



Technical Specification

Humboldt County Courthouse 4th Street Improvements

PROJECT NUMBER: 2020-101



FEBRUARY 2023

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NOTICE TO CONTRACTORS

SECTION 00 00 20

NOTICE IS HEREBY GIVEN that informal sealed bids are invited by the County Administrative Office/Purchasing Agent of Humboldt County, a public body, corporate and politic, for the performance of all the work and the furnishing of all the labor, materials, supplies, tools, and equipment for the following project:

CONSTRUCTION OF
HUMBOLDT COUNTY DISTRICT ATTORNEY, VICTIM/WITNESS AND CAST
COUNTY OF HUMBOLDT
PROJECT NUMBER: 2018-102

Pursuant to the Contract Documents on file with the County Administrative Office of Humboldt County.

A pre-bid meeting is scheduled for 2:00 PM, Pacific Daylight Time, March 22, 2023 at the Humboldt County Courthouse Conf. Room A, 825 5th Street, Eureka, California. Contract Documents, Plans, and Specifications will be available on March 14, 2023.

Each Bid must be contained in a sealed envelope addressed as set forth in said Bid Documents, and filed at the office of the Clerk of the Board of Supervisors of Humboldt County, 825 5th Street, Room 111, Eureka, California at or before 2:00 PM, Pacific Daylight Time, on April 11, 2023. All Bids will be publicly opened and summary amounts read aloud. The officer whose duty it is to open the Bids will decide when the specified time for the opening of Bids has arrived.

Plans and Specifications and other Contract Document forms will be available for examination at the County Administrative Office, Room 112, 825 5th Street, Eureka, CA, Phone: (707) 445-7266. Plans will also be available for viewing at area plan centers. Complete sets may be obtained from Nichols, Melburg & Rossetto, 300 Knollcrest Drive, Redding, CA 96002. Complete sets may be obtained upon advanced payment of \$100.00 each, 100 % of which shall be refunded upon the return of such sets unmarked and in good condition within ten (10) days after the bids are opened. Checks should be made payable to County of Humboldt.

Each Bid shall be submitted on the forms furnished by the County within the Bid Documents. All forms must be completed.

Each Bid shall be accompanied by one of the following forms of Bidder's Security to with a certified check or a cashier's check payable to the County, U.S. Government Bonds, or a Bid Bond executed by an admitted insurer authorized to issue surety bonds in the State of California (in the form set forth in said Contract Documents). The Bidder's security shall be in the amount equal to at least ten percent (10%) of the Bid.

The successful Bidder will be required to furnish and pay for a satisfactory faithful performance bond and a satisfactory payment bond in the forms set forth in said Bid Documents.

The County reserves the right to reject any or all Bids or to waive any informalities in any Bid. No Bid shall be withdrawn for a period of one-hundred (100) calendar days subsequent to the opening of Bids without the consent of the County.

All Bidders will be required to certify that they are eligible to submit a Bid on this project and that they are not listed either (1) on the Controller General's List of Ineligible Bidders/Contractors, or (2) on the debarred list of the Labor Commissioner of the State of California.

The successful Bidder shall possess a valid Contractor's license in good standing, with a classification of "B" (General Building Contractor) at the time the contract is awarded.

The successful Bidder will be required to comply with all equal employment opportunity laws and regulations both at the time of award and throughout the duration of the Project.

The Contractor and all Subcontractors are required to be registered with the Department of Industrial Relations pursuant to labor code section 1725.5. This project is subject to compliance monitoring and enforcement by the Department of Industrial Relations. A Contractor or Subcontractor shall not be qualified to bid on, be listed in a bid proposal, subject to the requirements of Section 4104 of the Public Contract Code, or engage in the performance of any contract for public work, as defined in this chapter, unless currently registered and qualified to perform public work pursuant to Section 1725.5. It is not a violation of this section for an unregistered contractor to submit a bid that is authorized by Section 7029.1 of the Business and Professions Code or by Section 10164 or 20103.5 of the Public Contract Code, provided the Contractor is registered to perform public work pursuant to Section 1725.5 at the time the contract is awarded.

The Contractor, and each subcontractor participating in the Project, shall be required to pay the prevailing wages as established by the Department of Industrial Relations, Division of Labor Statistics and Research, P.O. Box 420603, San Francisco, CA, Phone: (415) 703-4780.

The attention of Bidders is directed to the fact that the work proposed herein to be done will be financed in whole or in part with State and County funds, and therefore all of the applicable State and County statutes, rulings and regulations will apply to such work.

In the performance of this contract, the Contractor will not discriminate against any employee or applicant for employment in accordance with the provisions of the California Fair Employment and Housing Act. (Government Code section 12900 et seq)

In accordance with the provisions of Section 22300 of the Public Contractor's 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 entering into an Escrow Agreement for Security Deposits In Lieu of Retention.

