provide information specifically applicable to the work.

1.05 SAMPLES

- A. Office samples shall be of sufficient size and quantity to clearly illustrate:
 - 1. Functional characteristics of the product, with integrally related parts and attachment devices.
 - 2. Full range of color, texture and pattern.

1.06 CONTRACTOR RESPONSIBILITIES

- A. Review shop drawings, product data and samples prior to submission.
- B. Determine and verify:
 - 1. Field measurements.
 - 2. Field construction criteria.
 - 3. Catalog number and similar data.
 - 4. Conformance with specifications.
- C. Coordinate each submittal with requirements of the work and of the contract documents.
- D. Notify the Architect in writing, at time of submission, of any deviations in the submittals from requirements of the contract documents.
- E. Begin no fabrication or work which requires submittals until return of submittals with Architect/Engineer approval.

1.07 SUBMISSION REQUIREMENTS

- A. Make submittals promptly in accordance with approved schedule, and in such sequence as to cause no delay in the work or in the work of any other Contractor.
- B. Number of submittals required (if hard-copies are provided or required in lieu of digital format):
 - 1. Shop Drawings: Submit the number of opaque reproductions which the Contractor required, plus four (4) copies which will be retained by the Architect, Engineer, Inspector and Owner.

- 2. Product Data: Submit the number of copies which the contractor requires, plus two which will be retained by the Architect/Engineer.
- 3. Samples: Submit the number stated in each specification section.
- C. Submittals shall contain:
 - 1. The date of submission and the dates of any previous submissions.
 - 2. The project title and number.
 - 3. Contract identification.
 - 4. The names of:
 - a. Contractor.
 - b. Supplier.
 - c. Manufacturer.
 - 5. Identification of the product, with the specification section number.
 - 6. Field dimensions, clearly identified as such.
 - 7. Relation to adjacent or critical features of the work or materials.
 - 8. Application standards, such as ASTM or Federal Specification numbers.
 - 9. Identification of deviations from Contract Documents.
 - 10. Identification of revisions on resubmittals.
 - 11. An 8" x 3" blank space for Contractor, Architect and Engineer stamps.
 - 12. Contractor's stamp, initialed or signed, certifying to review of submittal, verification of products, field measurements and field construction criteria, and coordination of the information within the submittal with requirements of the work and of contract documents.
 - 13. Structural calculations or testing affidavits required by the Office of the State Architect for Deferred Approval Item review.

1.08 RESUBMISSION REQUIREMENTS

- A. Make any corrections or changes in the submittals required by the Architect/Engineer and resubmit until approved.
- B. Shop Drawings and Product Data:
 - 1. Revise initial drawings or data, and resubmit as specified for the initial submittal.
 - 2. Indicate any changes which have been made other than those requested by the Architect/Engineer.
- C. Samples: Submit new samples as required for initial submittal.

1.09 DISTRIBUTION

- A. Distribute reproductions of shop drawings and copies of product data which carry the Architect stamp of approval to affected subcontractors.

1.10 ARCHITECT DUTIES

- A. Review submittals with reasonable promptness and in accord with schedule.
- B. Affix stamp and initials or signature, and indicate requirements for resubmittal, or approval of submittal.
- C. Retain submittals to Contractor for distribution, or for resubmission. Send copy of submittal to Project Representative.

1.11 DEFERRED APPROVAL ITEM

If Contractor wishes to substitute components and or design elements he is responsible for obtaining approvals from the Owner, Architect and the Division of the State Architect.

1.12 SCHEDULE OF SAMPLES, SUBMITTALS AND SHOP DRAWINGS REQUIRED

<u>SECTION NO.</u>	<u>SHOP DRAWINGS</u>
03 20 00	Concrete Reinforcement
03 31 00	Cast-In-Place Concrete
13 12 72	DSA Pre-Approved Classroom Building

Provide other Shop Drawing submittals which reflect significant portions of work and/or require Architect's review or Owner's color choice and per sections of this specification.

PART 1 GENERAL**1.01 REQUIREMENTS INCLUDED**

- A. Owner will employ, with the approval of the Architect, and pay for the services of an Independent Testing Laboratory to perform specified testing.
 - 1. Contractor shall cooperate with the laboratory to facilitate the execution of its required services.
 - 2. Employment of the laboratory shall in no way relieve Contractor's obligations to perform the work of the contract:

1.02 RELATED REQUIREMENTS

- A. Conditions of the Contract: Inspections and testing required bylaws, ordinances, rules, regulations, orders or approvals of public authorities, Section 00 71 00-11.
- B. Respective Sections of Specifications: Certification of products.

1.03 SCHEDULE OF REQUIRED TESTS AND INSPECTIONS

As required by Owner and these specifications.

1.04 LABORATORY DUTIES

- A. Cooperate with Architect and Contractor; provide qualified personnel after due notice.
- B. Perform specified inspections, sampling and testing of materials and methods of construction:
 - 1. Comply with specified standards.
 - 2. Ascertain compliance of materials with requirements of Contract Documents.
- C. Promptly notify Architect and Contractor of observed irregularities or deficiencies of work or products.
- D. Promptly submit written report of each test and inspection; one copy each to Architect, Owner, Project Representative, Contractor, and one copy to the Division of the State Architect. Each report shall include:
 - 1. Date issued.
 - 2. Project title and number.
 - 3. Testing laboratory name, address and telephone number.
 - 4. Name and signature of laboratory inspector.
 - 5. Date and time of sampling or inspection.
 - 6. Record of temperature and weather conditions.
 - 7. Date of test.
 - 8. Identification of project and specification section.
 - 9. Location of sample or test in the Project.
 - 10. Type of inspection or test.
 - 11. Results of tests and compliance with Contract Documents.
 - 12. Interpretation of test results, when requested by Architect.
 - 13. Select samples from bulk materials.
- E. Perform additional tests as required by Architect or the Owner.

1.05 LIMITATIONS OF AUTHORITY OF TESTING LABORATORY

- A. Laboratory is not authorized to:
 - 1. Release, revoke, alter, or enlarge on requirements of Contract Documents.
 - 2. Approve or accept any portion of the work.
 - 3. Perform any duties of the Contractor.

1.06 CONTRACTOR'S RESPONSIBILITIES

- A. Cooperate with laboratory personnel; provide access to work, to manufacturer's

- operations.
- B. Secure and deliver to the laboratory adequate samples of materials proposed to be used and which require testing.
 - C. Provide to the laboratory the location of sources of aggregate and other materials proposed to be used and which require control by the testing laboratory.
 - D. Furnish copies of products test reports as required.
 - E. Furnish incidental labor and facilities:
 - 1. To provide access to work to be tested.
 - 2. To facilitate inspections and tests.
 - 3. For storage and curing of test samples.
 - F. Notify laboratory sufficiently in advance of operations to allow for laboratory assignment of personnel and scheduling of tests.
 - 1. When tests or inspections cannot be performed after such notice, reimburse Owner for laboratory personnel and travel expenses incurred due to Contractor's negligence.
 - G. Make arrangements with laboratory and pay for additional samples and tests required for Contractor's convenience.

PART 2 PRODUCTS -- NOT USED

PART 3 EXECUTION -- NOT USED

END OF SECTION

PART 1 GENERAL1.01 REQUIREMENTS INCLUDED

Owner will provide electrical and water utilities required for construction, contractor to furnish other facilities as required to do his work and remove on completion of work.

1.02 RELATED REQUIREMENTS

Section 01 01 00: Summary of Work.

1.03 REQUIREMENTS OF REGULATORY AGENCIES

- A. Comply with California Electric Code.
- B. Comply with State codes and regulations and with utility company requirements.

PART 2 MATERIALS2.01 MATERIALS, GENERAL

Materials may be new or used, but must be adequate in capacity for the required usage, must not create unsafe conditions, and must not violate requirements of applicable codes and standards.

2.02 TEMPORARY ELECTRICITY AND LIGHTING

- A. Arrange with Owner, service required for power and lighting.
- B. Install circuit and branch wiring, with area distribution boxes located so that power and lighting is available throughout the construction by the use of construction-type power cords.
- C. Provide adequate artificial lighting for all areas of work when natural light is not adequate for work, and access.

2.03 TEMPORARY HEAT AND VENTILATION

- A. Provide temporary heat and ventilation as required to maintain adequate environmental conditions to facilitate progress of the work, to meet specified minimum conditions for the installation of materials, and to protect materials and finishes from damage due to temperature or humidity.
- B. Provide adequate forced ventilation of enclosed areas for curing of installed materials, to disperse humidity, and to prevent hazardous accumulations of dust, fumes, vapors, or gases.
- C. Portable heaters shall be standard approved units complete with controls.
- D. Pay all costs of installation, maintenance, operation and removal, and for fuel consumed.
- E. Provide connections to existing facilities extend and supplement with temporary units as required to comply with requirements. Pay all costs of installation, maintenance, operation and removal.

2.04 TEMPORARY TELEPHONE SERVICE

- A. Arrange with local telephone Service Company; provide direct line telephone service at construction site for the use of personnel and employees. Service required:
 - 1. One direct line instrument in field office and fax machine.
- B. Pay all costs for installation, maintenance and removal, and service charges for local calls. Toll charges shall be paid by the party who places the call, except the Contractor shall pay for calls by the Architect or Project Inspector.

2.05 TEMPORARY WATER

- A. Make connections to existing facilities, provide water for construction purposes; Owner will pay costs of water used.
- B. Install branch piping with taps located so that water is available throughout the construction by the use of hoses. Protect piping and fittings against freezing.

2.06 TEMPORARY SANITARY FACILITIES

- A. Provide sanitary facilities in compliance with laws and regulations.
- B. Service, clean, and maintain facilities and enclosures.
- C. Existing plumbing facilities shall not be used by construction personnel.

PART 3 EXECUTION3.01 GENERAL

- A. Comply with applicable requirements specified in Division 15 - Mechanical, and in Division 16 - Electrical.
- B. Maintain and operate systems to assure continuous service.
- C. Modify and extend systems as work progress requires.

3.02 REMOVAL

- A. Completely remove temporary materials and equipment when their use is no longer required.
- B. Clean and repair damage caused by temporary installations or use of temporary facilities.
- C. Restore existing facilities used for temporary services to specified, or to original, condition.
- D. Restore permanent facilities used for temporary services to specified condition.
 - 1. Prior to final inspection, remove temporary lamps and install new lamps.

END OF SECTION

PART 1 GENERAL1.01 REQUIREMENTS INCLUDED

Furnish, install, and maintain required construction aids, remove on completion of work.

1.02 RELATED REQUIREMENTS

Section 01 01 00: Summary of Work.

PART 2 PRODUCTS2.01 MATERIALS, GENERAL

Materials may be new or used, suitable for the intended purpose, but must not violate requirements of applicable codes and standards.

2.02 CONSTRUCTION AIDS

A. Provide construction aids and equipment required by personnel and to facilitate execution of the work; scaffolds, staging, ladders, stairs, ramps, runways, platforms, railings, hoists, cranes, chutes and other such equipment and shoring.

1. Refer to respective sections for particular requirements for each trade.

B. Maintain facilities and equipment in first-class condition.

2.03 TEMPORARY ENCLOSURES

Provide temporary weather-tight enclosure of exterior walls for successive areas of building as work progresses, as necessary to provide acceptable working conditions, provide weather protection for materials, allow for working conditions, provide weather protection for materials, allow for effective heating, and to prevent entry of unauthorized persons.

PART 3 EXECUTION3.01 PREPARATION

Consult with Architect, review site conditions and factors which affect construction procedures and construction aids, including adjacent properties and public facilities which may be affected by execution of the work.

3.02 GENERAL

A. Comply with applicable requirements specified in sections of Divisions 2 through 16.

B. Relocate construction aids as required by progress of construction, by storage or work requirements, and to accommodate legitimate requirements of Owner and other Contractors employed at the site.

3.03 REMOVAL

A. Completely remove temporary materials, equipment, and services:

1. When construction needs can be met by use of permanent construction.

2. At completion of project.

B. Clean, repair, damage caused by installation or by use of temporary facilities.

1. Grade areas of site affected by temporary installations to required elevations and slopes, and clean the area.

C. Restore existing facilities used for temporary purposes to specified, or to original condition.

D. Restore permanent facilities used for temporary purposes to specified condition.

PART 1 GENERAL1.01 REQUIREMENTS INCLUDED

- A. Furnish, install, and maintain a temporary field office during construction period.
- B. Furnish, install, and maintain storage and work sheds as needed for construction.
- C. At completion of work, remove field office, sheds and contents.

1.02 RELATED REQUIREMENTS

- A. Section 01 01 00: Summary of Work.
- B. Section 01 51 00: Temporary Electricity.
- C. Section 01 51 00: Temporary Telephone Service.
- D. Section 01 55 00: Access Roads and Parking.
- E. Section 01 66 00: Storage and Protection.

1.03 OTHER REQUIREMENTS

Prior to installation of office and sheds, consult with Architect on location, access and related facilities.

PART 2 PRODUCTS2.01 MATERIALS, EQUIPMENT, FURNISHINGS

May be new or used, but must be serviceable, adequate for required purpose, and must not violate applicable codes or regulations.

PART 3 EXECUTION3.01 PREPARATION

Fill and grade sites for temporary structures to provide surface drainage.

3.02 INSTALLATION

- A. Construct temporary field offices and storage sheds on proper foundations, provide connections for utility services.
 - 1. Secure portable or mobile buildings when used.
 - 2. Provide steps and landings at entrance doors.
- B. Mount thermometer at convenient outside location, not in direct sunlight.

3.03 MAINTENANCE AND CLEANING

Provide periodic maintenance and cleaning for temporary structures, furnishings, equipment, and services.

3.04 REMOVAL

- A. Remove temporary field offices, contents and services at a time no longer needed.
- B. Remove storage sheds when no longer needed.
- C. Remove foundations and debris; grade site to required elevations and clean the areas.

END OF SECTION

PART 1 GENERAL1.01 REQUIREMENTS INCLUDED

Furnish, install, and maintain suitable barriers as required to prevent public entry into remodeling and material storing areas, and to protect the work, existing facilities, trees, and plants from construction operations; remove when no longer needed, or at completion of work. Provide access into remodeling and material storing areas and use of facilities for authorized persons.

1.02 RELATED REQUIREMENTS

Section 01 11 00: Summary of Work.

PART 2 PRODUCTS2.01 MATERIALS GENERAL

Materials may be new or used, suitable for the intended purpose, but must not violate requirements of applicable codes and standards.

2.02 FENCING

Only as required to protect public.

A. Open-Mesh Fence:

1. No. 11 gage, 2" mesh, 72" high galvanized chain link fabric, with extension arms and three strands of galvanized barbed wire.
2. Galvanized steel posts; 1-1/2" line posts and 2" corner posts.
3. Contractor must protect his equipment and materials and is responsible for the security of the job site.

PART 3 EXECUTION3.01 GENERAL

- A. Install facilities of a neat and reasonable uniform appearance, structurally adequate for required purposes.
- B. Maintain barriers during entire construction period.
- C. Relocate barriers as required by progress of construction.

3.02 FENCES

As required:

- A. Prior to start of work at the Project site, install enclosure fence with suitably locked entrance gates.
 1. Locate fence to enclosure substantially entire Project site or that portion the Contractor establishes as required to separate the work area from the student play area.
 2. Locate vehicular entrance gates in suitable relation to construction facilities; and to avoid interference with traffic on public roadways.
- B. Construct open-mesh fence on accordance with industry standards.

3.03 TREE AND PLANT PROTECTION

- A. Preserve and protect existing trees and plants at site which are designated to remain, and those adjacent to site.
- B. Consult with Architect, and remove agreed upon roots and branches which interfere with construction.
 1. Employ a qualified tree surgeon to remove, and to treat cuts.
- C. Provide temporary barriers to a height of six feet, around each, or around each group, of trees and plants.

Barriers

Section 01 53 00

- D. Protect root zones of trees and plants:
 - 1. Do not allow vehicular traffic or parking.
 - 2. Do not store materials or products.
 - 3. Prevent dumping of refuse or chemically injurious materials or liquids.
 - 4. Prevent puddling or continuous running water.
- E. Carefully supervise excavating, grading and filling, and subsequent construction operations, to prevent damage.
- F. Replace, or suitably repair, trees and plants designated to remain which are damaged or destroyed due to construction operations.

3.04 REMOVAL

- A. Completely remove barricades, when construction has progressed to the point that they are no longer needed, and when approved by Architect.
- B. Clean and repair damage caused by installation, fill and grade areas of the site to required elevations and slopes, and clean the area.

PART 1 GENERAL1.01 REQUIREMENTS INCLUDED

- A. Provide a project security program, to:
 - 1. Protect work, stored products, and construction equipment from theft and vandalism.
 - 2. Protect construction premises from entry by unauthorized persons after work hours.
Provide access for authorized persons during work hours.

1.02 RELATED REQUIREMENTS

- A. Section 01 31 19: Project Meetings.
- B. Section 01 51 00: Temporary Lighting.
- C. Section 01 53 00: Barriers.

1.03 MAINTENANCE OF SECURITY

- A. Initiate security program promptly after job mobilization, when enclosure fence and gates are installed.
- B. Maintain security program throughout construction period, until Owner occupancy or Owner acceptance precludes the need for Contractor security.

END OF SECTION

PART 1 GENERAL1.01 REQUIREMENTS INCLUDED

- A. Provide and maintain vehicular access to site and within site to provide uninterrupted access:
 - 1. To temporary construction facilities, storage and work areas.
 - 2. For use by persons and equipment involved in construction of project.
 - 3. For use by emergency vehicles and to within 100' of temporary or permanent fire department connections.
- B. Provide and maintain temporary parking facilities for use by construction personnel.
- C. Remove temporary construction and facilities when no longer needed, and restore areas.

1.02 RELATED REQUIREMENTS

- A. Section 31 22 16: Finish Grading.

1.03 SITE ACCESS ROADS

Provide site access for construction equipment and vehicles through public through fares.