INSTRUCTIONS TO BIDDERS

SECTION 00 01 00

Formal Sealed Bids will be received by the Clerk of the Board of Supervisors of the County of Humboldt, Humboldt County Courthouse, 825 5th Street, Room 111, Eureka, California 95501, until 2:00 PM, Pacific Daylight Time, on April 11, 2023 at which time they will be publicly opened by the Clerk of the Board of the County of Humboldt at a public meeting in the Office of the Clerk of the Board, for performance of the following work:

CONSTRUCTION OF
HUMBOLDT COUNTY COURTHOUSE 4TH STREET IMPROVEMENTS
PROJECT NUMBER: 2020-101

1. SECURING DOCUMENTS

Plans and Specifications and other Contract Document forms will be available for examination at the County Administrative Office, Room 112, 901 5th Street, Eureka, CA, Phone: (707) 445-7266. Plans will also be available for viewing at area plan centers. Complete sets may be obtained through the Nichols, Melburg & Rossetto, 300 Knollcrest Drive, Redding, CA 96002 upon advanced payment of \$100.00 each, 100 % of which shall be refunded upon the return of such sets unmarked and in good condition within ten (10) days after the bids are opened. Checks should be made payable to County of Humboldt.

2. BASIC INFORMATION

These instructions pertain to the work (as hereinafter defined) to be performed under Agreement with the County of Humboldt (hereinafter sometimes called "Owner"):

<u>Owner</u>	<u>Humboldt County Board of Supervisors</u> 825 Fifth Street Eureka, CA 95501
Owner's Lead Agency:	County Administrative Office/Purchasing Agent County of Humboldt 825 5 th Street Eureka, California 95501 Phone: (707) 445-7266 Fax: 445-7299
Project Location:	Humboldt County Courthouse 825 5th Street Eureka, CA 95501 Humboldt County, California
Architect:	Nichols, Melburg & Rossetto 300 Knollcrest Drive Redding, California 96002 Phone: (530) 222-3300

3. RECEIPT OF BIDS. Each bidder should mark its bid as "Bid for the Construction of Humboldt County District Attorney – Victim/Witness and CAST." Bids shall be deemed to include the written responses to the bidder to any questions or requests for information of County made as part of bid evaluation process after submission of bid. Telephone and telefax proposals will not be accepted. County will reject all bids received after the specified time and will return such bids to bidders unopened.

4. DETERMINATION OF APPARENT LOW BIDDER. Apparent low bid will be based on the amount of the base bid listed of the Bid Form.

- 5. REQUIRED BID FORM.** All bidders must submit bids on the Section 00 30 00, the "Bid Form." County will reject as non-responsive any bid not submitted on the required form. Bids must be full and complete. Bidders must complete all bid items and supply all information required by the bidding documents and specifications. County reserves the right in its sole discretion to reject any bid as non-responsive as a result of any error or omission in the bid. Bidders may not modify the Bid Form or qualify their bids. Bidders must submit clearly and distinctly written bids. Bidders must clearly make any changes in their bids by crossing out original entries, entering new entries and initialing new entries. County reserves the right to reject any bid not clearly written. The Bid Form shall be signed by the bidder's legal representative as indicated on the Bid Form. If the bid is made by an individual, it shall be signed and his/her full name and his/her address shall be given; if it is made by a partnership, it shall be signed with the co-partnership name by a member of the firm, who shall sign his/her own name and provide the name and address of each member; and if it is by a corporation, the bid shall show the name of the corporation and the state under the laws of which the corporation was chartered. When the bid is signed by the duly authorized officer or officers of the corporation, it shall be attested by the corporate seal, and the names and titles of the principal officers of the corporation shall be given. When a bid is signed by an agent, other than the officer or officers of a corporation authorized to sign contracts on its behalf or a member of a partnership, a "Power of Attorney" must be filed with the County prior to opening bids or shall be submitted with the bid; otherwise, the bid may be rejected as irregular and unauthorized. Bids submitted as joint ventures must so state and be signed by each venturer.
- 6. CONTENTS OF BID ENVELOPE.** The bid envelope shall contain all of the following:

 - Section 00 30 00 - Bid Form
 - Section 00 41 00 - Bid Security Form (Bid Bond)
 - Section 00 43 00 - Subcontractor List
 - Section 00 44 00 - Non-collusion Affidavit
 - Section 00 45 00 - Responsibility/Non-responsibility
 - Section 00 46 00 - Public Contract Code 10232 Statement
 - Section 00 47 00 - Workers' Compensation Certification
 - Section 00 48 00 - Debarment and Suspension Certification
- 7. BID OPENING.** The County will stamp bids with the date and time of receipt. Bids will be opened and read publicly at the time and place indicated in Section 1 above. Bidders or their authorized agents may be present. After opening of bids, the County will review all bids for accuracy and reserves the right to correct obvious errors. Upon completion of review, the bids will be ranked by the bid amount and the apparent low bidder will be determined and notified.
- 8. FAILURE TO EXECUTE AND DELIVER DOCUMENTS.** IF the bidder to whom the Contract is awarded shall fail or neglect , with ten (10) calendar days from the date of the receipt of a notice of award, to execute and deliver all required Contract Documents and file all required bonds, insurance certificates and other documents, County may, in its sole discretion, deposit bidder's surety bond, cashier's check or certified check for collection, and retain the proceeds thereof as liquidated damages for bidder's failure to enter into the Contract Documents. Bidder agrees that calculating the damages County may suffer as a result of bidder's failure to execute and deliver all required Contract Documents would be extremely difficult and impractical and that the amount of bidder's required bid security shall be the agreed and presumed amount of County's damages.
- 9. BIDDER'S BOND, PERFORMANCE BOND AND PAYMENT BOND.** Bid security must be submitted with the bid. The successful bidder, prior to execution of the Contract, must submit a Performance Bond in the full amount of the Contract. The successful bidder, prior to execution of the Contract, must submit a Payment Bond in the full amount of the Contract.
- 10. INSURANCE.** It is highly recommended that bidders confer with their respective insurance carriers or brokers to determine in advance of bid submission the availability of the insurance certificates and endorsements required. A bidder, who executes the Contract and thereafter fails to comply strictly with the insurance requirements, will be deemed to be in breach of Contract.