1.04 ON-SITE ROADS AND PARKING AREAS

- A. Locate roads, drives, walks, and parking facilities to provide uninterrupted access to construction offices, mobilization, storage areas, and other areas required for execution of the contract.
 - 1. Location: As designated; consult with Architect regarding any desired deviation there from.
 - 2. Size of Parking Facilities: Adequate to provide for needs of personnel.
 - a. When parking needs exceed on-site capacity, provide additional off-site facilities.
 - b. Provide access for emergency vehicles:
 - 1. Maintain driveways a minimum of 15 feet wide between and around combustible materials in storage and mobilization areas.
- C. Maintain traffic areas free as possible of excavated materials, construction equipment, products, snow, ice, and debris.
- D. Keep fire hydrants and water control valves free from obstruction and accessible for use.

1.05 EXISTING PAVEMENTS

- A. Designated existing on-site streets and driveway may be used for construction traffic.
 - 1. Provide temporary additional roads as needed for required construction access.
 - 2. Maintain existing construction, and restore to original, or specified, condition at completion of work.
- B. Designated areas of existing parking facilities may be used for parking of construction personnel's private vehicles and of Contractor's light-weight vehicles.
 - 1. Do not allow heavy vehicles or construction equipment in parking areas.

PART 2 PRODUCTS2.01 BASE AND TOPPING MATERIALS

- A. For temporary construction which will be removed when no longer needed for construction purposes: To Contractor's option.
- B. For earthwork and topping which will become a permanent part of the work: Respective sections of specifications.

PART 3 EXECUTION3.01 PREPARATION

- A. Clear areas required for access roads and parking areas.
- B. Fill, compact, and grade areas as necessary to provide suitable support for vehicular traffic under anticipated loadings.
- C. Provide for surface drainage of facilities and surrounding areas.
 - 1. Provide and operate temporary pumps.

3.02 CONSTRUCTION

- A. Construction methods for temporary facilities to be removed when no longer needed: To Contractor's option to provide the required results.
- B. For work which will become a part of permanent work, comply with respective sections of specifications for preparation and construction.

3.03 MAINTENANCE

- A. Maintain roads, walks, and parking areas in a sound, clean condition.
 - 1. Repair or replace any portions damaged during progress of construction work.

3.04 REMOVAL

- A. Completely remove temporary materials and construction when construction needs can be met by use of permanent installation.
 - 1. Remove and dispose of compacted materials to depths required by various conditions to be met in completed work.
- B. Restore areas to original or to specified conditions at completion of work.

END OF SECTION

PART 1 GENERAL**1.01 REQUIREMENTS INCLUDED**

Provide and maintain methods, equipment, and temporary construction, as necessary to provide controls over environmental conditions at the construction site and related areas under Contractor's control; remove physical evidence of temporary facilities at completion of work.

1.02 RELATED REQUIREMENTS

- A. Section 01 51 00: Temporary Utilities.
- B. Section 01 71 00: Cleaning.

1.03 NOISE CONTROL

Restrict high noise producing equipment use until after school hours.

1.04 DUST CONTROL

Provide positive methods and apply dust control material to minimize raising dust from construction operations, and provide positive means to prevent air-borne dust from dispersing into the adjoining rooms.

1.05 WATER CONTROL

- A. Provide methods to control surface water to prevent damage to the project, the site, or adjoining properties.
- B. Provide, operate, and maintain hydraulic equipment of adequate capacity to control surface and water.
- C. Dispose of drainage water in a manner to prevent flooding, erosion, or other damage to any portion of the site or to adjoining areas.

1.06 FIRE PROTECTION

Provide and maintain 2-2A 20BC fire extinguishers on the site near active construction.

1.07 RODENT CONTROL

- A. Provide rodent control as necessary to prevent infestation of construction or storage area.
 - 1. Employ methods and use materials which will not adversely affect conditions at the site or on adjoining properties.
 - 2. Should the use of rodenticides be considered necessary, submit an informational copy of the proposed program to Owner with a copy to Architect. Clearly indicate:
 - a. The area or areas to be treated.
 - b. The rodenticides to be used, with a copy of the manufacturer's printed instructions.
 - c. The pollution preventative measures to be employed.
- B. The use of any rodenticide shall be in full accordance with the manufacturer's printed instructions and recommendations. Do not store or use rodenticide near any children.

1.08 DEBRIS CONTROL

- A. Maintain all areas under Contractor's control free of extraneous debris.
- B. Initiate and maintain a specific program to prevent accumulation of debris at construction site, storage and parking areas, or along access roads and haul routes.
 - 1. Provide containers for deposit of debris as specified in Section 01.710 - Cleaning.
 - 2. Provide periodic inspection of traffic areas to enforce requirements.
- C. Schedule periodic collection and disposals of debris at specified in Section 01.710 - Cleaning.
 - 1. Provide additional collections and disposals of debris whenever the periodic schedule is inadequate to prevent accumulation.

1.09 POLLUTION CONTROL

- A. Provide methods, means and facilities required to prevent contamination of soil, water, or atmosphere by the discharge of noxious substances from construction operations.

Temporary Controls

Section 01 56 00

- B. Provide equipment and personnel, perform emergency measures required to contain any spillages, and to remove contaminated soils or liquids.
 - 1. Excavate and dispose of any contaminated earth off-site, and replace with suitable compacted fill and topsoil.
- C. Take special measures to prevent harmful substances from entering public waters.
 - 1. Prevent disposal of wastes, effluents, chemicals, or other such substances adjacent to streams, or in sanitary, or storm sewers.
- D. Provide systems for control of atmospheric pollutants.
 - 1. Prevent toxic concentrations of chemicals.
 - 2. Prevent harmful dispersal of pollutants into the atmosphere.

1.10 EROSION CONTROL

- A. Plan and execute construction and earth work by methods to control surface drainage from cuts and fills, and from borrow and waste disposal areas, to prevent erosion and sedimentation.
 - 1. Hold the areas of bare soil exposed at one time to a minimum.
 - 2. Provide temporary control measures such as berms, dikes, and drains.
- B. Construct fills and waste areas by selective placement to eliminate surface silts or clays which will erode.
- C. Periodically inspect earthwork to detect any evidence of the start of erosion, apply corrective measures as required to control erosion.

PART 1 GENERAL**1.01 REQUIREMENTS INCLUDED**

- A. Material and equipment incorporated into the work:
 - 1. Conform to applicable specifications and standards.
 - 2. Comply with size, make, type, and quality specified, or as specifically approved in writing by the Architect/Engineer.
 - 3. Manufactured and Fabricated Products:
 - a. Design, fabricate, and assemble in accord with the best engineering and shop practices.
 - b. Manufacture like parts of duplicate units to standard sizes and gauges to render said parts interchangeable.
 - c. Two or more items of the same kind shall be identical, by the same manufacturer.
 - d. Products shall be suitable for service conditions.
 - e. Equipment capacities, sizes, and dimensions shown or specified shall be adhered to unless variations are specifically approved in writing.
 - 4. Do not use material or equipment for any purpose other than that for which it was designed or is specified.

1.02 RELATED REQUIREMENTS

- A. Section 00 72 13: Conditions of the Contract.
- B. Section 00 73 00: Supplementary Conditions
- C. Section 01 01 00: Summary of Work.
- D. Section 01 34 00: Shop Drawings, Product Data, and Samples.
- E. Section 01 71 00: Cleaning.
- F. Section 01 73 00: Operating and Maintenance Data.

1.03 REUSE OF EXISTING MATERIAL

- A. Except as specifically indicated or specified, materials, and equipment removed from the existing structure shall not be used in the completed work.
- B. For material and equipment specifically indicated or specified to be reused in the work:
 - 1. Use special care in removal, handling, storage, and reinstallation, to assure proper function in the completed work.
 - 2. Arrange for transportation, storage, and handling of products which require off-site storage, restoration or renovation. Pay all costs for such work.

1.04 MANUFACTURER'S INSTRUCTIONS

- A. When Contract Documents require that installation of work shall comply with manufacturer's printed instructions, obtain and distribute copies of such instructions to parties involved in the installation, including two copies to Architect.
- B. Handle, install, connect, clean, condition, and adjust products in strict accord with such instructions and in conformity with specified requirements.
 - 1. Should job conditions or specified requirements conflict with manufacturer's instructions, consult with Architect for further instructions.
 - 2. Do not proceed with work without clear instructions.
- C. Perform work in accord with manufacturer's instructions. Do not omit any preparatory step or installation procedure unless specifically modified or exempted by Contract Documents.

1.05 TRANSPORTATION AND HANDLING

- A. Arrange deliveries of products in accord with construction schedules, coordinate to avoid conflict with work and conditions at the site.
 - 1. Deliver products in undamaged condition, in manufacturer's original containers or packaging, with identifying labels intact and legible.
 - 2. Immediately on delivery, inspect shipments to assure compliance with requirements of Contract Documents and approved submittals, and that products are properly Protected and undamaged.
- B. Provide equipment and personnel to handle products by methods to prevent soiling or damage to products or packaging.

1.06 STORAGE AND PROTECTION

- A. Store products in accord with manufacturer's instructions, with seals and labels intact and legible.
 - 1. Store products subject to damage by the elements in weather tight enclosures.
 - 2. Maintain temperature and humidity within the ranges required by manufacturer's instructions.
- B. Exterior Storage:
 - 1. Store fabricated products above the ground, on blocking or skids, prevent soiling or staining. Cover products which are subject to deterioration with impervious sheet coverings, provide adequate ventilation to avoid condensation.
 - 2. Store loose granular materials in a well-drained area on solid surfaces to prevent mixing with foreign matter.
- C. Arrange storage in a manner to provide easy access for inspection. Make periodic inspections of stored products to assure that products are maintained under specified conditions, and free from damage or deterioration.
- D. Protection after Installation:
 - 1. Provide substantial coverings as necessary to protect installed products from damage from traffic and subsequent construction operations. Remove when no longer needed.

1.07 SUBSTITUTIONS AND PRODUCT OPTIONS

- A. Products List:
 - 1. Within 30 days after contract date, submit to Architect a complete list of major products proposed to be used, with the name of the manufacturer and the installing subcontractor.
- B. Contractor's Options:
 - 1. For products specified only by reference standard, select any product meeting that standard.
 - 2. For products specified by naming several products or manufacturers, select any one of the products of manufacturers named, which complies with the specifications.
 - 3. For products specified by naming one or more products or manufacturer and "or equal", Contractor must submit a request as for substitutions for any product or manufacturer not specifically named.
 - 4. For products specified by naming only one product and manufacturer, there is no option.
- C. Substitutions:
 - 1. For a period of 30 days after contract date, Architect will consider written requests from Contractor for substitution of products.
 - 2. Submit a separate request for each product, supported with complete data, with drawings and samples as appropriate, including:
 - a. Comparison of the qualities of the proposed substitution with that specified.
 - b. Changes required in other elements of the work because of the substitution.
 - c. Effect on the construction schedule.
 - d. Cost data comparing the proposed substitution with the product specified.

- e. Any required license fees or royalties.
 - f. Availability of maintenance service, and source of replacement materials.
 - 3. Architect shall be the judge of the acceptability of the proposed substitution.
 - 4. Only one substitution request per item will be considered.
 - 5. Substitutions that affect accessibility, fire-life safety or structural safety may require submittal to the County for review and approval.
- D. Contractor's Representation:
- 1. A request for a substitution constitutes a representation that Contractor:
 - a. Has investigated the proposed product and determined that it is equal to or superior in all respects to that specified.
 - b. Will provide the same warranties or bonds for the substitution as for the product specified.
 - c. Will coordinate the installation of an accepted substitution into the work, and make the work complete in all respects.
 - d. Waives all claims for additional costs, under his responsibility which may subsequently become apparent.
- E. Architect will review requests for substitutions with reasonable promptness, and to notify Contractor, in writing of his decision to accept or reject the requested substitution.

END OF SECTION

PART 1 GENERAL1.01 REQUIREMENTS INCLUDED

Execute cleaning, during progress of the work, and at completion of the work, as required by General Conditions.

1.02 RELATED REQUIREMENTS

- A. Conditions of the Contract.
- B. Each Specification Section: Cleaning for specific products or work.

1.03 DISPOSAL REQUIREMENTS

Conduct cleaning and disposal operations to comply with codes, ordinances, regulations, and anti-pollution laws.

PART 2 PRODUCTS2.01 MATERIALS

- A. Use only those cleaning materials which will not create hazards to health or property and which will not damage surfaces.
- B. Use only those cleaning materials and methods recommended by manufacturer of the surface materials to be cleaned.
- C. Use cleaning materials only on surfaces recommended by cleaning material manufacturer.

PART 3 EXECUTION3.01 DURING CONSTRUCTION

- A. Execute periodic cleaning to keep the work, the site and adjacent properties free from accumulations of waste materials, rubbish and windblown debris, resulting from construction operations.
- B. Provide on-site containers for the collection of waste materials, debris, and rubbish.
- C. Remove waste materials, debris and rubbish from the site periodically and dispose of at legal disposal areas away from the site.

3.02 DUST CONTROL

- A. Clean interior spaces prior to the start of finish painting and continue cleaning on an as-needed basis until painting is finished.
- B. Schedule operations so that dust and other contaminants resulting from cleaning process will not fall on wet or newly-coated surfaces.

3.03 FINAL CLEANING

- A. Employ skilled workmen for final cleaning.
- B. Remove grease, mastic, adhesives, dust, dirt, stains, fingerprints, labels, and other foreign materials from sight-exposed interior and exterior surfaces.
- C. Wash and shine glazing and mirrors.
- D. Polish glossy surfaces to a clear shine.
- E. Ventilating Systems:
 - 1. Clean permanent filters and replace disposable filters if units were operated during construction.
 - 2. Clean dusts, blowers, and coils if units were operated without filters during construction.
- F. Broom clean exterior paved surfaces; rake clean other surfaces of the grounds.
- G. Prior to final completion, or Owner occupancy, Contractor shall conduct an inspection of sight-exposed interior and exterior surfaces, and all work areas, to verify that the entire work is clean.
- H. Contractor: Broom clean exterior paved surfaces; rake clean other surfaces of the grounds.

PART 1 GENERAL1.01 REQUIREMENTS INCLUDED

- A. Maintain at the site for the Owner one record copy of:
 - 1. Drawings.
 - 2. Specifications.
 - 3. Addenda.
 - 4. Change Orders and other modifications to the Contract.
 - 5. Architect/Engineer field orders or written instructions.
 - 6. Approved shop drawings, product data and samples.
 - 7. Field test records.
 - 8. California Code of Regulations (CCR) Title 21 and 24.

1.02 RELATED REQUIREMENTS

Section 01 34 00: Shop drawings, product data and samples.

1.03 MAINTENANCE OF DOCUMENTS AND SAMPLES

- A. Store documents and samples in Contractor's field office apart from documents used for construction.
 - 1. Provide files and racks for storage of documents.
 - 2. Provide locked cabinet or secure storage space for storage of samples.
- B. File documents and samples in accordance with CSI/SCS format.
- C. Maintain documents in a clean, dry, legible condition and in good order. Do not use record documents for construction purposes.
- D. Make documents and samples available at all times for inspection by Architect.

1.04 MARKING DEVICES

Provide felt tip marking pens for recording information in the color code.

1.05 SUBMITTAL

- A. At contract close-out, deliver record documents to Architect for the Owner.
- B. Accompany submittal with transmittal letter in duplicate, containing:
 - 1. Date.
 - 2. Project title and number.
 - 3. Contractor's name and address.
 - 4. Title and number of each record document.
 - 5. Signature of Contractor of his authorized representative.

END OF SECTION

PART 1 GENERAL**1.01 REQUIREMENTS INCLUDED**

- A. Compile product data and related information appropriate for Owner's maintenance and operation of products furnished under Contract.
 - 1. Prepare operating and maintenance data as specified in this Section and as referenced in other pertinent sections of Specifications.
- B. Instruct Owner's personnel in maintenance of products and in operation of equipment and systems.

1.02 RELATED REQUIREMENTS

- A. Section 01 34 00: Shop Drawings, Product Data and Samples.
- B. Section 01 77 00: Contract Closeout.
- C. Section 01 72 00: Project Record Documents.
- D. Section 01 74 00: Warranties and Bonds.

1.03 FORM OF SUBMITTALS

- A. Prepare data in form of an instructional manual for use of Owner's personnel.
- B. Format:
 - 1. Size: 8-1/2" x 11"
 - 2. Paper: 20 pound minimum, white, for typed pages.
 - 3. Text: Manufacturer's printed data, or neatly type written.
 - 4. Drawings:
 - a. Provide reinforced punched binder tab, bind in with text.
 - b. Fold larger drawings to size of text pages.
 - 5. Provide fly-leaf for each separate product, or each piece of operating equipment.
 - a. Provide typed description of product, and major component parts of equipment.
 - b. Provide indexed tabs.
 - 6. Cover: Identify each volume with typed or printed title "OPERATING AND MAINTENANCE INSTRUCTIONS." List:
 - a. Title of Project.
 - b. Identity of separate structure as applicable.
 - c. Identity of general subject matter covered in the manual.
- C. Binders:
 - 1. Commercial quality three-ring binders with durable and cleanable plastic covers.
 - 2. Maximum ring size: 1 inch.
 - 3. When multiple binders are used, co-relate the data into related consistent groupings.

1.04 CONTENT OF MANUAL

- A. Neatly typewritten table of contents for each volume, arranged in systematic order.
 - 1. Contractor, name of responsible principal, address, and telephone number.
 - 2. A list of each product required to be included, indexed to content of the volume.
 - 3. List, with each product, name, address and telephone number of:
 - a. Subcontractor or installer.
 - b. Maintenance contractor, as appropriate.
 - c. Identify area of responsibility of each.
 - d. Local source of supply for parts and replacement
 - 4. Identify each product by product name and other identifying symbols as set forth in contract documents.
- B. Product Data:
 - 1. Include only those sheets which are pertinent to the specified product.
 - 2. Annotate each sheet to:
 - a. Clearly identify specific product or part installed.
 - b. Clearly identify data applicable to installation.
 - c. Delete reference to inapplicable information.
- C. Drawings:

1. Supplement product data with drawings as necessary to clearly illustrate;
 - a. Relations of component parts of equipment and systems.
 - b. control and flow diagrams.
2. Coordinate drawings with information on Project Record Documents to assure correct illustration of completed illustration.
3. Do not use Project Record Documents as maintenance drawings.
- D. Written text, as required to supplement product data for the particular installation:
 1. Organize in consistent format under separate headings for different procedures.
 2. Provide logical sequences of instructions for each procedure.
- E. Copy of each warranty, bond and service contract issued.
 1. Provide information sheet for Owner's personnel, give:
 - a. Proper procedures in event of failure.
 - b. Instances which might affect validity of warranties or bonds.