- 11. RESERVATION OF RIGHTS:** County specifically reserves the right, in its sole discretion, to reject any or all bids, or re-bid, or to waive minor irregularities from bid requirements. If no bids are received, the County reserves the right to identify interested contractor(s) and negotiate directly without re-bidding.
- 12. SECURITIES IN LIEU OF RETENTION:** Public Contract Code Section 22300 gives the Contractor for option to deposit securities with an escrow agent as a substitute for retention earnings to be withheld by the County.
- 13. PRE-BID MEETING:** The Pre-Bid Meeting is scheduled for 2:00 PM, Pacific Daylight Time, March 22, 2023 at the Humboldt County **Courthouse Conference Room A**, 825 5th Street, Eureka, California.
- 14. WITHDRAWAL OF BIDS.** Any bidder may withdraw his/her bid, either personally or by written request, any time prior to the scheduled closing time for receipt of bids.
- 15. QUESTIONS AND CLARIFICATIONS.** In order to avoid any misinterpretation or misrepresentation between the Bidder, the Architect and the County as regards the plans and specifications for the Project, neither the County nor Architect will respond to any verbal or telephone inquiries, however Bidders may submit written inquiries for clarifications or questions by email to the attention of Deven Carter, Project Architect. Nichols Melburg & Rossetto. Email: carter@nmrdesign.com. Any responses to written Bidder inquiries will be at the full discretion of the County, and any responses will be in writing in the form of an Addendum to these Contract Documents, which will be sent to all Bidders.
- 16. ADDENDA OR BULLETINS.** Any Addenda or Bulletins issued during the time of bidding or forming a part of the Documents loaned to the Bidder, for the preparation of his Bid, shall be covered in the Bid, and shall be made a part of the Contract.
- 17. BIDDERS INTERESTED IN MORE THAN ONE BID.**
No person, firm, or corporation shall be allowed to make or file, or be interested in more than one bid for the same work, unless alternate bids are called for. A person, firm, or corporation, who has submitted a subproposal to a bidder, is not thereby disqualified from submitting a subproposal or quoting prices to the other bidders.
- 18. VISITING THE SITE & KNOWLEDGE OF PLANS & SPECIFICATIONS**
Before submitting a bid for the work, it is recommended that the Bidder inspect the sites and inform himself as to the conditions under which he will be obligated to execute the work. A Pre-Bid meeting and walk-through are scheduled for this project. See Paragraph "13" above.

No allowance will be subsequently made for failure to inspect, and the Bidder will be solely responsible for the consequences of his negligence or lack of diligence. Before submitting any proposal, each Bidder shall examine the General Conditions, Plans, Specifications, as well as these Instructions to Bidders, and the forms appended hereto and made a part hereof.

END OF SECTION

SPECIAL CONDITIONS

SECTION 00 01 10

1. PROJECT DESCRIPTION

This project is located in Humboldt County in the City of Eureka. It consists of remodeling the 5th floor of Courthouse, replacement of portions of the roof and mechanical systems. The Courthouse will remain in operation during the entire project.

- A. Project Location:
Humboldt County Courthouse
825 5th Street
Eureka, CA 95501
Humboldt County, California

2. ENGINEER'S ESTIMATE:

The engineer's estimate for the base bid is \$480,000. This is an estimate only and bidders should not rely upon this figure when preparing or submitting their bids.

3. TIME FOR COMPLETION

The Contractor shall complete the entire project within 180 calendar days from the County's issuance of the "Notice to Proceed".

4. LIQUIDATED DAMAGES

As actual damages for any delay in completion are impossible to determine, the Contractor and their sureties shall be liable for and shall pay to the County of Humboldt the sum of \$750.00 as fixed, agreed and liquidated damages for each calendar day of delay beyond the overall contract completion date until the work is completed and accepted.

5. SUBSTITUTIONS

- A. All pre-bid substitution requests for "equal" products or systems shall be submitted to the Owners Representative. 10 days prior to the contract bid opening date. All pre-bid substitution requests shall be submitted on the PRE-BID SUBSTITUTION REQUEST FORM - SECTION 00158, see Section 00 70 00, GC 27,B.
- B. Product substitution requests for products that are "equal" to specified products but not produced by an "Acceptable Manufacturer", per each technical specification shall be submitted within 35 days after the contract is awarded. All product substitution requests shall be submitted on the PRODUCT SUBSTITUTION REQUEST FORM; see Section 01 60 00, "Product Requirements."

6. ADDENDA

No addenda shall be issued within 48 hours of the designated Bid opening time. Any addenda resulting in material changes, addition, or deletion shall be issued at least 72 hours before the designated Bid opening time, otherwise the Bid time shall be extended by not less than 72 hours.