1.05 MANUAL FOR MATERIALS AND FINISHES

- A. Submit two copies of complete manual in final form.
- B. Content; for architectural products, applied materials and finishes:
 1. Manufacturer's data, giving full information on products.
 - a. Catalog number, size composition.
 - b. Color and texture designations.
 - c. Information required for re-ordering special manufactured products.
 2. Instructions for care and maintenance:
 - a. Manufacturer's recommendation for types of cleaning agents and methods.
 - b. Cautions against cleaning agents and methods which are detrimental to product.
 - c. Recommended schedule for cleaning and maintenance.
- C. Content, for moisture-protection and weather-exposed products:
 1. Manufacturer's data, giving full information on products.
 - a. Applicable standards.
 - b. Chemical composition.
 - c. Details of installation.
 2. Instructions for inspection, maintenance and repair.
- D. Additional requirements for maintenance data: Respective sections of Specifications.
- E. Provide complete information for products specified in:
 1. Section 16.100: Electrical systems.

1.06 MANUAL FOR EQUIPMENT AND SYSTEMS

- A. Submit three copies of complete manual in final form.
- B. Content, for each unit of equipment and system, as appropriate:
 1. Description of unit and component parts.
 - a. Function, normal operating characteristics, and limiting conditions.
 - b. Performance curves, engineering data and tests.
 - c. Complete nomenclature and commercial number of replaceable parts.
 2. Operating Procedures:
 - a. Start-up, break-in, routine and normal operating instructions.
 - b. Regulation, control, stopping, shut-down and emergency instructions.
 - c. Summer and winter operating instructions.
 - d. Special operating instructions.
 3. Maintenance Procedures:
 - a. Routine operations.
 - b. Guide to "trouble-shooting."
 - c. Disassembly, repair and reassembly.
 - d. Alignment, adjusting and checking.
 4. Servicing and lubrication schedule.
 - a. List of lubricants required.
 5. Manufacturer's printed operating and maintenance instructions.
 6. Description of sequence of operation by control manufacturer.

7. Original manufacturer's part list, illustrations, assembly drawings and diagrams for required maintenance.
 8. As-installed control diagrams by controls manufacturer.
 9. Each Contractor's coordination drawings.
 - a. As-installed color coded piping diagrams.
 10. Charts of valve tag numbers, with location and function of each valve.
 11. List of original manufacturer's spare parts, manufacturer's current prices, and recommended quantities to be maintained in storage.
 12. Other data as required under pertinent sections of specifications.
- C. Content, for each electric and electronic system, as appropriate.
1. Description of system and component parts.
 - a. Function, normal operating characteristics, and limiting conditions.
 - b. Performance curves, engineering data and tests.
 - c. Complete nomenclature and commercial number of replaceable parts.
 2. Circuit directories of panel boards.
 - a. Electrical service.
 - b. Controls.
 - c. Communications.
 3. As-installed color coded wiring diagrams.
 4. Operating Procedures:
 - a. Routine and normal operating instructions.
 - b. Sequences required.
 - c. Special operating instructions.
 5. Maintenance Procedures:
 - a. Routine operations.
 - b. Guide to "trouble-shooting."
 - c. Disassembly, repair and reassembly.
 - d. Adjustment and checking
 6. Manufacturer's printed operating and maintenance instructions.
 7. List of original manufacturer's spare parts, manufacturer's current prices, and recommended quantities to be maintained in storage.
 8. Other data as required under pertinent sections of specifications.
- D. Prepare and include additional data when the need for such data becomes apparent.

1.07 SUBMITTAL SCHEDULE

- A. Submit two copies of preliminary draft of proposed formats and outlines of contents prior to start of work.
 1. Architect will review draft and return on copy with comments.
- B. Submit one copy of completed data in final form fifteen days prior to final inspection or acceptance.
- C. Submit specified number of copies of approved data in final form 10 days after final inspection or acceptance

1.08 INSTRUCTION OF OWNER'S PERSONNEL

- A. Prior to final inspection of acceptance, fully instruct Owner's designated operating and maintenance personnel in operation, adjustment and maintenance of products, equipment and systems.
- B. Operating and maintenance manual shall constitute the basis of instruction.
 1. Review contents of manual with personnel in full detail to explain all aspects of operations and maintenance.

End of Section

PART 1 GENERAL1.01 REQUIREMENTS INCLUDED

- A. Compile specified warranties and bonds.
- B. Compile specified service and maintenance contracts.
- C. Co-execute submittals when so specified.
- D. Review submittals to verify compliance with Contract Documents.
- E. Submit to Architect for review and transmittal to Owner.

1.02 RELATED REQUIREMENTS

- A. Instructions to Bidders: Bid or Proposal Bonds.
- B. Conditions of the Contract: Performance Bond and Labor and Material Payment Bond.
- C. Conditions of the Contract: General Guaranty of Construction; Section 00 63 00, 41.
- D. Section 01 77 00: Contract Closeout.
- E. Section 01 73 00: Operating & Maintenance Data.
- F. The respective section of specifications which specifies the product: Provisions of Warranties & Bonds, Duration.

1.03 SUBMITTAL REQUIREMENTS

- A. Assemble warranties and bonds executed by each of the respective manufacturers, suppliers, and subcontractors.
- B. Number of original signed copies required: Two each.
- C. Table of Contents: Neatly typed, in orderly sequence. Provide complete information for each item.
 - 1. Product or work item.
 - 2. Firm, with name of principal, address and telephone number.
 - 3. Scope.
 - 4. Date of beginning of warranty, bond or service and maintenance contract.
 - 5. Duration of warranty, bond or service maintenance contract.
 - 6. Provide information for Owner's personnel:
 - a. Provide information in case of failure.
 - b. Instances which might affect the validity of warranty of bond.
 - 7. Contractor, name of responsible principal, address, and telephone number.

1.04 FORM OF SUBMITTALS

- A. Prepare in duplicate packets.
- B. Format:
 - 1. Size 8-1/2" x 11", punch sheets for standard 3-ring binder.
 - a. Fold larger sheets to fit into binders
 - 2. Cover: Identify each packet with typed or printed title "WARRANTIES AND BONDS" list:
 - a. Title of Project
 - b. Name of Contractor
- C. Binders: Commercial quality, three ring, with durable and cleanable plastic covers.

1.05 TIME OF SUBMITTALS

- A. Make submittals within ten days after Date of Substantial Completion, prior to final request for payment.
- B. For items of work, where acceptance is delayed materially beyond Date of Substantial Completion, provide updated submittal within ten days after acceptance, listing date of acceptance as start of warranty period.

PART 1 GENERAL**1.01 REQUIREMENTS INCLUDED**

Comply with requirements stated in Conditions of the Contract and in Specifications for administrative procedures in closing out the work.

1.02 RELATED REQUIREMENTS

- A. Conditions of the Contract. Fiscal provisions, legal submittals and additional administrative requirements.
- B. Section 01 01 00: Summary of Work.
- C. Section 01 71 00: Cleaning.
- D. Section 01 73 00: Operating and Maintenance Data.
- E. Section 01 74 00: Warranties and Bonds.
- F. Section 01 72 00: Record Documents.

1.03 SUBSTANTIAL COMPLETION

- A. When Contractor considers the work is substantially complete, he shall submit to the Architect:
 - 1. A written notice that the work, or designated portion thereof, is substantially complete.
 - 2. A list of items to be completed or corrected.
- B. Within a reasonable time after receipt of such notice, Architect will make an inspection to determine the status of completion.
- C. Should Architect determine that the work is not substantially complete:
 - 1. Architect will promptly notify the Contractor in writing, giving the reasons thereof.
 - 2. Contractor shall remedy the deficiencies in the work, and send a second written notice of substantial completion to the Architect.
 - 3. Architect will re-inspect the work.
- D. When Architect concurs that the work is substantially complete, he will:
 - 1. Prepare a Certificate of Substantial Completion, accompanied by Contractor's list of items to be completed or corrected, as verified and amended by the Architect.
 - 2. Submit the Certificate to Owner and Contractor for their written acceptance of the responsibilities assigned to them in the Certificate.
 - 3. The Owner will then have the Certificate notarized by the County Records.

1.04 FINAL INSPECTION

- A. When Contractor considers the Work is complete, he shall submit written certification that:
 - 1. Contract Documents have been reviewed.
 - 2. Work has been inspected for compliance with Contract Documents.
 - 3. Work has been completed in accordance with Contract Documents.
 - 4. Equipment and systems have been tested in the presence of the Owner's representative and are operational.
 - 5. Work is completed and ready for final inspection.
- B. Architect will make an inspection to verify the status of completion with reasonable promptness after receipt of such certification.
- C. Should the Architect determine that the work is incomplete or defective:
 - 1. Architect will promptly notify the Contractor in writing, listing the incomplete or defective work.
- D. When the Architect finds that the work is acceptable under the Contract Documents, he shall request the Contractor to make closeout submittals.

1.05 REINSPECTION FEES

- A. Should Architect perform re-inspections due to failure of the Work to comply with the claims of status of completion made by the Contractor.
 - 1. Owner will compensate Architect for such additional services.
 - 2. Owner will deduct the amount of such compensation from the final payment to the Contractor.

1.06 CONTRACTOR'S CLOSEOUT SUBMITTALS TO ARCHITECT

- A. Evidence of compliance with requirements of governing authorities showing receipt of the following documents at the Office of the State Architect:
 - 1. Verified Report by Contractor; final submittals.
 - 2. Weighmasters Certificate; signed submittal.
 - 3. Welding Inspection Affidavit; signed submittal.
 - 4. Structural and Miscellaneous Metal Test Affidavit; signed submittal.
 - 5. Concrete Compression Test Affidavit by Testing Laboratory; signed submittal.
 - 6. Soil Density Test Affidavit by Testing Laboratory; signed submittal, if required.
 - 7. Reinforcing Steel Test Affidavit by Testing Laboratory; signed submittal.
- B. Project Record Documents: To requirements of Section 01 72 00.
- C. Operating and Maintenance Data, Instructions to Owner's Personnel: To requirements of Section 01 78 23.
- D. Warranties and Bonds: To requirements of Section 01 74 00.
- E. Keys and Keying Schedule: To requirements of Section 08 71 00: Finish Hardware.
- F. Spare Parts and Maintenance Materials: To requirements of Section 01 73 00.
- G. Evidence of Payment and Release of Liens: To requirements of General and Supplementary Conditions.
- H. Certificate of Insurance for Products and Completed Operations.

1.07 FINAL ADJUSTMENT OF ACCOUNTS

- A. Submit a final statement of accounting to Architect.
- B. Statement shall reflect all adjustments to the Contract Sum:
 - 1. The original contract sum.
 - 2. Additions and deductions resulting from:
 - a. Previous change orders.
 - b. Deductions for uncorrected work.
 - c. Penalties and bonuses.
 - d. Deductions for liquidated damages.
 - e. Deductions for reinspection payments.
 - f. Other adjustments.
 - 3. Total contract sum, as adjusted.
 - 4. Previous payments.
 - 5. Sum remaining due.
- C. Architect will prepare a payment request reflecting approved adjustments to the Contract Sum, which were not previously made by Change Orders.

1.08 FINAL APPLICATION FOR PAYMENT

Contractor shall submit the final Application for Payment in accordance with procedures and requirements stated in the Conditions of the Contract.

END OF SECTION

PART 1 GENERAL1.01 WORK INCLUDED

- A. Removal and disposal of existing structures, features and improvements as shown on the plans including but not limited to: Asphalt Concrete pavement; Portland Cement Concrete; underground and surface utilities; drainage pipe and inlets; fuel or oil tanks; wood and/or metal structures and miscellaneous construction materials.
- B. Asbestos Abatement by General Contractor.

1.02 RELATED WORK

- Section 01 03 10: Alteration Project Procedures
- Section 02 10 00: Clearing and Grubbing

1.03 SUBMITTALS

- A. Permits and notices authorizing demolition as required.
- B. Permit for transport and disposal of debris and evidence of proper disposal.
- C. Demolition procedures, Hazardous Materials Handling Plan & Disposition, and operational sequence for review and acceptance by Architect.

1.04 PROTECTION

- A. Provide, install and maintain effective protection (fencing, barriers, lighting, etc.) to avoid entry of school attendees, personnel, visitors or traffic into hazardous areas. Do not interfere with their use or the use of other buildings, utilities and facilities on-site. Provide for and maintain free and safe passage to and from.
- B. Prevent movement or settlement of structures or facilities. Provide and place bracing or shoring if needed to ensure their safety and support.
- C. If safety or stability of structure(s) or facilities appear to be endangered, cease operations, provide for personal safety, secure the site and notify the Architect immediately. Take action to properly support structure. Do not resume operations until safety is restored.

1.05 EXISTING SERVICES

- A. Arrange, perform and/or pay for disconnection, removal, and capping utility services within areas of demolition.
- B. Place markers to indicate location of disconnected services. Identify service lines and capping locations on Project Record Documents.

PART 2 PRODUCTS2.01 MATERIALS

- A. Except where noted otherwise, maintain possession of materials being demolished, i remove from the site and dispose of properly.
- B. Relics and antiques (i.e., cornerstones and their contents, commemorative plaques, and tablets) and similar objects remain the property of the Owner. Notify architect upon discovery prior to removal and obtain acceptance regarding disposition and methods of removal.

PART 3 EXECUTION3.01 PREPARATION

- A. Schedule and carry out demolition work to cause as little inconvenience to adjacent occupied building areas as possible.

3.02 DEMOLITION

- A. Demolish in an orderly and workmanlike manner as required to accommodate new work,

- including that required for connection to new or existing building(s) or facilities. Protect existing foundations, floor slabs and facilities to remain in place.
- B. Perform demolition in accordance with applicable codes and requirements.
 - C. Repair all demolition performed in excess of that required, at no cost to the Owner.
 - D. Burning of materials on site is not permitted.
 - E. Remove from site, contaminated, vermin infested or dangerous materials encountered and dispose of by safe means so as not to endanger health of workers and public.
 - F. Remove demolished materials, tools, and equipment from site upon completion of work. Leave site in a clean and safe condition acceptable to the Architect.
 - G. Active utilities and facilities shown on the Drawings shall be adequately protected from damage and removed or relocated only as indicated or specified.
 - H. Where active utilities are encountered but are not shown on the Drawings, the Architect shall be advised, the work shall be adequately protected, supported or relocated as directed by the Architect. Protect or provide utilities for continuous operation of existing school buildings or facilities by temporary means as needed.
 - I. Verify as inactive and abandoned utilities encountered in excavating and grading operations and report to the Architect. In the absence of specified requirements, plug or cap such utility lines at least 3 feet outside of new building walls, or as required by the local regulations.

END OF SECTION

PART 1 GENERAL**1.01 RELATED WORK DESCRIBED ELSEWHERE**

- A. Section 02 07 20: Minor Demolition
- B. Section 02 20 00: Earthwork.
- C. Section 02 26 00: Finish Grading

1.02 DEFINITIONS

- A. "Clearing" as used herein, includes the removal of all existing objects (except those objects designated to remain) down to the existing ground level, plus such other work as is described in this section of these specifications.
- B. "Grubbing" includes the removal of materials below ground level as specified herein.
- C. "Large rock" is in-situ rock whose greatest dimension is at least 12 inches.

1.03 JOB DESCRIPTIONS

- A. Areas to be cleared and grubbed shall include: building pads and approximately 10 feet around pads; all areas of other improvements or installations (e.g.: paving areas, pedestrian areas and drainage improvements), and; elsewhere as required by the Architect.
- B. Landscape areas shall be cleared as noted on plans.

1.04 DUST CONTROL

- A. Use all means necessary to prevent airborne dust during performance of the work of this section; thoroughly moisten all surfaces as required to prevent dust being a hazard or nuisance to the public, neighbors and concurrent performance of other work on the site.

1.05 BURNING

- A. On-site burning will not be permitted.

1.06 DAMAGE TO EXISTING TREES

- A. Damage to existing trees not shown to be removed will be assessed at \$250.00 per tree. Damage includes anything that will affect the health or appearance of the tree.

PART 2 PRODUCTS**2.01 MATERIALS**

- A. Materials not specifically described but required for the proper completion of the work of this Section shall be as selected by the Contractor subject to the approval of the Architect.

PART 3 EXECUTION**3.01 PREPARATION**

- A. Site Inspection: Prior to all work of this section, carefully inspect the entire site and all objects designated to be removed and to be preserved. Locate all existing utility lines and determine all requirements for disconnecting and capping. Locate all existing active utility lines traversing the site and determine the requirements for their protection.
- B. Clarification: The drawings do not purport to show all objects existing on the site. Before commencing the work of this section, verify with the Architect all objects to be removed and all objects to be preserved.

CLEARING AND GRUBBINGSECTION 02 10 00

- C. Scheduling: Schedule all work in accordance with Permit requirements and to minimize impacts to neighbors and the public while providing for safety and Owner's beneficial use of its buildings and other facilities.
- D. Disconnection of Utilities: Before starting site operations, disconnect, or arrange for the disconnection of all utility services designated to be removed or as required for safety, performing all such work in accordance with the requirements of the utility company or agency involved.

3.02 CLEARING AND GRUBBING

- A. Strip and remove the top 2 to 4 inches of soil containing shallow vegetation roots and other deleterious materials. This highly organic topsoil can be stockpiled on-site and used for surface landscaping, but shall not be used for constructing compacted engineered fills. Grub soil to a depth of 8" to remove roots over 1" or other deleterious material.
- B. Remove rootballs of shrubs, tree roots and tree stumps. Excavate the remaining cavities or holes sufficiently to enable backfill placement and compaction in accordance with Section 02 22 00.
- C. Remove all large rocks from the top 8 inches of soil. Large rock may be used to construct engineered fills provided they are placed more than 3 feet below finished subgrade surface and embedded in compactable soil to preclude nesting or voids. The Architect must approve proposed use/placement of large rock prior to constructing compacted fills.
- D. Vegetation, debris, other deleterious materials, and large rock shall be removed from the site and disposed of properly unless otherwise approved by Architect.

END OF SECTION

PART 1 - GENERAL**1.1 RELATED DOCUMENTS**

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

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Protecting existing trees and vegetation to remain.
 - 2. Removing trees and other vegetation.
 - 3. Clearing and grubbing.
 - 4. Topsoil stripping.
 - 5. Removing above-grade site improvements.
- B. Related Sections include the following:
 - 1. Division 1 Section "Field Engineering" for verifying utility locations and for recording field measurements.
 - 2. Division 1 Section "Construction Facilities and Temporary Controls" for temporary utilities, temporary construction and support facilities, temporary security and protection facilities, and environmental protection measures during site operations.
 - 3. Division 2 Section "Building Demolition" for demolition of buildings, structures, and site improvements.
 - 4. Division 2 Section "Earthwork" for soil materials, excavating, backfilling, and site grading.

1.3 DEFINITIONS

- A. Topsoil: Natural or cultivated surface-soil layer containing organic matter and sand, silt, and clay particles; friable, pervious, and black or a darker shade of brown, gray, or red than underlying subsoil; reasonably free of subsoil, clay lumps, gravel, and other objects more than 1" in diameter; and free of weeds, roots, and other deleterious materials.

1.4 MATERIALS OWNERSHIP

- A. Except for materials indicated to be stockpiled or to remain Owner's property, cleared materials shall become Contractor's property and shall be removed from the site.

1.5 SUBMITTALS

- A. Photographs or videotape, sufficiently detailed, of existing conditions of trees and plantings, adjoining construction, and site improvements that might be misconstrued as damage caused by site clearing.
- B. Record drawings according to Division 1 Section "Contract Closeout."

SITE CLEARING

SECTION 02 11 00

1. Identify and accurately locate capped utilities and other subsurface structural, electrical, and mechanical conditions.

1.6 QUALITY ASSURANCE

- A. Pre-installation Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Meetings."

1.7 PROJECT CONDITIONS

- A. Traffic: Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities during site-clearing operations.
 1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction.
 2. Provide alternate routes around closed or obstructed traffic ways if required by authorities having jurisdiction.
- B. Improvements on Adjoining Property: Authority for performing indicated removal and alteration work on property adjoining Owner's property will be obtained by Owner before award of Contract.
- C. Salvable Improvements: Carefully remove items indicated to be salvaged and store on Owner's premises where indicated.
- D. Notify utility locator service for area where Project is located before site clearing.(U.S.A)

PART 2 – PRODUCTS**2.1 SOIL MATERIALS**

- A. Satisfactory Soil Materials: Requirements for satisfactory soil materials are specified in Division 2 Section "Earthwork."
 1. Obtain approved borrow soil materials off-site when satisfactory soil materials are not available on-site.

PART 3 - EXECUTION**3.1 PREPARATION**

- A. Protect and maintain benchmarks and survey control points from disturbance during construction.
- B. Provide erosion-control measures to prevent soil erosion and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.
- C. Locate and clearly flag trees and vegetation to remain or to be relocated.
- D. Protect existing site improvements to remain from damage during construction.

1. Restore damaged improvements to their original condition, as acceptable to Owner.

3.2 TREE PROTECTION

A. Existing Trees

1. The contractor shall protect all existing trees and shrubs scheduled to remain against injury or damage, including cutting, breaking or skinning of roots, trunks or branches.
2. No trees or shrubs are to be removed, trimmed, or cut without prior approval of the Landscape Architect.
3. Prior to the beginning of work on the project, including the clearing and grading phase, a continuous, temporary, six foot (6') high chain link fence shall be erected around the drip line of all trees scheduled to remain, unless otherwise specified by the Landscape Architect. No construction activity shall be allowed within the limits of this fencing unless specifically shown on the drawings, or unless directed by the Landscape Architect. The temporary fencing shall remain in place during the entire construction period and shall not be removed until directed by the Landscape Architect.
 - a. Do not store construction materials, debris, or excavated material within drip line of remaining trees.
 - b. Do not permit vehicles, equipment, or foot traffic within drip line of remaining trees.
4. Grading beneath trees to be saved shall be given special attention. Every effort shall be made to avoid creating conditions adverse to the tree's health. The natural ground within the drip lines of trees to be preserved shall remain as undisturbed as possible. Grading within the protected root zone of trees to be preserved shall be as shown on the drawings only, unless directed by the Landscape Architect.
5. Where excavation for new construction is required within drip line of trees, hand clear and excavate to minimize damage to root systems. Use narrow-tine spading forks, comb soil to expose roots, and cleanly cut roots as close to excavation as possible. No mechanical trenching or excavation is allowed within the drip line of existing trees any time. Trenching shall be completed by running the trench parallel to the roots to the extent possible, rather than cross-cutting the roots.
 - a. If during construction or grading (grading, excavation, etc.) tree roots of 2" in diameter or greater are encountered, work shall stop immediately and a Certified Arborist shall be contracted for a root inspection. Root cutting of any roots over 2" in diameter must have prior approval from the Landscape Architect.
 - b. Major roots one inch (1") or greater in diameter encountered within the drip line of the tree in the course of excavation or trenching shall not be cut and shall be kept moist and covered with earth as soon as possible.
 - c. Roots one half inch (1/2") to one inch (1") in diameter which are severed shall be trimmed cleanly and covered with earth as soon as possible.
6. Branches interfering with construction but not designated for removal may be removed only as directed by the Landscape Architect.
7. Any pruning, cutting, or trimming of any trees will be performed by an International Society of Arboriculture Certified Arborist in accordance with the National Arborist Association and/or International Society of Arboriculture pruning standards. Cutting of

SITE CLEARING

SECTION 02 11 00

2" diameter limbs or greater or major dead wooding shall require approval of the Landscape Architect.

8. Trees or shrubs scheduled to remain and damaged by construction operations shall be repaired by the contractor in a manner acceptable to the Landscape Architect. Damaged trees and shrubs shall be repaired promptly to prevent progressive deterioration. Repair or replacement of trees and shrubs shall be at the contractor's expense as determined by the Landscape Architect. Contractor shall be held fully liable for damage caused to trees and shall be assessed fees based on the International Society of Arboriculture "Guide for Plant Appraisal", as determined by the local jurisdiction; fees will be assessed for: 1) any injury to the trunk, limbs, or root system, and 2) for the value of any tree requiring removal subsequent to injury or treatment that varies from these Specifications.

3.3 UTILITIES

- A. Locate, identify, disconnect, and seal or cap off utilities indicated to be removed.
 1. Owner will arrange to shut off indicated utilities when requested by Contractor.
 2. Arrange to shut off indicated utilities with utility companies.
- B. Existing Utilities: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
 1. Notify Architect not less than two days in advance of proposed utility interruptions.
 2. Do not proceed with utility interruptions without Architect's written permission.
- C. Excavate for and remove underground utilities indicated to be removed.

3.4 CLEARING AND GRUBBING

- A. Remove obstructions, trees, shrubs, grass, and other vegetation to permit installation of new construction. Removal includes digging out stumps and obstructions and grubbing roots.
 1. Do not remove trees, shrubs, and other vegetation indicated to remain or to be relocated.
 2. Cut minor roots and branches of trees indicated to remain in a clean and careful manner where such roots and branches obstruct installation of new construction.
 3. Completely remove stumps, roots, obstructions, and debris extending to a depth of 18 inches (450 mm) below exposed subgrade.
 4. Use only hand methods for grubbing within drip line of remaining trees.
- B. Fill depressions caused by clearing and grubbing operations with satisfactory soil material, unless further excavation or earthwork is indicated.
 1. Place fill material in horizontal layers not exceeding 8-inch (200-mm) loose depth, and compact each layer to a density equal to adjacent original ground.

3.5 TOPSOIL STRIPPING

- A. Remove sod and grass before stripping topsoil.
- B. Strip topsoil to whatever depths are encountered in a manner to prevent intermingling with underlying subsoil or other waste materials.
 - 1. Strip surface soil of unsuitable topsoil, including trash, debris, weeds, roots, and other waste materials.
- C. Stockpile topsoil materials away from edge of excavations without intermixing with subsoil. Grade and shape stockpiles to drain surface water. Cover to prevent windblown dust.
 - 1. Limit height of topsoil stockpiles to 72 inches (1800 mm).
 - 2. Do not stockpile topsoil within drip line of remaining trees.
 - 3. Dispose of excess topsoil as specified for waste material disposal.
 - 4. Stockpile surplus topsoil and allow for respreading deeper topsoil.

3.6 SITE IMPROVEMENTS

- A. Remove existing above- and below-grade improvements as indicated and as necessary to facilitate new construction.
- B. Remove slabs, paving, curbs, gutters, and aggregate base as indicated.
 - 1. Unless existing full-depth joints coincide with line of demolition, neatly saw-cut length of existing pavement to remain before removing existing pavement. Saw-cut faces vertically.

3.7 DISPOSAL

- A. Disposal: Remove surplus soil material, unsuitable topsoil, obstructions, demolished materials, and waste materials, including trash and debris, and legally dispose of them off Owner's property.

END OF SECTION

PART 1 - GENERAL**1.1 SECTION INCLUDES**

- A. Description of the requirements for earthwork which includes, but is not necessarily limited to, the following:
 - 1. All excavating, filling and grading to elevations indicated on the Drawings.
 - 2. Preparation of subgrade for slabs and paving.
 - 3. Cutting, filling and finish grading of areas to extent shown and specified herein.

1.2 RELATED SECTIONS

- A. Section 02 07 20: Minor Demolition
- B. Section 02 11 00: Site Clearing
- C. Section 02 22 20: Excavating, backfilling and compacting for utilities.
- D. Section 02 51 10: Asphalt concrete paving

1.3 QUALITY ASSURANCE

- A. Requirements of Regulatory Agencies:
 - 1. Safety Regulations: Work shall comply with all Federal, state and municipal regulations regarding safety, including the requirements of the following:
 - a. William-Steiger Occupational Safety & Health Act of 1970
 - 2. All trenching work shall conform to Trench Construction Safety Orders of California State Industrial Accident Commission (CSIAC).
- B. References and Standards:
 - 1. American Society for Testing and Materials (ASTM):
 - a. D422-72- Test for Maximum Particle Size.
 - b. D1557-78 - "Moisture-Density Relations of Soils Using 10-lb (4.5 kg) Rammer and 18-in. (457 mm) Drop."
 - c. D4318-84 - Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils.

1.4 PROTECTION

- A. Adjacent Facilities: Protect adjacent public and private property, both above and below grade, from damage resulting from work of this section. Assume all responsibility for damage to adjoining properties and restore property to its original condition, should damage occur.

- B. Bulkheading and Shoring: Provide shoring, sheeting and bracing to prevent caving, erosion or gulying of sides of excavations.
- C. Surface Drainage: Provide for surface drainage during period of construction in a manner to prevent water from running into excavated areas, and to avoid creating a nuisance to adjacent areas.
- D. Pumping: Keep all excavations free from water during entire progress of work, regardless of cause, source or nature of water. Any water which accumulates in excavations shall be drained promptly by means of pumps, if necessary.
- E. Dust Control: Precaution shall be exercised at all times to control dust created and to avoid creation of a nuisance in the surrounding area as a result of the demolition and removal work and the excavating and grading operations. Keep ground wet as may be required to control dust. See Storm Water Pollution Prevention Plan.
- F. Carefully protect existing trees to remain.

1.5 JOB CONDITIONS

- A. Seasonal Limits: No fill shall be placed during weather conditions which will alter the moisture content of the fill materials sufficiently to make adequate compaction impossible. After placing operations have been stopped because of adverse conditions, no additional fill material shall be placed until the last layer compacted has been checked and found by the Geotechnical Engineer to be compacted to the specified densities.
- B. Existing Site Conditions: Contractor shall acquaint himself with all site conditions. Should any utilities or other subsurface items not shown on the drawings be found during excavations, the Contractor shall promptly notify the Architect for instructions as to further action. Failure to do so will make the Contractor liable for any and all damage thereto arising from his operations subsequent to discovery of such utilities and other subsurface items not shown on Drawings.
- C. On-site investigation: Periodic Inspection of excavation of existing soils and footing/foundation preparation by on-site Soils Engineer registered in the state of California shall be provided.

1.6 CLEAN-UP AND DISPOSAL

- A. Clean-up: The Contractor shall maintain cleanliness on roadways and other public areas used by the equipment and will be held responsible for immediate removal of all spillage on these pavings. The Contractor shall remove from the site all rubbish and debris found thereon, and all materials and debris resulting from demolition, leaving the site in a safe and clean condition.
- B. Disposal: All items and materials not indicated or specified to be reused or to become the Owner's property shall become the Contractor's property and shall be removed from the premises. The Contractor shall make all arrangements for the disposal of materials and pay all costs involved.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. All fill shall be approved local materials from required excavations, supplemented by imported fill, where necessary. Approved local materials are defined as local soils, free from concentrations of organics, rubble or other deleterious materials, tested and approved by the Geotechnical Engineer prior to use. Clods, rocks or hard lumps exceeding four inches (4") in final size shall not be allowed in the upper two feet (2') of any fill supporting pavements or buildings.
- B. Asphalt concrete rubble shall not be used in general fill construction, but may be pulverized, and used within the structural section of new pavements as aggregate base or subbase.
- C. Imported fill may be required to complete work. Proposed import fill material shall meet the above requirements; shall be similar to the native soils. Import fill shall meet the above requirements; Plasticity Index less than fifteen (15); an Expansion Index less than twenty (20); and shall be of one-inch (1") maximum particle size; be free of contaminants and have corrosion characteristics within the acceptable limits. All import fill material shall be tested and approved by Soils Engineer prior to transportation to the site. Proposed fill material shall comply with DTSC guidelines to include Phase 1 environmental site assessment and related tests. Refer to the October 2001 DTSC Information Advisory for clean imported fill material.
 - 1. DTSC TESTING: Site work contractor is to coordinate testing with an analytical lab, hired by the owner, licensed by the State of California for the DTSC testing. The costs associated with testing will be paid by the contractor.
 - 2. DTSC testing shall include documentation as to the previous land use, location, and history. Soils shall be analyzed for all compounds of concern to ensure the imported soil is uncontaminated and acceptable. Testing shall be performed per the recommendations included in DTSC Imported Fill Advisory http://www.dtsc.ca.gov/Schools/upload/SMP_FS_Cleanfill-Schools.pdf. Soils shall be tested prior to import to the project site.
 - 3. Lab shall determine geographically which tests and analysis comparison will be appropriate for the testing. (CAM 17 / Title 22); (RWQCB) Regional Water Quality Control Board; or (OEHHA) Office of Environmental Health Hazard Assessment.
 - 4. Frequency of testing shall be conducted in accordance with DTSC's Imported Fill Advisory as follows;

Fill Material Sampling Schedule

Area Of Individual Borrow Area

Sampling Requirements

2 Acres or less
 2 to 4 Acres
 4 to 10 Acres

Minimum of 4 samples
 Minimum of 1 sample every ½ Acre
 Minimum of 8 Samples

Greater than 10 Acres	Minimum of 8 locations with 4 subsamples per location
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Volume of Borrow Area Stockpile

Up to 1,000 Cubic Yards	1 sample per 250 cubic yards
1,000 to 5,000 Cubic Yards	4 samples for the first 1000 cubic Yards + 1 sample per each additional 500 cubic yards
Greater than 5,000 Cubic Yards	12 samples for the first 5,000 cubic yards + 1 sample per each additional 1,000 cubic yards

5. Reports/ Documentation

a. Results of the testing analysis shall be sent to the Owner; Architect; Project Inspector, Project Civil Engineer, DTSC, and DSA. Letter shall reference DSA file and application numbers.

- D. Asphalt concrete, aggregate base and other paving products shall comply with the appropriate provisions of the State of California (Caltrans) Standard Specifications.
- E. Topsoil material for landscaped areas shall be loose and friable soil equal to existing surface soils found on the site.
- F. Water: Furnish all required water for construction purposes, including compaction and dust control, in accordance with Section 01 52 00.

PART 3 - EXECUTION

3.1 LAYOUT AND PREPARATION

A. Prior to the beginning of any grading, excavation or trenching operations, layout all work, establish grades, locate existing underground utilities, set necessary markers and stakes, establish all corners of building, set up necessary barricades and protection facilities as outlined herein, Section 01 52 00, and as required by any governing agencies, and be responsible for their correctness and adequacy.

3.2 CLEARING, GRUBBING AND SITE PREPARATION

- A. Materials removed which are suitable for fill or backfill as specified herein may be stockpiled on site.
- B. All vegetation to be removed; oversized rubble and debris from clearing operations; uncompacted fill, loose and/or saturated materials; underground utilities to be relocated or abandoned, and utility trench backfill shall be removed and disposed of so as to leave the areas that have been disturbed with a neat and finished appearance, free from unsightly debris. Excavations and depressions resulting from the removal of such items, as well as any existing excavations or loose soil deposits, as determined by the Geotechnical Engineer, shall be cleaned out to firm, undisturbed soil and backfilled with suitable materials in accordance with these specifications.

EARTHWORK

SECTION 02 20 00

- C. The surfaces upon which fill is to be placed and building pad subgrades left at existing grade shall be plowed or scarified to a depth of at least twelve inches (12") until the surface is free from ruts, hummocks or other uneven features which would tend to prevent uniform compaction by the selected equipment.
- D. When the moisture content of the subgrade is less than two percent (2%) above the optimum moisture content, water shall be added until the proper moisture content is achieved.
- E. When the moisture content of the subgrade is too high to permit the specified compaction to be achieved, the subgrade shall be aerated by blading or other methods until the moisture content is satisfactory for compaction.
- F. After the foundations for fill have been cleared, plowed, or scarified, they shall be disced or bladed until uniform and free from large clods, brought to the proper moisture content and compacted to at least ninety percent (90%) of the maximum dry density as determined by the ASTM D1557-91 Compaction Test.