7. COMMUNICATIONS

- A. All notices, demands, requests, instructions, approvals, proposals, and claims must be in writing.
- B. Any notice to or demand upon the Contractor shall be sufficiently given if delivered at the office of the Contractor stated on the signature page of the Contract or at such other office as Contractor may from time to time designate in writing to the County of Humboldt or deposited in the United States mail in a sealed postage-prepaid envelope, or if delivered with charges prepaid to any delivery company for transmission, in each case addressed to such office.
- C. All papers required to be delivered to the County shall, unless otherwise specified in writing to the Contractor, be delivered to the County and any notice to or demand upon the County of Humboldt shall be mailed in a sealed, postage-prepaid envelope, or delivered with charges prepaid to any delivery company for transmission to the County of Humboldt at such address, or to such other representatives of the County of Humboldt or to such other address as the County may subsequently specify in writing to the Contractor for such purpose.
- D. Any such notice shall be deemed to have been given as of the time of actual delivery; or, in the case of mailing, when the same should have been received in due course of post; or, in case of any delivery company, at the time of actual receipt.

8. MINIMUM RATES OF PAY

A schedule of the minimum rates of pay applicable to this Contract is on file at the principal office of Humboldt County Public Works at 1106 Second Street, Eureka, California, and shall be made available to any interested party on request.

9. JOB OFFICES

- A. The Contractor must designate an area to serve the posting requirements of this contract. On this board will be posted EEO and wage information in compliance with the General Conditions of this contract.
- B. The Contractor and their subcontractors may maintain such office and storage facilities on the site as may be necessary for the proper conduct of the work. These shall be located so as to cause no interference with any work to be performed on the site. The Owner's Representative shall be consulted with regard to locations.
- C. Upon completion of the project, or as directed by the County of Humboldt, Owner's Representative, the Contractor shall remove all such temporary structures and facilities from the site, same to become their property, and leave the premises in the condition required by the County.
- D. The Contractor shall furnish and maintain, during construction of the project, adequate facilities at the site to be designated by the County of Humboldt for the use of the County of Humboldt and the Architect.

10. PERFORMANCE AND PAYMENT BONDS

The company providing the required performance and payment bonds must be listed in U.S. Treasury Circular No. 570 as a surety approved to issue bonds securing Government contracts in the State of California.

11. NOISE ABATEMENT PROVISIONS

- A. Noise Affecting Existing Courthouse:
 - 1. The ground and second floor of the building contains an active courthouse including courtrooms, judge's offices and court operations. These areas are operated by the Superior Court of California, not by Humboldt County. Contractor's work shall not impact the court's operations. For all work that may impact the court's operations,

including excessive noise and vibration, the contractor shall coordinate and schedule in advance with the Owner's Representative and receive approval from the Owner's Representative.

2. The Owner's Representative and the Owner shall be the sole judges of permissible noise and vibration levels and they have the right to designate times when specific items of equipment may be used.
- C. Vibration Control: Provide ten (10) working days notice before conducting construction activities that might cause vibration, such as, but not limited to, drilling, demolition, compaction, etc.
 - D. Noise Levels: Do not exceed an average continuous sound level of 72 dBA, measured at the perimeter of the work area, and do not exceed an impact noise level of 100 dBA measured at the perimeter of the work area, and only two impact occurrences between 72 dBA and 100 dBA are permitted in a one-hour period.
 - E. Objectionable discernible noise transmitting is prohibited during normal Courthouse hours.

END OF SECTION

BID CHECKLIST
SECTION 00 01 40

The following documents shall be submitted by each Bidder, as part of their complete Bid:

1. Section 00300 - Bid Form
2. Section 00410 - Bid Security Form (Bid Bond)
3. Section 00430 - Subcontractor List
4. Section 00440 - Non-collusion Affidavit
5. Section 00450 - Responsibility/Non-responsibility
6. Section 00460 - Public Contract Code 10232 Statement
7. Section 00470 - Workers' Compensation Certification
8. Section 00480 - Debarment and Suspension Certification

END OF SECTION

PRE-BID SUBSTITUTION FORM

SECTION 00 15 80

PROJECT: Humboldt County Courthouse 4th Street Improvements DATE: _____
Project Number: 2020-101

Note to Contractor: All substitution requests for "equal" products or systems shall be submitted to the Owner's Representative, (10) ten days prior to the contract bid date.

We hereby submit for your consideration the following product in lieu of the specified item for the above project.

SECTION: _____ Paragraph: _____

Specified Item: _____

Proposed Substitution: _____

Attach completed technical data, including laboratory tests, if applicable.

Include complete information on changes to Drawings and/or Specifications which proposed substitution will require for its proper installation.