3.3 PLACING, SPREADING AND COMPACTING FILL MATERIAL

- A. The selected fill material shall be placed in layers which when compacted shall not exceed six inches (6") in thickness. Each layer shall be spread evenly and be thoroughly mixed during the spreading to promote uniformity of material in each layer.
 - 1. When the moisture content of the fill material is less than two percent (2%) above the optimum moisture content, water shall be added until the proper moisture content is achieved.
 - 2. When the moisture content of the fill material is too high to permit the specified degree of compaction to be achieved, the fill material shall be aerated by blading or other methods until the moisture content is satisfactory.
- B. After each layer has been placed, mixed and spread evenly, it shall be thoroughly compacted to at least ninety percent (90%) of the ASTM Specification D1557-91 Compaction Test. Compaction shall be undertaken with equipment capable of achieving the specified density and shall be accomplished while the fill material is at the required moisture content. Each layer shall be compacted over its entire area until the desired density has been obtained.
- C. The filling operation shall be continued until the fills have been brought to the finished slopes and grades as shown on the accepted drawings.

3.4 FINAL SUBGRADE PREPARATION

- A. T upper six inches (6") of all final subgrades supporting pavement sections shall be brought to a uniform moisture content, and shall be uniformly compacted to not less than:
- B. Pavement Areas 95% (Vehicular and sidewalks)

As determined by the ASTM D1557-91 Compaction Test, regardless of whether final subgrade elevations are attained by filling, excavation or are left at existing grades.

3.5 EXCAVATIONS

EARTHWORK

SECTION 02 20 00

- A. Excavate for all work below grade to dimensions and elevations indicated or deeper if required to obtain firm bearing. Do not excavate or disturb earth below footing elevations without prior authorization in writing by the Architect. Claims for extra costs involved in such changes shall be made as set forth in the Conditions of the Contract.
- B. Excess excavations under slabs or footings shall be restored to the proper excavations by the procedure specified for "Placing and Compacting." Where excess excavations have taken place under footings, footings shall be carried down to the bottom of the excavation at no increase in cost to the Owner.
- C. Steps in footings shall be as indicated. Care shall be exercised in excavating for lower footings so as not to disturb bearing under any adjacent higher footings.
- D. Excavations shall be sufficient to allow for construction and removal of forms, except where feasible to place concrete directly against cut ground when the Architect's approval for same is obtained.
 - 1. Conditions for trench footings without forms which the Architect will require before issuing an approval are:
 - a. Sides of trenches must be able to stand without caving.
 - b. No sluffage will be permitted.
 - c. Footings must be increased 2 inches in width.
- E. Excavated on-site materials which meet requirements hereinbefore specified under Part 2 are suitable for all fill and backfill. All excess excavated on-site materials shall be removed from the site.

3.6 GRADING FOR CONCRETE SLABS AND PAVING

- A. Grading for Asphalt Paving: Grade to elevations required to receive paving and aggregate base which are specified and included under Section 02 51 10. Subgrade shall be uniform and true to grade.

3.7 SITE FINISH GRADING

- A. Finish grading shall be accomplished to the grades shown except as otherwise directed.
- B. The material beneath all fills shall be firm, dense and thoroughly compacted and shall be free from mud and muck.
- C. All earth slopes shall be finished to reasonably smooth surfaces in substantial accordance with the lines and slopes shown on Drawings.
- D. The degree of finish for grading or slopes shall be that ordinarily obtainable either from blade grader or scraper operations. The nicety of finish ordinarily associated with template and stringline or hand-raking methods will not be required.
- E. Grading Tolerances: Except as may otherwise be directed in the field by the Architect, grading shall be within tolerances of one-tenth foot above grade, but in no case below grade indicated.

3.8 MISCELLANEOUS WORK

- A. Perform all other site earthwork shown on the Drawings and not otherwise specified.

END OF SECTION

PART 1 - GENERAL**1.1 SECTION INCLUDES**

A. Description of requirements for materials, equipment and services necessary to complete trenching, excavation, backfilling and compaction as shown and specified for utilities and related structures and thrust blocks.

1. Utilities companies' requirements where applicable will take precedence over these specifications.

1.2 RELATED SECTIONS

A. Section 02 20 00: Earthwork

1.3 QUALITY ASSURANCE

A. Requirements of Regulatory Agencies

B. Safety Regulations: Work shall comply with all Federal, state and municipal regulations regarding safety, including the requirements of the following:

1. William-Steiger Occupational Safety & Health Act of 1970.
2. All trenching work shall conform to Trench Construction Safety Orders of California State Industrial Accident Commission.

C. References and Standards:

1. American Society for Testing and Materials (ASTM):

- a. D1557-78- "Moisture-Density Relations of soils Using 10 lb. (4.5 kg) Rammer and 18-in. (457 mm) Drop."

D. Observations and Inspections: The Geotechnical Engineer will observe and respective utilities agencies' representative will inspect utilities trenching, excavation, backfilling and compaction as appropriate. Contractor shall appropriately schedule all inspections prior to commencing trenching and backfilling operations. All installations are subject to satisfactory inspection by appropriate agency.

PART 2 - PRODUCTS**2.1 MATERIALS**

A. Pipe bedding and initial backfill shall be well-graded granular material, less than 3/4-inch in greatest dimension, clean and free of clay, silt or organic matter, such that not more than five percent (5%) shall pass a No. 200 sieve, and judged suitable by Geotechnical engineer.

1. Pipe bedding and backfill material used in trenches containing utilities owned by utility companies shall meet all requirements of that utility company.

- B. Trench Backfill material for backfilling trenches above the pipe bedding and initial backfill material shall be well-graded on-site native fill or import granular material, less than 3/4 inch in greatest dimension, clean and free of clay, silt or organic matter, such that not more than five percent (5%) shall pass a No. 200 sieve, and judged suitable by Geotechnical Engineer.
- C. Trench "capping" material for use above trench backfill material shall be on-site native fill material judged suitable by Geotechnical Engineer. Suitable material for "trench capping" shall be the same as the material described in Section 02 20 00, paragraph 2.01, A.

PART 3 - EXECUTION

3.1 TRENCHING

- A. Make all trenches open vertical or sloped construction, as recommended by the manufacturer of the pipe, and with sufficient width to provide free working space at both sides of trench and around installed item as required for caulking, joining, backfilling, and compacting. Where no manufacturer's recommendations are available, trenches shall be not less than 12 inches nor more than 24 inches wider than pipe or conduit diameter.
 - 1. Where recommended trench widths are exceeded redesign shall be performed at no extra cost to the Owner, using stronger pipe or special installation procedures.
 - 2. Restore all surfaces damaged or cut during excavation to original condition.
- B. Excavate trench straight and true to line and grade and to a depth below the bottom of the pipe sufficient to provide for pipe bedding material as required. Trenches over-excavated in depth shall be re-filled with suitable materials and compacted to 90 percent (90%) relative compaction.
- C. Excavations for utilities related structures and appurtenances, manholes, drop inlets or similar structures shall be sufficient to leave at least 12 inches clear between the outer structure surface and face of the excavations. When concrete is to be placed in an excavated area, special care shall be taken not to disturb the bottom of the excavation.
- D. Hand excavate final 3 inches to accurate grade to provide firm and uniform bearing for conduits, or excavate additional 6 inches and provide 6 inch bed of sand to proper grade.
- E. Unsatisfactory material, as determined by the Geotechnical Engineer, shall be removed and replaced with suitable material compacted to 90 percent (90%) relative compaction.

3.2 CONTROL OF GROUND WATER

- A. The Contractor shall provide all labor, equipment and materials for dewatering trenches and excavations and subsequent control of ground water.

3.3 BRACING AND SHORING

- A. The Contractor shall furnish, place, and maintain such bracing and shoring as necessary for the safety of workers, protection of adjacent facilities and utilities, and proper installation of pipe, in conformance with legal requirements.

3.4 PIPE BEDDING PLACEMENT

- A. A six-inch layer of pipe bedding material compacted to 90 percent (90%) relative compaction (per ASTM D1557) shall be placed and accurately shaped as required for the indicated pipe elevations and grades.

3.5 BACKFILLING

- A. Initial Backfill Placement: Initial backfill material shall be placed and compacted to 90 percent (90%) relative compaction (per ASTM D1557) on both sides of the pipe simultaneously to avoid displacement of the pipe, six inches (6") above pipe.
- B. Trench Backfill Placement: Subsequent trench backfill material shall be placed in layers not exceeding six inches thick, and compacted to 90 percent (90%) relative compaction (per ASTM D1557) up to six inches from finish surface or subgrade.
- C. Trench "Capping" Material: The trench shall be "capped" above the trench backfill with trench "capping" material compacted to 95 percent (95%) relative compaction (per ASTM D1557) to subgrade or finish surface.
 - 1. Refer also to Section 02 20 00.
- D. Backfill for utility related or similar structures shall be placed as specified above and in such a manner that the structure will not be damaged.
- E. Remove excess earth from site or deposit on site if so directed by Architect.
- F. Requirements from material manufacturers shall take precedence over minimum requirements listed in this section.

END OF SECTION

PART 1 GENERAL1.01 WORK INCLUDED

- A. Finish grade sub-soil.
- B. Cut out areas to receive stabilizing base course materials for paving and sidewalks.
- C. Place, finish grade and compact.

1.02 RELATED WORK

- A. Section 02 21 00: Rough grading sub-soil to site contours.

1.03 PROTECTION

- A. Prevent damage to existing fencing, trees, landscaping, natural features, bench marks, pavement, utility lines and buildings. Correct damage at no cost to Owner.

PART 2 PRODUCTS - NOT USED**PART 3 EXECUTION**3.01 SUB-SOIL PREPARATION

- A. Rough grade sub-soil systematically to allow for a maximum amount of natural settlement and compaction. Eliminate uneven areas and low spots. Remove debris, roots, branches, stones, etc., in excess of 1-1/2" in size. Remove sub-soil which has been contaminated with petroleum products.
- B. Cut out areas to sub-grade elevation, which are to receive stabilizing base for paving and sidewalks.
- C. Bring sub-soil to required levels, profiles and contours. Make changes in grade gradual. Blend slopes into level areas.
- D. Slope grade away from building minimum 2" in 10", minimum, gradient.
- E. Compact sub-grade to the following:
 - 1. 95% lbs/cu/ft. maximum, dry density, where stabilizing base for paving is to be placed.
 - 2. 95% lbs/cu/ft. maximum, dry density, where stabilizing base for concrete sidewalks is to be placed.
 - 3. 95% lbs/cu/ft. maximum, dry density, elsewhere.

3.02 SURPLUS MATERIAL

- A. Relocate surplus sub-soil on site.
- B. Leave stockpile areas and entire job site clean and raked.

END OF SECTION

PART 1 GENERAL1.01 WORK INCLUDED

- A. Concrete Splash Blocks.
- B. Aggregate setting bed and cover.
- C. Under walk and underground drain pipes.
- D. Corrugated metal pipe (CMP).

1.02 RELATED WORK

- A. Section 02 21 00: Site Grading

1.03 REFERENCE STANDARDS

- A. ASTM D2952, Grade 333700 - Polyethylene couplings
- B. ASTM C127, Calif. 206, Calif. 229

PART 2 PRODUCTS2.01 ACCEPTABLE MANUFACTURERS

- A. Substitutions: Items of same function and performance are acceptable in conformance with Section 01 25 00.

2.02 MATERIALS

- A. Splash Blocks: Precast concrete 13-1/2" X 24" as manufactured by Cook Concrete Products, Inc., or approved equal.
- B. Under walk and Underground Drain Pipe: 4" O/, polyvinyl chloride pipe as manufactured by Phillips Petroleum Company, or approved equal.
- C. Angular Rock: 2" - 8" 50% by weight greater than 4" dia. 80% by weight greater than 2" dia. Rock shall be sound and durable and shall not disintegrate from the action of air and water and be clean of earth and clay.
- D. Corrugated Metal Pipe (CMP):
 - 1. Either corrugated aluminum or steel pipe. The pipe can be either helical or 1/2 X 2-2/3 or 1 X 6 annular corrugations, 16 gage steel or 12 gage aluminum. Material shall conform to California State Standard Specifications. Fittings and band couplings shall be the same material as the pipe. The fittings shall be coated and lined in the same manner as the pipe.
 - 2. Coupling bands shall conform to the requirements in Section 4 and 14 of AASHTO Designation: M-196 for aluminum pipe, and Section 20 of AASHTO Designations: M-36 for steel pipe, except as otherwise specified herein or shown on the Plans.
 - 3. Coupling bands shall be of either 1 or 2-piece construction. Coupling bands shall be not more than 2, thicknesses (as listed in Table 4 of AASHTO Designation: M-218 or Table 4 of AASHTO Designation: M-196) lighter than the thickness of the pipe to be connected and in no case lighter than .060 inch for aluminum pipe or .064 inch for steel pipe.
 - 4. The metal of the bands shall be corrugated or dimple in a manner that will effectively engage the corrugations of the pipe ends.
 - 5. Bolts and nuts for all type of coupling bands shall conform to the requirement of ASTM Designation: A-307. All welds on coupling bands shall develop the strength of the bolts.
 - 6. Aluminum and steel materials shall not be mixed on any installation except as otherwise provided for bolts and nuts.
 - 7. Mitered joints shall be welded from the inside. The inside of all joints shall be as smooth and even as practical.

8. The diameter of the fittings will depend on the pipe option selected by the Contractor. Upstream diameter of fittings is to match upstream pipe diameter; downstream diameter of fittings is to match downstream pipe diameter.
9. Imported crushed rock, gravel or sand, of which 100 percent shall pass the 3/4 inch sieve and which shall have a minimum sand equivalent of 50, as determined by Test Method No. California 217, or equal, except that for pipe 10 inches or less in diameter, 100 percent shall pass the 1/2-inch sieve.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install site drainage system with fine aggregate backfilling.
- B. Provide concrete splash blocks.
- C. Provide underwalk drain pipes as noted on plans.
- D. Laying and placing of pipe: The pipes shall be laid in a trench excavated to the lines and grades established by the Architect. The bottom of the trench shall be graded and prepared to provide a firm and uniform bearing throughout the entire length of the pipe.

END OF SECTION

PART 1 GENERAL1.01 RELATED WORK DESCRIBED ELSEWHERE

- A. Section 02 20 00 Earthwork
- B. Section 02 22 10 Trenching, Backfilling and Compaction
- C. Section 02 51 30 Asphalt Paving
- D. Section 02 60 00 Concrete Curb, Gutter and Walks

1.02 STANDARD SPECIFICATIONS

- A. State of California, Caltrans Standard Specifications.

1.03 GENERAL

- A. Aggregate Base (AB) shall consist of mineral aggregate, spread and compacted on a prepared sub-grade or subbase in accordance with Section 26 of the Standard Specifications.

1.04 TESTING

- A. Notify the Architect two (2) weeks in advance of providing Aggregate Base of its proposed source and provide test data confirming it meets or exceeds quality and gradation requirements set forth in the Standard Specifications.
- B. Specified compaction shall be determined as relative to maximum density determined in accordance with ASTM D-1557.

PART 2 PRODUCTS2.01 Aggregate Base (AB)

- A. AB shall be Class 2, ¾" maximum grading specified in the Standards Section 26. Such AB may contain recycled materials (broken or crushed Asphalt Concrete or Portland Cement Concrete). AB shall be free of soft, friable, thin, elongated or laminated pieces, disintegrated material, organic matter or other deleterious substances.

PART 3 EXECUTION3.01 INSTALLATION OF AB

- A. Installation of AB shall not commence until the Architect has been notified of, and approved, the completion of subgrade preparation including compaction of subgrade to 95%.
- B. Each layer of AB shall be placed, spread and compacted in accordance with the Standard Specifications to not less than 95%.

3.02 TESTING

- A. AB may be sampled in the windrow or as delivered, dumped or stockpiled on-site for quality and gradation.
- B. AB shall be tested in-place for compaction.

PART 1 - GENERAL**1.1 RELATED DOCUMENTS**

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

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Provisions for hot-mixed asphalt paving over prepared subbase.
 - 2. Prepared subbase is specified in another Division 2 section.
 - 3. Proof rolling of prepared subbase is included in this Section.
 - 4. Saw-cutting of edges of existing pavement is specified in site-clearing section.
 - 5. Pavement texturing and coloration.
 - 6. Pavement marking paint.
- B. Striping and Marking Reference:
 - 1. Standard Specifications for the Department of Transportation, State of California (Caltrans), May 2006 Section 84, Traffic Stripes and Pavement Markings.
 - 2. California Administrative Code, Title 24, Part 2, Disabled Accessible Regulations.
 - 3. ADA Accessibility Guidelines for Buildings and Facilities (ADAAG)

1.3 SUBMITTALS

- A. General: Submit the following in accordance with Conditions of Contract and Division 1 Specification Sections.
- B. Material Certificates signed by material producer and Contractor, certifying that each material item complies with or exceeds specified requirements.
- C. Pavement marking plan indicating lane separations, arrows, and defined parking spaces.

1.4 SITE CONDITIONS

- A. Weather Limitations: Apply prime and tack coats when ambient temperature is above 50 deg F (10 deg C) and when temperature has not been below 35 deg F (1 deg C) for 12 hours immediately prior to application. Do not apply when base is wet or contains an excess of moisture.
- B. Construct hot-mixed asphalt surface course when atmospheric temperature is above 40 deg F (4 deg C) and when base is dry. Base course may be placed when air temperature is above 40 deg F (minus 1 deg C) and rising.
- C. Grade Control: Establish and maintain required lines and elevations.