Does the substitution affect dimensions shown on Drawings? _____(Yes) _____(No)

Will the undersigned pay for changes to the building design, including detailing costs caused by the requested substitution? _____(Yes) _____(No)

What effect does substitution have on other trades? _____

Differences between proposed substitution and specified item? _____

Manufacturer's guarantees of the proposed and specified items are:

Same _____ Different (Explain on attachment) _____

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

Submitted By: _____

Signature: _____

Firm: _____

Address: _____

Telephone: _____

FOR USE BY ARCHITECT:

_____ Accepted _____ Accepted as Noted

_____ Not Accepted _____ Received Too Late

By: _____ Date: _____

Remarks: _____

END OF SECTION

BID FORM

SECTION 00 30 00

TO
THE COUNTY OF HUMBOLDT

CONSTRUCTION OF HUMBOLDT COUNTY COURTHOUSE, 4TH STREET IMPROVEMENTS

CONTRACT NUMBER 2020-101

Name of Bidder: _____

Business Address: _____

Telephone Number: _____

Residence Address: _____

The work to be done shall be constructed in accordance with the Contract Documents, prepared by NMR Architects, Dated 02/15/2023, the Agreement annexed hereto and the General Prevailing Wage provisions as specified in the "Notice to Contractors".

Bids are submitted for the entire work. The amount of "The Bid" for comparison purposes will be the determination of the apparent low bid as specified in Section 00 01 00, "Instructions to Bidders".

The Bidder shall set forth for the Base Bid and each Alternate, if any, in clearly legible figures, a written lump sum price and a numeric lump sum price.

In case of a discrepancy between the two notated prices, the written price shall prevail, unless, however, if the amount set forth in writing is ambiguous, unintelligible or uncertain for any cause, or is omitted, then the amount set forth in the numeric column for the item shall prevail.

If this proposal shall be accepted and the undersigned shall fail to enter into the Contract and to give the two required bonds in the sums to be determined as aforesaid, with surety satisfactory to the Department of Public Works, within seven (7) days, not including Sundays and legal Holidays, after the Bidder has received notice from the Department that the contract has been awarded, the County may, at its option, determine that the Bidder has abandoned the Contract, and thereupon this Proposal and the acceptance thereof shall be null and void and the forfeiture of such security accompanying this Proposal shall operate and the same shall be the property of the County of Humboldt.

The undersigned, as Bidder, declares that the only persons or parties interested in this proposal as principals are those named herein; that this proposal is made without collusion with any other person, firm, or corporation; that Bidder has carefully examined the location of the proposed work, the annexed proposed form of contract, and the plans therein referred to; and proposes and agrees if this proposal is accepted, that Bidder will contract with the County of Humboldt, in the form of the copy of the contract annexed hereto, to provide all necessary machinery, tools, apparatus and other means of construction, and to do all the work and furnish all the material specified in the contract, in the manner and time therein prescribed, and according to the requirements of the Architect as therein set forth, and that he will take in full payment therefor the following item prices to wit:

Receipt and compliance with the following Addenda to the Contract Documents is acknowledged:

1. Addendum No.____ Dated_____
2. Addendum No.____ Dated_____
3. Addendum No.____ Dated_____
4. Addendum No.____ Dated_____
5. Addendum No.____ Dated_____

I, _____, as an agent for

_____, declare under penalty of perjury under the laws of the State of California, that the information contained in this Bid is true and correct.

Executed at _____, California, on _____, 2019

The project shall be complete within the time limits specified in Section 00 01 10, "Special Conditions." The undersigned is aware the Contract includes provisions for liquidated damages as specified in Section 00 01 10, "Special Conditions," if the Project is not completed within the agreed time of completion.

THE UNDERSIGNED, as Bidder, proposes the following:

BASE BID:

To furnish and complete the entire work as shown on the drawings and listed in the specifications, including required contract bonds and insurance, without additions or subtractions on account of specified alternates, for the sum of:

Base Bid (Lump Sum):	
_____	\$ _____
Total Amount in Words	Total

Proposal Signature Page

Accompanying this proposal is _____

(Insert the words "Cash (\$)", "Cashier's Check", "Certified Check", or "Bidder's Bond", as the case may be)

in the amount of at least ten percent (10%) of the total Bid Price submitted. The names of all persons interested in the foregoing proposal as Principals are as follows:

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

Licensed in accordance with an Act providing for the registration of Contractors:

License No.: _____ Expiration Date: _____

By my signature on this proposal I certify, under penalty of perjury under the laws of the State of California, that the foregoing questionnaire and statements of Public Contract Code Section 10162, and 10232, are true and correct and that the bidder has complied with the requirements of Section 8102 of the Fair Employment and Housing Commission Regulations (Chapter 5, Title 2 of the California Administrative Code). By my signature on this proposal I further certify, under penalty of perjury under the laws of the State of California and the United States of America, that the Noncollusion Affidavit required by Title 23 United States Code, Section 112 and Public Contract Code Section 7106; and the Title 49 Code of Federal Regulation, Part 29 Debarment and Suspension Certification are true and correct.

Signature of Bidder

Date

If a Bidder is a Corporation or a Co-partnership:

Name of Corporation or Firm Name of Co-partnership

Signatures of officer(s) or partners authorized to sign contracts on behalf of the Corporation or Co-partnership, Corporations require signature by 2 (two) corporate officers:

_____	_____
Name	Title
_____	_____
Name	Title

If Signature is by an agent, other than an officer of a corporation or a member of a partnership, a Power of Attorney must be on file with the Department prior to opening Bids or may be submitted with the Bid; otherwise the Bid will be disregarded as irregular and unauthorized.