PART 2 - PRODUCTS**2.1 MATERIALS**

- A. General: Use locally available materials and gradations that exhibit a satisfactory record of previous installations.
- B. Coarse Aggregate: Sound, angular crushed stone, crushed gravel, or properly cured crushed blast furnace slag, complying with ASTM D 692-88.
- C. Fine Aggregate: Sharp-edged natural sand or sand prepared from stone, properly cured blast furnace slag, gravel, or combinations thereof, complying with ASTM D 1073.
- D. Mineral Filler: Rock or slag dust, hydraulic cement, or other inert material complying with ASTM D 242.
- E. Asphalt Cement: ASTM D 3381 for viscosity-graded material; ASTM D 946 for penetration-graded material.
- F. Tack Coat: Emulsified asphalt; ASTM D 977.
- G. Seal Coat: Pre-mixed asphalt emulsion blended with select fillers and fibers such as:
 - 1. Park-Top No. 302, Western Colloid Products.
 - 2. Over Kote, Reed and Graham.
 - 3. Drivewalk, Conoco Oil.
- H. Herbicide Treatment: Commercial chemical for weed control, registered by Environmental Protection Agency. Provide granular, liquid, or wettable powder form.
 - 1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated in the work include, but are not limited to, the following:
 - 2. Manufacturers: Subject to compliance with requirements, provide products of one of the following:
 - a. Ciba-Geigy Corp.
 - b. Dow Chemical U.S.A.
 - c. E.I. Du Pont de Nemours & Co., Inc.
 - d. FMC Corp.
 - e. Thompson-Hayward Chemical Co.
 - f. U.S. Borax and Chemical Corp.
- I. Paint Schedule: Alkyd-resin type, ready-mixed complying with AASHTO M 248, Type I. Apply 2-coat pavement and curb markings as scheduled below and indicated on the drawings.
 - 1. Contractor shall verify striping layout and curb colors comply with owner and local fire authority requirements prior to application.

- a. Color: White.
- b. Color: Yellow with first coat white.
- c. Color: Blue with first coat white.
- d. Color: Red with first coat white.

J. Visqueen; minimum 20 mil thickness.

2.2 ASPHALT-AGGREGATE MIXTURE

A. Provide plant-mixed, hot-laid asphalt-aggregate mixture complying with ASTM D 3515 and as recommended by local paving authorities to suit project conditions.

PART 3 - EXECUTION

3.1 SURFACE PREPARATION

- A. General: Remove loose material from compacted subbase surface immediately before applying herbicide treatment or prime coat.
- B. Proof-roll prepared subbase surface to check for unstable areas and areas requiring additional compaction.
- C. Notify Architect of unsatisfactory conditions. Do not begin paving work until deficient subbase areas have been corrected and are ready to receive paving.
- D. Herbicide Treatment: Apply chemical weed control agent in strict compliance with manufacturer's recommended dosages and application instructions. Apply to compacted, dry subbase prior to application of prime coat.
- E. Tack Coat: Apply to contact surfaces of previously constructed asphalt or Portland cement concrete. Distribute at rate of 0.05 to 0.15 gal. per sq. yd. of surface.
- F. Allow to dry until at proper condition to receive paving.
- G. Exercise care in applying bituminous materials to avoid smearing of adjoining concrete surfaces. Remove and clean damaged surfaces.

3.2 PLACING MIX

- A. General: Place hot-mixed asphalt mixture on prepared surface, spread, and strike off. Spread mixture at minimum temperature of 225 deg F (107 deg C). Place areas inaccessible to equipment by hand. Place each course to required grade, cross-section, and compacted thickness.
- B. Paver Placing: Place in strips not less than 10 feet wide, unless otherwise acceptable to Owner's Representative. After first strip has been placed and rolled, place succeeding strips and extend rolling to overlap previous strips. Complete base course for a section before placing surface course.

- C. Immediately correct surface irregularities in finish course behind paver. Remove excess material forming high spots with shovel or lute.
- D. Joints: Make joints between old and new pavements, or between successive days' work, to ensure continuous bond between adjoining work. Construct joints to have same texture, density, and smoothness as other sections of hot-mixed asphalt course. Clean contact surfaces and apply tack coat.

3.3 ROLLING

- A. General: Begin rolling when mixture will bear roller weight without excessive displacement.
- B. Compact mixture with hot hand tampers or vibrating plate compactors in areas inaccessible to rollers.
- C. Breakdown Rolling: Accomplish breakdown or initial rolling immediately following rolling of joints and outside edge. Check surface after breakdown rolling and repair displaced areas by loosening and filling, if required, with hot material.
- D. Second Rolling: Follow breakdown rolling as soon as possible, while mixture is hot. Continue second rolling until mixture has been evenly compacted.
- E. Finish Rolling: Perform finish rolling while mixture is still warm enough for removal of roller marks. Continue rolling until roller marks are eliminated and course has attained 95 percent laboratory density.
- F. Patching: Remove and replace paving areas mixed with foreign materials and defective areas. Cut out such areas and fill with fresh, hot hot-mixed asphalt. Compact by rolling to specified surface density and 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.

3.4 PAVEMENT SEALER (Seal Coat)

- A. Seal coat emulsion shall not be applied to newly constructed asphalt concrete surfaces until 30 days after spreading and compacting of the new asphalt concrete.
- B. Surface Preparation: surface shall be clean of all dirt, sand, oil or grease. Broom, blow or hose down entire area with a strong jet of water to remove all debris.
- C. Remove soft, loose, or otherwise damaged areas of asphalt concrete to full depth of damage and replace with compacted asphalt concrete as specified herein.
- D. Minor holes and imperfections may be patched using hot mix asphalt or mastic using sand/SS-1-H.

HOT-MIXED ASPHALT PAVING & STRIPING**SECTION 02 51 10**

- E. Use wire brush for removal of oil and grease; prime with shellac or synthetic resin as recommended by manufacturer of pavement sealer material.
- F. Surfaces that have weathered excessively or are dusted shall be primed with a solution of 1 to 4 parts cool, clean water and 1 part of SS-1-H. Apply at the rate of 1 gallon per sq. ft. and allow to dry. If in doubt a test patch shall be tried.
- G. Seal Coat Application: Thoroughly mix materials and apply in accordance with manufacturer's written instructions. A minimum of 2 applications will be required; utilizing 30 gallons of material per 1000 sq. feet.
- H. Clean-Up and Precautions: As recommended by pavement sealer material manufacturer

3.5 TRAFFIC AND LANE MARKINGS

- A. Do not apply pavement-marking paint until layout, colors, and placement have been verified with Architect.
- B. Applicator shall examine surfaces to receive striping and markings and verify that substrate is ready for striping. In the event of discrepancies, immediately notify the owner's representative. Do not proceed until all discrepancies have been resolved.
- C. Allow paving to cure for 30 days before starting pavement marking.
- D. Sweep and clean surface to eliminate loose material and dust.

3.6 APPLICATION OF PAVEMENT MARKINGS

- A. Use proper masking, stencils, and application equipment recommended for the purpose by the paint manufacturer 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).
- B. Use proper masking, stencils, and application Apply 2 coats of striping paint as shown on the drawings. The first coat shall be a contrasting color to the final coat.

3.7 PROTECTION & INSPECTION OF PAVEMENT MARKINGS

- A. Protection: Provide traffic cones, barricades, and other devices needed to protect paint until it is sufficiently dry to withstand traffic.
- B. When paint is thoroughly dry, visually inspect the entire application. Touchup as required to provide clean straight lines and surfaces throughout.

3.8 FIELD QUALITY CONTROL

- A. General: Testing in-place hot-mixed asphalt courses for compliance with requirements for thickness and surface smoothness will be done by Owner's testing laboratory. Repair or remove and replace unacceptable paving as directed by Owner's Representative.

HOT-MIXED ASPHALT PAVING & STRIPING

SECTION 02 51 10

- B. Thickness: In-place compacted thickness tested in accordance with ASTM D 3549 will not be acceptable if exceeding following allowable variations:
1. Base Course: Plus or minus 1/2 inch.
 2. Surface Course: Plus or minus 1/4 inch.
- C. Surface Smoothness: Test finished surface of each hot-mixed asphalt course for smoothness, using 10-foot straightedge applied parallel with and at right angles to centerline of paved area. Surfaces will not be acceptable if exceeding the following tolerances for smoothness:
1. Base Course Surface: 1/4 inch.
 2. Wearing Course Surface: 3/16 inch.
 3. Crowned Surfaces: Test with crowned template centered and at right angle to crown. Maximum allowable variance from template is 1/4 inch.
- D. Check surface areas at intervals as directed by Owner's Representative.

END OF SECTION

PART 1 - GENERAL**1.1 RELATED DOCUMENTS**

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

1.2 SUMMARY

- A. Extent of Portland cement concrete paving is shown on drawings including walkways.
- B. Types of Portland Cement Concrete Paving:
 - 1. Concrete paving with standard gray color.
- C. Prepared subgrade and base is specified in Section 02 20 00 - "Earthwork."
- D. Coordination paving interface with related work.

1.3 SUBMITTALS

- A. Provide samples, manufacturer's product data, test reports, and materials' certifications as required in referenced sections for concrete and joint fillers and sealers.
- B. Mock-up: Construct 10 foot X 10 foot mock-up of each type of Portland cement paving, showing full range of color and texture indicated to serve as a standard of quality. Accepted mock-up may serve as part of completed work.

1.4 QUALITY ASSURANCE

- A. Codes and Standards: Comply with local governing regulations if more stringent than herein specified.

1.5 JOB CONDITIONS

- A. Traffic Control: Maintain access for vehicular and pedestrian traffic as required for other construction activities.
 - 1. Coordinate with requirements for "Temporary Facilities" specified in Division 1.

PART 2 - PRODUCTS**2.1 MATERIALS**

- A. Forms: Steel, wood, or other suitable material of size and strength to resist movement during concrete placement and to retain horizontal and vertical alignment until removal. Use straight forms, free of distortion and defects.

1. Use flexible spring steel forms or laminated boards to form radius bends as required.
 2. Coat forms with a nonstaining form release agent that will not discolor or deface surface of concrete.
- B. Reinforcing Bars: Deformed steel bars, ASTM A 615/A, 615M Grade 60.
- C. Fabricated Bar Mats: Welded or clip-assembled steel bar or rod mats, ASTM A 184. Use ASTM A 615, Grade 60 steel bars, unless otherwise indicated.
- D. Joint Dowel Bars: Plain steel bars, ASTM A 615, Grade 60. Cut bars true to length with ends square and free of burrs.
- E. Metal Expansion Caps: Furnish for one end of each dowel bar in expansion joints. Design caps with one end closed and a minimum length of 3" to allow bars movement of not less than 1", unless otherwise indicated.
- F. Hook Bolts: ASTM A 307, Grade A bolts, internally and externally threaded. Design hook bolt joint assembly to hold coupling against pavement form and in position during concreting operations, and to permit removal without damage to concrete or hook bolt.
- G. Concrete Materials: Comply with requirements of applicable Division 3 sections for concrete materials, admixtures, bonding materials, curing materials, and others as required.
- H. Expansion Joint Materials: Expansion and Isolation-Joint-Filler Strips: ASTM D 1751, asphalt-saturated cellulosic fiber, or ASTM D 1752, cork or self-expanding cork.
- I. Liquid-Membrane Forming and Sealing Curing Compound: Comply with ASTM C 309, Type I, Class A unless other type acceptable to Architect. Moisture loss no more than 0.055 gr./sq. cm. when applied at 200 sq. ft. / gal.
1. Products: Subject to compliance with requirements, provide one of the following:
 - a. "Ecocure"; Euclid Chemical Co.
 - b. "Spartan-Cote"; The Burke Co.
 - c. "Kure-N-Seal"; Sonneborn-Contech.
 - d. "Dress & Seal"; L & M Construction Chemicals.
 - e. Approved equal.
- J. Bonding Compound: Polyvinyl acetate or acrylic base, rewettable type.
1. Available Products: Subject to compliance with requirements, products which may be incorporated in the work include, but are not limited to, the following:
 2. Products: Subject to compliance with requirements, provide one of the following:
 - a. "J-40 Bonding Agent"; Dayton Superior Corp.
 - b. "Weldcrete"; Larsen Products.
 - c. "Intralok"; W.R. Meadows.
 - d. "Everbond"; L & M Construction Chemicals.

- e. "EucoWeld"; Euclid Chemical Co.
 - f. "Hornweld"; A. C. Horn.
 - g. "Sonocrete"; Sonneborn-Contech.
 - h. "Acrylic Bondcrete"; The Burke Co.
- K. Epoxy Adhesive: ASTM C 881, 2-component material suitable for use on dry or damp surfaces. Provide material "Type", "Grade", and "Class" to suit project requirements.
- 1. Available Products: Subject to compliance with requirements, products which may be incorporated in the work include but are not limited to the following:
 - 2. Products: Subject to compliance with requirements, provide one of the following:
 - a. "Epoxite"; A. C. Horn.
 - b. "Edoco 2118 Epoxy Adhesive"; Edoco Technical Prod.
 - c. "Sikadur Hi-Mod"; Sika Chemical Corp.
 - d. "Euco Epoxy 463 or 615"; Euclid Chemical Co.
 - e. "Patch and Bond Epoxy"; The Burke Co.
 - f. "Sure-Poxy"; Kaufman Products Inc.
- L. Truncated domes: Cast in place type only meeting Americans with Disabilities Act (ADA): Provide detectable/tactile warning surfaces which comply with the detectable warnings on walking surfaces per section of the Americans with Disabilities Act (Title 49 CFR TRANSPORTATION, Part 37.9 STANDARDS FOR ACCESSIBLE TRANSPORTATION FACILITIES, Appendix A, Section 4.29.2 DETECTABLE WARNINGS ON WALKING SURFACES. In addition products must comply with CALIFORNIA TITLE 24 requirements regarding patterns, color and sound on cane contact.
- Truncated domes within the City of Corning right of way shall be ADA Solutions Cost-In-Place Replaceable Tactile System or equal.
- 1. Color to be Yellow conforming to Federal Color No. 33538.
 - 2. Material to be Vitrified Polymer Composite (VPC).

2.2 CONCRETE MIX, DESIGN, AND TESTING:

- A. Comply with requirements of applicable Division 3 sections for concrete mix design, sampling and testing, and quality control and as herein specified.
- B. Design mix to produce normal-weight concrete consisting of portland cement, aggregate, water-reducing or high-range water-reducing admixture (superplasticizer), air-entraining admixture, and water to produce the following properties:
 - 1. Compressive Strength:
 - a. At 4" thick and thicker Plaza and Sidewalks: 3000 psi, minimum at 28 days, unless otherwise indicated.
 - 2. Slump Limit: 4 inches

- a. Slump Limit for Concrete Containing High-Range Water-Reducing Admixture: Not more than 8 inches.
3. Air Content: 5 to 8 percent.

PART 3 - EXECUTION

3.1 SURFACE PREPARATION

- A. Remove loose material from compacted subgrade and base surface immediately before placing concrete.
- B. Proof-roll prepared subgrade and base surface to check for unstable areas and need for additional compaction. Do not begin paving work until such conditions have been corrected and are ready to receive paving.

3.2 FORM CONSTRUCTION

- A. Set forms to required grades and lines, braced and secured. Install forms to allow continuous progress of work and so that forms can remain in place at least 24 hours after concrete placement.
- B. Check completed formwork for grade and alignment to following tolerances:
 1. Top of forms not more than 1/8 inch in 10 feet.
 2. Vertical face on longitudinal axis, not more than 1/4 inch in 10 feet.
- C. Clean forms after each use and coat with form release agent as required to ensure separation from concrete without damage.

3.3 REINFORCEMENT

- A. Locate, place and support reinforcement as specified in Division 3 sections, unless otherwise indicated.

3.4 CONCRETE PLACEMENT

- A. General: Comply with requirements of Division 3 sections for mixing and placing concrete, and as herein specified.
- B. Do not place concrete until subgrade and base forms have been checked for line and grade. Moisten subgrade and base if required to provide a uniform dampened condition at time concrete is placed. Do not place concrete around manholes, utility boxes or other structures until they are at required finish elevation and alignment.
- C. Place concrete by methods that prevent segregation of mix. Consolidate concrete along face of forms and adjacent to transverse joints with internal vibrator. Keep vibrator away from joint assemblies, reinforcement, or side forms. Use only square-faced shovels for

hand-spreading and consolidation. Consolidate with care to prevent dislocation of reinforcing, dowels, and joint devices.

- D. Use bonding agent at locations where fresh concrete is placed against hardened or partially hardened concrete surfaces.
- E. Deposit and spread concrete in a continuous operation between transverse joints as far as possible. If interrupted for more than ½ hour, place a construction joint.
- F. When adjacent pavement lanes are placed in separate pours, do not operate equipment on concrete until pavement has attained sufficient strength to carry loads without damage.
- G. Fabricated Bar Mats: Keep mats clean and free from excessive rust, and handle units to keep them flat and free of distortions. Straighten bends, kinks, and other irregularities or replace units as required before placement. Set mats for a minimum 2-inch overlap to adjacent mats.
 - 1. Place concrete in 2 operations; strike off initial pour for entire width of placement and to the required depth below finish surface. Lay fabricated bar mats immediately in final position. Place top layer of concrete, strike off, and screed.
 - 2. Remove and replace portions of bottom layer of concrete that have been placed more than 15 minutes without being covered by top layer or use bonding agent if acceptable to Architect.
- H. Curbs and Gutters: Automatic machine may be used for curb and gutter placement at Contractor's option. If machine placement is to be used, submit revised mix design and laboratory test results that meet or exceed minimums specified. Machine placement must produce curbs and gutters to required cross-section, lines, grades, finish, and jointing as specified for formed concrete. If results are not acceptable, remove and replace with formed concrete as specified.

3.5 JOINTS

- A. General: Construct expansion, weakened-plane (contraction), and construction joints true to line with face perpendicular to surface of concrete. Construct transverse joints at right angles to the centerline, unless otherwise indicated. Repair and replacement work
- B. When joining existing structures, place transverse joints to align with previously placed joints, unless otherwise indicated.
- C. Weakened-Plane (Contraction) Joints: Provide weakened-plane (contraction) joints, sectioning concrete into areas as shown on drawings. Construct weakened-plane joints for a depth equal to at least 1/4 concrete thickness, as follows:
 - 1. Tooled Joints: Form weakened-plane joints in fresh concrete by grooving top portion with a recommended cutting tool and finishing edges with a jointer.
- D. Construction Joints: Place construction joints at end of placements and at locations where placement operations are stopped for more than ½ hour, except where such placements terminate at expansion joints.

1. Construct joints as shown or, if not shown, use standard metal keyway-section forms.
 2. Where load transfer-slip dowel devices are used, install so that one end of each dowel bar is free to move.
- E. Expansion Joints: Provide premolded joint filler for expansion joints abutting concrete curbs, catch basins, manholes, inlets, structures, walks, and other fixed objects, unless otherwise indicated.
1. Locate expansion joints at 50 feet o.c. for each pavement lane unless otherwise indicated.
- F. Extend joint fillers full width and depth of joint, not less than ½ inch or more than 1 inch below finished surface where joint sealer is indicated. If no joint sealer, place top of joint filler flush with finished concrete surface.
- G. Furnish joint fillers in one-piece lengths for full width being placed wherever possible. Where more than one length is required, lace or clip joint filler sections together.
- H. Protect top edge of joint filler during concrete placement with a metal cap or other temporary material. Remove protection after concrete has been placed on both sides of joint.
- I. Fillers and Sealants: Comply with requirements of applicable Division 7 sections for preparation of joints, materials, installation, and performance.

3.6 CONCRETE FINISHING

- A. After striking-off and consolidating concrete, smooth surface by screeding and floating. Use hand methods only where mechanical floating is not possible. Adjust floating to compact surface and produce uniform texture.
- B. After floating, test surface for trueness with a 10-ft. straightedge. Distribute concrete as required to remove surface irregularities, and refloat repaired areas to provide a continuous smooth finish.
- C. Work edges of slabs, gutters, back top edge of curb, and formed joints with an edging tool, and round to 1/4-inch radius, unless otherwise indicated. Eliminate tool marks on concrete surface.
- D. After completion of floating and when excess moisture or surface sheen has disappeared, complete troweling and finish surface as follows:
1. Broom finish by drawing a fine-hair concrete broom across concrete surface perpendicular to line of traffic or in a swirl pattern as indicated on drawings. Repeat operation if required to provide a fine line texture acceptable to Architect.
 2. On inclined slab surfaces and stairs, provide a coarse, non-slip finish by scoring surface with a stiff-bristled broom, perpendicular to line of traffic.

- E. Exposed Aggregate Finish: After completion of floating and troweling of exposed aggregate concrete when excess moisture or surface sheen has disappeared, complete finishing by fine-spraying with water while brushing. If aggregate is dislodged, delay the operation. Continue washing and brushing until flush water runs clear and there is no noticeable cement film left on the aggregate.
- F. Do not remove forms for 24 hours after concrete has been placed. After form removal, clean ends of joints and point-up any minor honeycombed areas. Remove and replace areas or sections with major defects, as directed by Architect.

3.7 CURING

- A. Protect and cure finished concrete paving in compliance with applicable requirements of Division 3 sections. Use membrane-forming curing and sealing compound or approved moist-curing methods.
- B. Apply two coats of curing sealing compound per manufacturer's recommendations. Apply so as to minimize glossy finish.

3.8 REPAIRS AND PROTECTIONS

- A. Repair or replace broken or defective concrete, discolored or inconsistent colored concrete, concrete surfaces with an inconsistent texture, and concrete with improper or incomplete jointing as directed by Architect. Repair and replacement work shall be at no additional cost to the Owner.
- B. Drill test cores where directed by Architect when necessary to determine magnitude of cracks or defective areas. Fill drilled core holes in satisfactory pavement areas with Portland cement concrete bonded to pavement with epoxy adhesive.
- C. Protect concrete from damage until acceptance of work. Exclude traffic from pavement for at least 14 days after placement. When construction traffic is permitted, maintain pavement as clean as possible by removing surface stains and spillage of materials as they occur.
- D. Sweep concrete pavement and wash free of stains, discolorations, dirt, and other foreign material just before final inspection.

END OF SECTION

PART 1 GENERAL1.01 WORK INCLUDED

- A. Prepare sub-grade to receive base course materials for walks and curbs.
- B. Place and compact base course materials for walks, curbs and ramps.
- C. Concrete walks, pads and exterior slabs, curbs and ramps complete with reinforcement.

1.02 RELATED WORK

- A. Section 02 21 00: Backfilling and rough grading.
- B. Section 03 10 00 and 03 20 00: Concrete formwork and reinforcement.
- C. Section 03 30 00: Cast-in-place concrete.

1.03 REFERENCES

- A. ASTM C150 – Portland cement.
- B. ASTM C94 – Ready-mix concrete.

1.04 INSPECTION AND TESTING

- A. Three concrete test cylinders will be taken for every 50 cu. Yards of concrete placed.
- B. One additional test cylinder will be taken during cold weather concreting, and be cured on job site under same conditions as concrete it represents.
- C. One slump test will be taken for each set of test cylinders taken.

PART 2 PRODUCTS2.01 ACCEPTABLE MANUFACTURERS

- A. Acceptable Manufacturers:
 - 1. Flintkote
 - 2. Kaizer
- B. Substitutions: Items of same function and performance are acceptable in conformance with Section 01 25 00.

2.02 FILL MATERIALS

- A. Gravel Base: Angular pit run crushed stone; free from shale, clay and friable materials and debris; graded within following limits:

<u>Sieve Size</u>	<u>Percent Passing</u>
1 inch	100
¾ inch	90-100
No. 4	35-65
No. 30	5-35
No. 200	2-12

2.03 CONCRETE MATERIALS

- A. Concrete Materials: See Section 03 30 00 – Cast In Place Concrete.

2.04 REINFORCEMENT

- A. Reinforcing Steel: See Section 03 20 00 – Concrete reinforcement.

2.05 FORMWORK AND ACCESSORIES

- A. Formwork: See Section 03 10 00 – Concrete formwork.

2.06 CONCRETE MIX

- A. Mix Design: See Civil Drawings.

CONCRETE CURB, GUTTER & WALKSSECTION 02 60 00

- B. Use accelerating admixtures in cold weather only when acceptable to Architect. Use of admixtures shall not relax cold weather placement requirements. Do not use calcium chloride.
- C. Use set-retarding admixtures during hot weather only when acceptable to Architect.

PART 3 EXECUTION**3.01 PREPARATION OF SUB-GRADE**

- A. Ensure rough grading has brought sub-grade to required elevations.
- B. Fill soft spots and hollows with additional fill.
- C. Level and compact sub-grade, to receive granular base for concrete walks, curbs and gutters, to 95% of maximum dry density.

3.02 PLACEMENT OF GRAVEL FILL

- A. Place and level gravel fill over prepared sub-grade to a compacted depth indicated on drawings true to lines and levels. Compact to 95% of maximum dry density.
- B. During concrete placement, keep gravel sufficiently moist to prevent excessive absorption of water from freshly placed concrete.

3.03 FORMING

- A. Form vertical surfaces to full depth and securely position to required lines and levels. Ensure form ties are not placed so as to pass through concrete.
- B. Arrange and assemble formwork to permit easy dismantling and stripping, and to prevent damage to concrete during formwork removal. Use expansion joint material as headers for the courtyard.

3.04 PLACING REINFORCING

- A. Reinforce concrete walks, curbs and gutters. Allow for minimum 1-1/2" concrete cover.
- B. Do not extend reinforcing through expansion and contraction joints. Provide dowelled joints through expansion and contraction joints, with one end of dowels fitted with capping sleeve to allow free movement.

3.05 FORMING EXPANSION AND CONTRACTION JOINTS

- A. Place expansion and contraction joints at 15-foot intervals. Where possible, make joints of curb coincide with joints in walks. When sidewalks abut building, provide continuous joint filler.
- B. Fit joints with filler of required profiles, set perpendicular to longitudinal axis of walks and curbs. Recess 1/2" below finished concrete surface.

3.06 PLACING CONCRETE

- A. Place concrete, screed and wood float surfaces to a smooth and uniform finish, free of open texturing and exposed aggregate.
- B. Avoid working mortar to surface.
- C. Make 1/4" wide dummy joints at 5' intervals.
- D. Round all edges, including edges of dummy and expansion and contraction joints, with 1/2" radius edging tool.
- E. Where paved surfaces are adjacent to walks, make concrete curbs and gutters integral with walks. Make expansion and contraction joints of curbs coincide with walk joints. Provide dummy joints at line between walks and curbs.
- F. Provide exposed surfaces of walks, ramps, and curbs and gutters with broom finish.
- G. Ensure surfaces do not vary from true lines, level or grade by more than 1/8" in 10' when measured with straight edge.
- H. Apply curing compound on finished surfaces immediately after placement. Apply in accordance with manufacturer's recommendations.

- I. Provide medium gray colored concrete as borders for the courtyard.

END OF SECTION

PART 1 GENERAL1.01 WORK INCLUDED

- A. Wood formwork for cast-in-place concrete, complete with shoring, bracing, and anchorage.
- B. Coordinate installation of items supplied by other sections of work.
- C. Coordinate requirements for curing concrete and installation of sports floor.

1.02 QUALITY ASSURANCE

Construct and erect concrete formwork in accordance with ACI 318 and 347 and applicable construction safety regulations for place of work.

1.03 REFERENCES

- A. ACI 318 - Building code requirements for reinforced concrete.
- B. ACI 347 - Recommended practice for concrete formwork.

PART 2 PRODUCTS2.01 WOOD FORM MATERIALS

- A. Wood forms shall be constructed of sound, new material; no second hand material will be permitted. All loose knots or knot holes shall be sealed in a manner to prevent seepage or protuberances on the surface of the wall.
- B. Form plywood shall have a repaired face wherever it comes in contact with concrete.
- C. Plywood forms shall be factory treated, or treated at the job before installing, with a penetrating type of form sealer that will fill the cellular structure of the wood and dry on the surface within eight hours yet preserve the forms for reuses without further treatment. No type of shellac or form sealer containing paraffin oil or other non-drying oil will be approved. Any type of sealer to be approved shall leave no residue or stain upon the face of the concrete, nor have the effect in any way of preventing the proper bonding of subsequent surface treatments.

2.02 FORMWORK ACCESSORIES

Form Clamps: All forms shall be held together by metal form clamps and spreaders of make and detail satisfactory to the Architect. Use of wire form ties or wood spreaders is prohibited.

PART 3 EXECUTION3.01 LOCATION

Refer to the Drawings for locations of concrete work.

3.02 PREPARATION FOR INSTALLATION

- A. Coordinate formwork as necessary for proper concrete placements and treatments and installation of materials embedded in or penetrating concrete.
- B. Material which has been used for forms shall be thoroughly cleaned before being used again, but no form sheathing or other material in contact with the concrete shall be re-used for exterior exposed surface, or for roof sheathing.

3.03 FORMWORK ERECTION

- A. Verify lines, levels, and centers before proceeding with formwork. Verify that dimensions agree with Drawings.
- B. Provide forms, bracing, form removal and all other forming operations necessary for all concrete placed under Section Cast-In-Place Concrete.
- C. Only exposed concrete surfaces are required to be formed; however, where concrete is not formed place in or against neat excavations as specified in Section 2C Building Pad under "footings and vertical below grade concrete". Concrete shapes, excluding slabs on grade, poured against earth shall be minimum 2" greater in the dimension perpendicular to the plane of that earth than if it were fully formed.

Concrete Formwork

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- D. Exposed concrete surfaces shall be defined to include all concrete surfaces to minimum 1 foot below finish grade.
- E. Design of forms shall be such that no objectionable deflection will take place during pouring. Wall forms shall be braced and formed with special attention to withstand the added strain of electric concrete vibrators.
- F. Forms shall be sufficiently tight to prevent seepage. Concrete overlaps, fins, and joints shall be ground down, patched and repaired to the satisfaction of the Architect. Vertical butt-joints shall occur only when necessary and shall be staggered in an approved manner.
- G. Panels shall be nailed directly to studs and shall be supplied in the manner as directed to minimize the number of joints and provide the desired effect. Joints shall be located where directed. Panel joints shall be tight butt joints, and all angles shall be true and square. Joinings shall be accurately made, lines shall be straight and true, level, or plumb as required and all work shall be neat in every respect.
- H. Plywood edges shall not appear on any exposed concrete surfaces.

3.04 INSERTS, EMBEDDED PARTS, AND OPENINGS

- A. Provide formed openings where required for pipes, conduits, sleeves, and other work to be embedded in and passing through concrete members.
- B. Locate and set in place items which will be cast directly into concrete.
- C. Coordinate work of other sections and cooperate with trade involved in forming and setting openings, slots, recesses, chases, sleeves, bolts, anchors, and other inserts. Do not perform work unless specifically indicated in Drawings or reviewed prior to installation.
- D. Install concrete accessories in accordance with manufacturer's recommendations; straight, level, and plumb. Ensure items are not disturbed during concrete placement.

3.05 FIELD QUALITY CONTROL

- A. Inspect and check completed formwork, shoring, and bracing to ensure that work is in accordance with formwork design, and that supports, fastenings, wedges, ties, and parts are secure.
- B. Maintain work site in clean, orderly condition as work progresses; neatly stockpile new and reusable materials, including ladders, etc., not in use; remove from site unusable materials; keep areas free from debris.
- C. Tolerances for formwork shall be as necessary to meet the workmanship and tolerances specified in Section 03 30 00 Cast-In-Place Concrete.

3.05 FORM REMOVAL

The removal of forms shall be carried out in a manner as to insure the complete safety of the structure. Wall forms and forms on vertical faces may be removed 48 hours after concrete is poured.

END OF SECTION

PART 1 GENERAL1.01 WORK INCLUDED

- A. Reinforcing steel bars and welded steel wire fabric for cast-in-place concrete, complete with tie wire.
- B. Support chairs, bolsters, bar supports, and spacers for reinforcing.

1.02 RELATED WORK

- A. Section 03 30 00: Cast-in-place concrete.

1.03 QUALITY ASSURANCE

- A. Perform concrete reinforcing work in accordance with CRSI 63 and 65 unless specified otherwise in the Section.

1.04 SOURCE QUALITY CONTROL TEST

- A. The testing laboratory will take samples and make tests as required by the approved construction documents.

1.05 REFERENCES

- A. Title 24, Part 2.
- B. ACI 318 - Building code requirements for reinforced concrete.
- C. CRSI 63 - Recommended practice for placing reinforcing bars.
- D. CRSI 65 - Recommended practice for placing bar supports, specifications and nomenclature.
- E. ASTM A185 - Welded steel wire fabric for concrete reinforcement.
- F. ASTM A617 - Axle steel deformed and plain bars for concrete reinforcement.
- G. ASTM A615 - Deformed and plain billet steel bars for concrete reinforcement.
- H. ASTM A616 - Rail steel deformed and plain bars for concrete reinforcement.
- I. ASTM A497 - Welded deformed steel wire fabric for concrete reinforcement.
- J. AWS D12.1 - Welding reinforcing steel, metal inserts and connections in reinforced concrete construction.
- K. ACI 315 - American Concrete Institute - manual of standard practice.

1.06 SHOP DRAWINGS

- A. Submit shop drawings in accordance with Section 01 34 00.
- B. Provide shop drawings showing the position of all reinforcing steel furnished, all bars fabricated in the shop to exact length and detail shall be clearly marked and identified as to position in the forms. Such bars shall be delivered on the job in bundles properly tagged for identification on the erection drawings. No steel shall be shipped until the erection drawings have been given approval for general sizes and detail by the Architect.

PART 2 PRODUCTS2.01 REINFORCING

- A. Bar Reinforcement: Deformed ASTM-A615, Grade 60. All reinforcing bars shall be of open-hearth steel rolled from new billet stock, free from mill scale, and shall be delivered without rust. All deformed bars shall have actual net effective sections equal to the actual cross sections of round or square bars of the same nominal size or diameter. Tolerance shall not exceed 2-1/2%.
- B. Wire for concrete reinforcement shall conform to the Standard Specifications for Cold Drawn Steel Wire for concrete reinforcement, 185 design of the American Society for testing materials.

PART 3 EXECUTION**3.01 PREPARATION FOR PLACEMENT**

- A. Coordinate reinforcing steel work with formwork erection and concrete placement schedules.
- B. Reinforcing steel before being placed in the forms and if necessary, again before pouring shall be thoroughly cleaned of scale, rust, mortar, oil, dirt or any other deleterious, bond-destroying or reducing coatings.

3.02 PLACEMENT

- A. Reinforce concrete as shown or noted. Any part not particularly noted, shown, or specified shall be reinforced in an approved manner similar to other like conditions, unless specifically noted "Not Reinforced".
- B. Sizes, positions and numbers of reinforcing bars shall be as shown on the drawings.
- C. Space reinforcing bars to the dimensions and clearances shown on the Drawings, and hold firmly in position with metal spacer, chairs and saddles while concrete is being poured. The supports shall be of a character and manufacture satisfactory to the Architect.
- D. Wire bars securely at all intersections. Bars shall be in as long lengths as possible. Splices shall be in locations as shown on the Drawings. Stagger splices 5'-0" minimum. Lap splices shall be per chart located on structural sheets.
- E. Space concrete chairs for slab reinforcing a maximum spacing 4'-0" center to center each way.
- F. Reinforcement bent up over supports and elsewhere shall be securely spaced and held in proper position as well as the lower reinforcement.
- G. Hooks & bends shall be per ACI 318.
- H. Steel improperly bent or otherwise damaged will be rejected and shall be replaced immediately by properly bent steel.
- I. Maintain work site in clean, orderly condition as work progresses; neatly stockpile materials, keep small items boxed and in locked storage; keep areas free from debris.

END OF SECTION

PART 1 GENERAL**1.01 QUALITY ASSURANCE**

- A. Perform cast-in-place concrete work in accordance with 2022 Title 24, Part 2, Chapter 19A, unless specified otherwise in this Section.
- B. Vertical corners shall be true and plumb, free of chipped or broken portions.
- C. Exposed edges, expansion joints, curbs, and exposed details shall be neatly tooled.
- D. Surfaces across joints shall be flush (free from offsets).
- E. Maximum Allowable Deviations:
 - 1. Planes of exterior concrete surfaces shall be within 1/4" of planes as established on the Drawings.
 - 2. Planes of interior concrete surfaces shall be within 1/8" of planes established on the Drawings.
 - 3. Trueness of finished concrete surfaces shall not exceed a run out of plus or minus 1/8" measured perpendicular to a 10' straight edge when placed against the surface in any direction. All troweled-finished floors shall not exceed 0.16" in 1', 0.38" in 5', and 0.50" in 10'. In addition, floor surface shall not vary more than plus or minus 3/4" from the elevation noted on the drawing anywhere on the floor surface.