Bidder's Business Address: _____

Place of Residence: _____

Date: _____

END OF SECTION 00 30 00

BID SECURITY FORM

SECTION 00 41 00

LET THE FOLLOWING BE KNOWN:

That _____, as Principal, and
, a corporation, organized and existing under and by virtue of the laws of the State of
and authorized to do surety business in the State of California, as Surety, are held and firmly bound unto the
_____, State of California, as Obligee, in the sum of
, Dollars (\$ _____), for the payment of which sum well and truly to be made, we, and each
of us, 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
the County of Humboldt, 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 Principal 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 any 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 material 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 to be fixed by the
Court.

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

By: _____

By:

Principal (Seal)

Surety (Seal)

- NOTE:
- (1) Signature of those executing for the surety must be properly acknowledged.
 - (2) This bond must be in an amount equal to as least ten (10%) percent of the amount bid.
 - (3) Bidders must use this form unless the surety company form is substantially the same.

END OF SECTION

SUBCONTRACTOR LIST

SECTION 00 43 00

LIST OF SUBCONTRACTORS

PROJECT NAME: HUMBOLDT COUNTY COURTHOUSE, 4TH STREET IMPROVEMENTS
PROJECT NUMBER: 2020-101

The Bidder shall list all Subcontractors in accordance with Article 18 of the Supplementary General Conditions. All Subcontractors shall be listed with the Department of Industrial Relations to work on public works projects.

<u>Name of Subcontractor, CA Contractor License Number.</u>	<u>Address</u>	<u>Description of Work to be Performed</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____

_____	_____	_____
_____	_____	_____
_____	_____	_____

_____	_____	_____
_____	_____	_____
_____	_____	_____

_____	_____	_____
_____	_____	_____
_____	_____	_____

<u>Name of Subcontractor, CA Contractor License Number & Dir. Reg. Number</u>	<u>Address</u>	<u>Description of Work to be Performed</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____

_____	_____	_____
_____	_____	_____
_____	_____	_____

_____	_____	_____
_____	_____	_____
_____	_____	_____

_____	_____	_____
_____	_____	_____
_____	_____	_____

_____	_____	_____
_____	_____	_____
_____	_____	_____

END OF SECTION

NONCOLLUSION AFFIDAVIT

SECTION 00 44 00

TO THE COUNTY OF HUMBOLDT, DEPARTMENT OF PUBLIC WORKS

Non-Collusion Affidavit

(Title 23 United States Code Section 112 and Public Contract Code Section 7106)

In accordance with Title 23 United States Code Section 112 and Public Contract Code 7106 the Bidder declares that the Bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the Bid is genuine and not collusive or sham; that the Bidder has not directly or indirectly induced or solicited any other Bidder to put in a false or sham bid, and they have not directly or indirectly colluded, conspired, connived, or agreed with any Bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; that the Bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the Bidder or any other Bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other Bidder, or to secure any advantage against the public body awarding the contract of anyone interested in the proposed contract; that all statements contained in the bid are true; and further, that the Bidder has not directly or indirectly, submitted their bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company association, organization, bid depository, or to any member of agent thereof to effectuate a collusive or sham bid.

Signature of Bidder

Date

Bidders are cautioned that making a false certification may subject the certifier to criminal prosecution.

END OF SECTION

RESPONSIBILITY/NONRESPONSIBILITY

SECTION 00 45 00

1. DETERMINATION OF BIDDER RESPONSIBILITY

- A. A responsible bidder is a bidder who has demonstrated the attribute of trustworthiness, as well as quality, fitness, capacity and experience to satisfactorily perform the contract. It is the County's policy to conduct business only with responsible contractors. (Ord. 2291, § 1, 01/07/2003)
- B. Bidders are hereby notified that the County may determine whether the bidder is responsible based on a review of the bidder's performance on any contracts, including but not limited to County contracts. Particular attention will be given to violations of labor laws related to employee compensation and benefits, and evidence of false claims made by the bidder against public entities. This will include subcontractors and their employees as well.(Ord. 2291, § 1, 01/07/2003)
- C. The County may declare a bidder to be non-responsible for the purpose of this contract, if the Board of Supervisors, in its discretion, finds that the bidder has done any of the following: (1) committed any act or omission which negatively reflects on the bidder's quality, fitness or capacity to perform this contract with the County or a contract with any other public entity, or engaged in a pattern or practice which negatively reflects on same; (2) committed an act or omission which indicates a lack of business integrity or business honesty; or (3) made or submitted a false claim against the County or any other public entity. (Ord. 2291, § 1, 01/07/2003)
- D. If there is evidence that the apparent low bidder may not be responsible, the department shall notify the bidder in writing of the evidence relating to the bidder's responsibility, and its intention to recommend to the Board of Supervisors that the bidder be found not responsible. The department shall provide the bidder and/or the bidder's representative with an opportunity to present evidence as to why the bidder should be found to be responsible and to rebut evidence which is the basis for the department's recommendation. If the bidder fails to avail itself of the opportunity to rebut the department's evidence, the bidder may be deemed to have waived all rights of appeal. (Ord. 2291, § 1, 01/07/2003)
- E. If the bidder presents evidence in rebuttal to the department, the department shall evaluate the merits of such evidence, and based on that evaluation, make a recommendation to the Board of Supervisors. The final decision concerning the responsibility of the bidder shall reside with the Board of Supervisors. (Ord. 2291, § 1, 01/07/2003)
- F. These terms shall also apply to proposed [subcontracts/ subconsultants] of bidders on County contracts. (Ord. 2291, § 1, 01/07/2003)

2. DETERMINATION OF BIDDER DEBARMENT

- A. The bidder is hereby notified that the County may debar the bidder from bidding on other County contracts for a specified period of time, not to exceed three (3) years, and the County may terminate any or all of the bidder's existing contracts with the County, if the Board of Supervisors finds, in its discretion, that the bidder has done any of the following: (1) violated any term of a contract with the County; (2) committed any act or omission which negatively reflects on the bidder's quality, fitness, or capacity to perform a contract with the County or any other public entity, or engaged in a pattern or practice which negatively reflects on same; (3) committed an act or offense which indicates a lack of business integrity or business honesty; or (4) made or submitted a false claim against the County or any other public entity. (Ord. 2291, § 1, 01/07/2003)

- B. If there is evidence that the apparent low bidder may be subject to debarment, the department shall notify the bidder in writing of the evidence which is the basis for the proposed debarment, and shall advise the bidder of the scheduled date for a debarment hearing before the Contractor Hearing Board (CHB). (Ord. 2291, § 1, 01/07/2003)
- C. The CHB shall conduct a hearing where evidence on the proposed debarment is presented. The bidder and/or the bidder's representative shall be given an opportunity to submit evidence at that hearing. After the hearing, the CHB shall prepare a proposed decision, which shall contain a recommendation regarding whether the bidder should be debarred, and, if so, the appropriate length of time of the debarment. If the bidder fails to avail itself of the opportunity to submit evidence to the CHB, the bidder may be deemed to have waived all rights of appeal. (Ord. 2291, § 1, 01/07/2003)
- D. A record of the hearing, the proposed decision and any other recommendation of the CHB shall be presented to the Board of Supervisors, by the department head. The Board of Supervisors shall have the right to modify, deny or adopt the proposed decision and recommendation of the hearing board.(Ord. 2291, § 1, 01/07/2003)
- E. These terms shall also apply to proposed [subcontractors/ subconsultants] of bidder's on County contracts.(Ord. 2291, § 1, 01/07/2003)

EVIDENCE OF RESPONSIBILITY / NONRESPONSIBILITY
(Humboldt County Code Sections 2141 et seq.)

The bidder shall, under penalty of perjury, answer each of the questions below and provide supporting documentation. The term "bidder" shall include any person associated with the bidder in the capacity of owner, partner, director, officer or manager.

- 1. Is the bidder under suspension, debarment, or determination of ineligibility by any federal, state or local agency? No Yes (explain)
- 2. Has the bidder been suspended, debarred, or determined ineligible by any federal, state or local agency within the preceding 5 years: No Yes (explain)
- 3. Is there pending against the bidder any proposed debarment or suspension proceeding?
 No Yes (explain)
- 4. Has the bidder been indicted, charged with, or convicted, or assessed civil or administrative penalties, or had a civil judgment rendered against it, in any matter involving:
 - (a) fraud, false claims, or dishonesty;
 - (b) any serious or wilful violation of the California Occupational Safety and Health Act of 1973 (Labor Code Sections 6300 et seq) or the Federal Occupational Safety and Health Act of 1970;
 - (c) violation of the state workers' compensation laws;
 - (d) violation of the Contractor's State License Law (Bus & Prof Code Sections 7000 et seq.)
 - (e) violation of prevailing wage laws;
 - (f) violation of state or federal environmental laws;
 - (g) violation of local laws related to permits, land use, or waste disposal? No Yes (explain)

- 5. Has the bidder defaulted on a construction contract within the preceding 10 years?

No Yes (explain)

6. Provide information concerning any bankruptcy or receivership of bidder, and information regarding all legal claims, disputes, or lawsuits (including administrative matters) arising from any construction project performed within the preceding 5 years, including information regarding any work completed by a surety.

NOTE: This information will not necessarily result in denial of award, but will be considered in determining bidder responsibility. Bidders are cautioned that making a false certification may subject the bidder to criminal prosecution.

Signature of Bidder

Date

END OF SECTION

PUBLIC CONTRACT CODE SECTION 10232 STATEMENT

SECTION 00 46 00

In accordance with Public Contract Code Section 10232, the Contractor, hereby states under penalty of perjury, that no more than one final unappealable finding of contempt of court by a Federal court has been issued against the Contractor within the immediately preceding two year period because of the Contractor's failure to comply with an order of a Federal court which orders the Contractor to comply with an order of the National Labor Relations Board.

Signature of Bidder

Date

Bidders are cautioned that making a false certification may subject the certifier to criminal prosecution.

END OF SECTION

WORKERS' COMPENSATION CERTIFICATE

SECTION 00 47 00

Labor Code Section 3700.

"Every employer except the State shall secure the payment of compensation in one or more of the foregoing ways:

- (a) By being insured against liability to pay compensation in one or more insurers duly authorized to write compensation insurance in this state.
- (b) By securing from the Director of Industrial Relations a certificate of consent to self-insure either as an individual employer, or as one employer in a group of employers, which may be given upon furnishing proof satisfactory to the Director of Industrial Relations of ability to self-insure and to pay any compensation that may become due to their employees."