1.02 TEST AND INSPECTION

- A. The manufacturer of transit-mix concrete shall deliver to job inspector a certificate with each mixer truck. Certificate shall bear signature of representative of testing laboratory, stating quantity of cement, water, fine aggregate, and admixtures contained in load. Certificates shall indicate time, to the nearest minute, that batch was mixed. Weighmaster certificates are acceptable only from Certified Plants.

1.03 REFERENCES

- A. ASTM C33-- Concrete Aggregates.
- B. ASTM C150-- Portland cement.
- C. ACI 318 - Building Code Requirements for Reinforced Concrete.
- D. ASTM C260-- Air Entraining Admixtures for Concrete.
- E. ASTM C494-- Chemical Admixtures for Concrete.
- F. ASTM C94-- Ready-Mixed Concrete.
- G. ACI 304 - Recommended Practice for measuring, mixing, transporting and placing concrete.
- H. ACI 305 - Recommended practice for hot weather concreting.
- I. ACI 306 - Recommended practice for cold weather concreting.
- J. ACI 301 - Specifications for structural concrete for buildings.
- K. ACI 211.1-81 - Recommended practice for selecting proportions for normal weight, heavyweight, and mass concrete.
- L. ACI 302 - Recommended practice for concrete floor and slab construction.

PART 2 PRODUCTS**2.01 CONCRETE MATERIALS**

- A. Portland Cement: ASTM C150, Type II. Maximum alkali content: 0.6% when calculated as sodium oxide by the method given in ASTM C114. Use only one brand of cement throughout the project for all concrete work unless written permission is given by the Architect.
 - 1. Concrete aggregates shall conform to the Grading requirements of C33, of the American Society for Testing Materials, except as modified by this section. The Sieves used in sieve analysis shall be of square mesh wire cloth. Both the coarse and fine aggregate shall be tested by use of a solution of sodium or magnesium sulphate, or both, or by the use of a solution of sodium hydroxide, whenever in the judgment of the Engineer such loss for coarse and fine aggregate shall not exceed 6%.

2. Both fine and coarse aggregates shall come from sources having a large enough supply to ensure uniformity throughout the project.
 3. Fine aggregate shall consist of a natural sand having hard, strong and durable particles and which does not contain more than 1% by weight of such deleterious substance as clay lumps, shale, schist, alkali, mica coated grains, or soft flaky particles.
 4. Coarse aggregate shall consist of clean, hard, fine grained, sound crushed rock or washed gravel which does not contain in excess of 5% by weight of flat, chip-like, thin elongated, friable or laminated pieces, or more than 1% by weight of shale or cherty materials. Any piece having a major dimension in excess of 2-1/2 times the average thickness shall be considered to be flat and/or elongated.
 5. The coarse aggregate shall have no pieces larger than 1" in any dimension, except that maximum size may be 1-1/2" for concrete in grade beams and footings. Aggregate shall be uniformly graded from #4 sieve in size to maximum size.
- B. Concrete Aggregate: ASTM C 33, from established sources with proven history of successful use in producing concrete with minimum shrinkage. All aggregate shall have a minimum C.V. (cleanliness value) and S.E. (sand equivalent) of not less than 75.
- C. Mixing Water: Fresh, clean and potable, free from injurious amounts of oil, acid, alkali or organic matter.
- D. Admixtures: Use only when approved by the Architect and only if they comply with the requirements of CBC section 1903A.6. Where more than one is used, admixtures shall be compatible.
1. Accelerating Admixtures: Not permitted.
 2. Water-Reducing Admixtures: ASTM C494 and California State Highway Specifications, Sections 90-4.04 and 90-4.04. Use a water reducing admixture for all exposed concrete. Use a water reducing admixture when the air temperature exceeds 70 degrees F.
 3. Air-Entraining Admixtures: ASTM C260.
- E. Grout for Setting Metal Items: Halletite Halco "Non-Shrink", Burke Co., "Burke Plug", Master Builders Co., "Embeco", Conrad Soving Co., "Metal-Mix" pre-mixed, non-shrink grout; or approved equivalent.
- F. Liquid Membrane-Forming Curing Compound: ASTM C309, Type I. Apply in accordance with manufacturer's recommendations. Prior to application provide evidence to Architect that curing agent will not affect proper bonding of floor covering, surface covering, or paint. The compound shall form a uniform, continuous, adherent film that will not check, crack or peel, and shall be free of pinholes or other imperfections.
- G. Bonding Agent: Larsen Products Corp., "Weld-Crete"; W.R. Grace Co., "Daraweld-C", Sonneborn "Sonocrete", or approved equivalent.

2.02 CONCRETE MIXES

- A. Design concrete mixes to meet requirement hereinafter specified for various classes of concrete. Determine mixes selected to be used for work by trial mixes to produce strength as required by ACI 318 section 5.3 Evaluate separately each combination of strength, drying shrinkage and workability required to be used for different portion of work.
- B. See special requirements hereinafter for HOT WEATHER CONCRETE, and COLD WEATHER CONCRETE.

2.03 CONCRETE STRENGTH AND PROPORTIONS AND DRYING SHRINKAGE

- A. All concrete shall develop the compressive strength specified at twenty-eight days on cylinders made and tested in accordance with ASTM Standards. The averages of all sets of three consecutive strength tests shall be equal to or greater than the specified strength and to individual strength test result shall fall below the specified strength by more than 300 psi.
- B. Concrete Classes: Unless otherwise specified, all concrete ingredients shall be proportioned according to the civil drawings.

- C. These proportions shall produce concrete of maximum density, minimum shrinkage and specified strength. The concrete shall work readily into the corners and angles of the forms and reinforcement without excessive puddling, spading, or vibration and without permitting the materials to segregate or free water to collect on the surface. The amount of water used shall be the minimum consistent with these requirements. Workability shall be improved by adjusting the aggregate gradation rather than by adding water.

2.04 READY-MIXED CONCRETE

- A. Conformity: Conform to ASTM C94, unless modified herein. All concrete mixed in transit mixer shall be agitated continuously until discharged.
- B. Acceptance: Plant and equipment shall be accepted before used. The method of measuring aggregates shall be such that all ingredients can be uniformly and accurately controlled and easily checked. The batching plant shall be equipped with an electric metering device capable of determining moisture content of sand. Admixture shall be introduced into the concrete mix by automatic metering dispensers.
- C. Delivery: Deliver and start discharge of concrete not more than 3/4 hr. after the introduction of water into mix. Complete discharge of concrete within 1-1/4 hours after introduction of water into mix. Mix concrete not less than 10 minutes, at least 5 minutes of this time after the mixer arrives at the project site. Concrete which has set or which has mixed more than 1 hour shall not be retempered, shall not be placed, and shall not be immediately removed from the site.

PART 3 EXECUTION

3.01 LOCATION

See the Drawings for locations of cast-in-place concrete.

3.02 PLACING CONCRETE

- A. The Contractor shall carefully examine the drawings and specifications and before concrete is deposited he shall notify all trades whose work engages in any way with the concrete work so that they will have in place the forms for all pipes, bolts, drains, sleeves, conduit, flashings, nailing strips, hangers, etc., necessary for their part of the work.
- B. Concrete shall not be placed until the forms and reinforcements have been inspected and approved by the architect or by his authorized representative, nor until all preparations have been checked by the Inspector subject to the approval of the Architect. Job Inspector shall notify the Architect 48 hours in advance of first pour of concrete.
- C. Clean all concrete mixing and transporting equipment before placing concrete. Wet or coat forms and remove standing water.

3.03 PLACING CONCRETE

- A. Transportation and Mixing of Concrete: All conditions of mixing and transporting shall be subject to the approval of the Architect. Transit mixed concrete shall be rejected if not placed in final position within 1 hour after water is first added to the batch. Concrete shall be handled from the transit mixer to the place of final deposit as rapidly as practicable by methods which will prevent the separation of or loss of ingredients. It shall be deposited as per ACI 318 Section 5.10, as nearly as practicable in its final position to avoid rehandling or flowing. Conveying concrete by chuting more than 20 feet will not be permitted. The placing of concrete in walls shall be as required by the Architect, and the use of closed canvas chutes or drops may be required for this purpose.
Proper runways shall be provided for all pouring operations. These runways shall be supported directly from the forms, ground, or a previously poured slab. Placing of runways on the reinforcing steel is prohibited. At the option of the Contractor and when approved by the Architect, and testing lab, concrete may be pumped to location of final deposit.
- B. Pouring Concrete: When concrete pouring is once started, it shall be carried on as a continuous operation until the section is completed between predetermined construction joints. Store a sufficient quantity of material at the site before commencing work. The concrete

shall be deposited as continuously and as rapidly as possible. Wall concrete shall be placed in horizontal layers of 18" maximum depth, and shall not be allowed to pile up in the forms. Concrete shall not be dropped more than 6'-0". For greater distances of drop, use metal chutes or tremie pipes. Pouring into forms shall be by a properly constructed chute, or by other approved methods. Inclined chutes more than 20 feet long will not be permitted. Concrete shall not be permitted to flow horizontally in the forms more than necessary. Accumulations of hardened concrete on the forms or reinforcements shall be avoided, and reinforcements and forms shall be cleaned should it occur. Care shall be taken to see that concrete does not splash on form or reinforcing steel. Forms immediately above a construction joint shall be protected by building paper or similar means.

- C. Using electric internal vibrators: The concrete shall be thoroughly compacted during the operation of placing, and thoroughly worked around embedded fixtures and into all corners of the forms. If the vibrator proves unsatisfactory, another type shall be supplied. Skilled vibrator men shall be employed to operate the vibrators. The Contractor shall furnish a sufficient number of vibrators to provide consolidation satisfactory to the Engineer without delaying the progress of the work. The vibrator tubes shall have a connection long enough to reach the entire depth of every form. Keep vibrator heads free from form surfaces. Use and type of vibrator shall conform to ACI 309 "Recommended Practice of Consolidation of Concrete." Care shall be taken to see that the wall sections are adequately vibrated to produce a smooth surface. Compaction shall be provided by inserting the vibrator in the concrete at intervals not greater than 2' and vibrating sufficiently so that the compacting is secured. Concrete shall not be over-vibrated.
- D. Puddling: The amount of puddling shall not be carried so far as to produce segregation of aggregate or matrix, nor to bring free water to the surface.
- E. Joints: At construction joints and where conditions make puddling difficult, or where the reinforcement is congested, batches of mortar containing the same proportion of cement to sand used in the concrete first shall be deposited in the forms and the operation of filling with the regularly specified mix be carried on at such rate that the mix is at all times plastic and flows readily into the spaces between the bars. In lieu of the above, batches of concrete containing two extra sacks of cement per cubic yard may be used at the joints. The prepared surface shall be dampened and the specified bonding compound applied. New concrete shall be placed after the bonding concrete has dried. Before resuming placing of concrete at construction joints, the surface of the concrete shall be thoroughly cleaned of all laitance, porous concrete and rubbish, and the surface roughened as required by the Architect. The laitance shall not be removed sooner than 8 hours after the concrete is poured. The mortar placed on the cold joint shall be deposited to a depth of 2", and shall be mixed with no more than enough water to produce a thick consistency. Pour joints shall be made only where shown on the plans or as approved by the Architect. The Contractor shall consult with the Architect on location of pour joints before commencing with the concrete work. All horizontal pour joints occurring on exposed concrete surfaces shall be poured to a true level line definitely fixed and established at points as desired by the Architect. Keys and dowels, as detailed, shall be placed in all construction joints and cutoff joints in slabs. If any are necessary, shall be vertical and shall be keyed as directed.

3.04 CURING AND PATCHING

- A. Curing is intended to maintain water for proper hydration and to minimize temperature changes.
- B. For all exposed concrete keep forms and exposed surfaces continuously wet for not less than 7 days. Use fog nozzles kept in continuous operation, or cover with mats or burlap and thoroughly wet twice daily (including weekends and holidays). Do not let ground become damp in underpinning areas.
- C. Mats shall be ASTM C171, Type 1, non-staining, reinforced waterproof kraft paper or minimum 4 mil white opaque polyethylene with no distinct surface pattern.
- D. For all concrete receiving earth backfill use white curing compound ASTM C309, Type 2, with light reflectance min. 65%. Apply in accordance with manufacturers recommendations.
- E. Follow methods and recommended practices described in ACI 306 for protecting and curing concrete in cold weather. Comply with ACI 318 Section 5.11.

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- F. Follow methods and recommended practices described in ACI 305 for protecting and curing concrete in hot weather.
- G. Protect concrete against frost and rapid drying and keep moist for at least 6 days after placing; during this period concrete shall be maintained above 70 degrees F., for at least 3 days or above 50 degrees F., for at least 5 days. If high early strength concrete is used this requirement may be reduced to 3 days.
- H. Remove forms in accordance with ACI Building Code Requirements for reinforced concrete No. 318, Chapter 6, without damage to concrete and in a manner insuring complete safe support of the concrete and any live loads placed upon it.
- I. Notify Architect, upon removal of forms, that he may inspect the newly stripped surfaces prior to patching or touching up.
- J. Cure finish floor surfaces in accordance with ANSI A168.1. Review method with Architect. Do not use curing compound.

3.05 DEFECTIVE CONCRETE

- A. After the forms have been removed, all concrete surfaces shall be inspected and any pour joints, voids, stone pockets or other defective areas permitted by the Architect to be patched, and all tie holes, shall be patched before the concrete is thoroughly dry. Defective areas shall be chipped away to a depth of not less than 1" with the edges perpendicular to the surface. The area to be patched and a space at least 6" wide entirely surrounding it shall be wetted to prevent absorption of water from the patching mortar.
- B. A grout of equal parts of Portland cement and sand with sufficient water to produce a brushing consistency shall then be well brushed into the surface, followed immediately by the patching mortar. The patch shall be made of the same material and or/the same proportions used for the concrete except that the coarse aggregate shall be omitted. The amount of mixing water shall be as little as consistent with the requirements of handling and placing. The mortar shall be retempered without the addition of water by allowing it to stand for a period of one hour during which time it shall be mixed with a trowel to prevent setting.
- C. The mortar shall be thoroughly compacted into place and screeded off so as to leave the patch slightly higher than the surrounding surface. It shall then be left undisturbed for a period of two hours to permit initial shrinkage before being finally finished. The patch shall be finished in such manner as to match the adjoining surface. Tie holes left by withdrawal of rods or the holes left by removal of ends of ties shall be filled solid with mortar after first being thoroughly wetted. For holes passing entirely through the wall, a plunger-type grease gun or other device shall be used to force the mortar through the wall.

3.06 CONCRETE FINISHING

- A. All concrete work except slabs and walks shall receive no finish other than that achieved by the formwork, subsequent repairs required, and as detailed on the Drawings.
- B. Slabs and walks shall be finished the same day as placed.
- C. Slab finishing shall be closely coordinated with concrete placement work. Finishing work shall include tooling of edged and corners, scoring, and like treatments as necessary to produce completely finished work throughout.
- D. Provide suitable screeds for all flatwork, arranged for setting and removal without damage to membranes or adjoining concrete. Uniformly spread screed and float concrete. Do not use grate tampers or mesh rollers. Do not spread concrete by vibration.
- E. Cover traffic areas with plywood sheets; plywood in place and in good repair for as long as necessary to protect against damage by any or all other construction operations.
- F. Exterior slabs shall be uniformly sloped to a maximum of 2%, to drain free from standing water uniformly graded between elevations indicated.
- G. Coordinate and verify all dimensions and layouts before placing concrete walks.
- H. Leveling is the first stage for finishing all slabs and walks. Thoroughly consolidate all areas; strike off surplus using straight edges worked along screeds in sawing motion. Fill voids, compact surfaces, and re-level as necessary. Do not proceed with subsequent finishes until surface water has absorbed or dried and surface sheen has become dull.

- I. Floating is the second stage for finishing all slabs and walks. Using approved floating machines or hardwood trowels, float surfaces to required planes and shapes; work just sufficient to bring surfaces uniform in condition. Work no more than necessary to achieve uniform texture free from irregularities and screed marks, except where receiving fills or mortar beds leave surfaces in roughened, granular condition for good mechanical bond. Cut and fill surfaces as necessary to true up. When followed by other finishes, floating shall leave small amount of mortar on surfaces without excess of water. Do not proceed with subsequent finishes until surface water has absorbed or dried off and concrete has set sufficient to prevent fines or water from being worked to the surface.
- J. Steel trowel finish for all slabs, and as the third stage for all walks; using approved finishing machines or steel trowels, trowel surfaces as necessary to produce a dense, hard, smooth steel trowel finish. Commence troweling in one pass just sufficient to flatten floated surface. Wait until concrete has set sufficiently; then resume steel troweling; continue and repeat as required to obtain a hard steel trowel finish free from blemishes, ripples, and trowel marks. Do not use cement or sand dusting to absorb surface water.
- K. Broom finish for all walks, ramps, and stairs immediately following third stage (steel troweling), roughen surfaces with medium fiber brooms to a uniform condition. Texture shall be parallel and across direction of travel unless otherwise directed.

3.07 MISCELLANEOUS PROVISIONS

- A. Concrete strength, or other characteristics found or reasonably thought to be not in compliance with specified requirements shall be investigated, removed, and replaced, as the case may be, as directed by the Architect, at no added cost to the Owner.
- B. Maintain an accurate record showing date and time of concrete placement in each portion of structure. Correlate placing record to record for test cylinders. Maintain a separate record giving dates of removal of forms, shoring including first and second halves, and reshoring if used. Keep records available for inspection at site. Upon completion, deliver copies of each to Architect, in approved form.
- C. Advertising or other impression stamps or markers will not be permitted; other extraneous marks shall be removed as directed by Architect.
- D. Do not deposit waste or rejected concrete on site.
- E. Do not damage other work previously installed in placing concrete. Provide protection as necessary.
- F. No coating or compound shall be used which will in any way impair installation, adhesion or color of any subsequent applied materials, finish or texture or otherwise affect concrete appearance.
- G. There shall be no work around or on anchors, bolts, dowels, reinforcing steel, etc., embedded in concrete for a minimum of three (3) days (76 hours). Concrete shall be allowed to set before the above are disturbed in any way.

3.08 NON-SHRINK GROUT

All column base plates, equipment bases and other locations noted on the structural drawings shall be grouted with the specified non-shrink grout. All exposed grout shall be the non-metallic type.

END OF SECTION