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

Signature of Contractor: _____

Date: _____

In accordance with Article 5 [commencing at Section 1860], Chapter 1, Part 7, Division 2, of the Labor Code, the above certificate must be signed and filed with the awarding body prior to commencing any work under this contract.

END OF SECTION

DEBARMENT AND SUSPENSION CERTIFICATION

SECTION 00 48 00

TITLE 49, CODE OF FEDERAL REGULATIONS, PART 29

The CONTRACTOR, under penalty of perjury, certifies that, except as noted below, he/she or any other person associated therewith in the capacity of owner, partner, director, officer, manager:

1. is not currently under suspension, debarment, voluntary exclusion, or determination of ineligibility by any Federal, State or local agency;
2. has not been suspended, debarred, voluntarily excluded or determined ineligible by any Federal, State or local agency within the past 3 years;
3. does not have a proposed debarment pending; and
4. has not been indicted, convicted, or had a civil judgment rendered against it by a court of competent jurisdiction in any matter involving fraud or official misconduct within the past 3 years.

If there are any exceptions to this certification, insert the exceptions in the following space.

Exceptions will not necessarily result in denial of award, but will be considered in determining bidder responsibility. For any exception noted above, indicate below to whom it applies, initiating agency, and dates of action.

Notes: Providing false information may result in criminal prosecution or administrative sanctions.

The above certification is part of the Proposal. Signing this Proposal on the signature portion thereof shall also constitute signature of this Certification.

Signature of Contractor: _____

Date: _____

END OF SECTION

AGREEMENT

SECTION 00 50 00

This is an AGREEMENT made and entered into this _____ day of _____, 2021 by and between the County of Humboldt, a political subdivision of the State of California (hereinafter referred to as COUNTY) and _____, a corporation organized and existing under the laws of the State of _____, a partnership consisting of _____; an individual doing business as _____ in the State of California, (hereinafter referred to as "CONTRACTOR").

County and Contractor for the consideration hereinafter named agree as follows:

SECTION 1 - SCOPE OF WORK

Contractor shall furnish all labor, tools and materials and perform all the work for the construction of:

**HUMBOLDT COUNTY DISTRICT ATTORNEY, VICTIM/WITNESS AND CAST
PROJECT NUMBER: 2018-102**

in accordance with the Contract Documents referred to in Section 3 of this Agreement.

The scope of work includes the work included in the "Base Bid" for the project and the following bid alternatives: _____

SECTION 2 - CONTRACT PRICE

County shall pay, and Contractor shall accept Contractor's Price, as follows:

_____ Dollars and _____ /100 (\$ _____)

as full compensation for furnishing all materials and for doing all the work contemplated and embraced in this Agreement; also for all loss or damage, arising out of the work aforesaid, or from the actions of the elements, or from any unforeseen difficulties or obstructions which may arise or be encountered in the prosecution of the work until its acceptance by County, and for all risks of every description connected with the work; also for all expenses incurred by or in consequence of the suspension or discontinuance of the work and for well and faithfully completing the work, and the whole thereof, in the manner and according to the Plans and Specifications, and the requirements of the Owner.

SECTION 3 - CONTRACT DOCUMENTS

The complete contract between the parties hereto shall consist of the following, hereinafter referred to as the CONTRACT DOCUMENTS:

- Notice to Contractors
- Bid Form
- Bid Security Form
- This Agreement
- Payment Bond
- Performance Bond
- Insurance Certificates
- General Conditions
- Supplementary General Conditions
- General Requirements
- Technical Specifications
- Plans and Drawings
- Subcontractor List
- Non collusion Affidavit

- Public contract code Statement
- Special Conditions

- Evidence Of Responsibility/Non-responsibility
- Debarment suspension certification

And, as published by the California Department of Industrial Relations:

- General Prevailing Wage Rates

And any addenda to any of the above documents, all of which are on file in the office of the Director of Public Works of the County of Humboldt. Each of said CONTRACT DOCUMENTS is incorporated and made a part of this Agreement by the reference contained in this Section.

All rights and obligations of the County and the Contractor are fully set forth and described in the Contract Documents. All of the above named documents are intended to be complementary, so that any work called for in one, and mentioned in the other is to be performed and executed the same as if mentioned in all said documents.

SECTION 4 - BEGINNING OF WORK

Following receipt and full execution and approval of the Contract Documents, and posting of the requisite Bonds as called for therein, the COUNTY will issue a "Notice to Proceed". Under no circumstances shall the CONTRACTOR enter upon the site of work until receipt of the "Notice to Proceed", unless so authorized in writing by the COUNTY.

SECTION 5 - TIME OF COMPLETION

The work called for in this Agreement shall be commenced within ten (10) calendar days of the date of receipt by Contractor of the Notice to Proceed and shall be fully completed within 200 calendar days following receipt of the Notice to Proceed by the Contractor.

SECTION 6 - PREVAILING WAGE

Pursuant to Section 1770 of the Labor Code, the County has determined the Prevailing Wage Rate to be as listed by the Department of Industrial Relations, Division of Labor Statistics and Research, P.O. Box 420603, San Francisco, CA, 94101, Phone: (415) 703-4780. Complete Certified Payrolls must be submitted to the OWNER together with each application for progress payment. Electronic submittal directly to DIR may be required.

SECTION 7 - WORKERS' COMPENSATION

By my signature hereunder, as CONTRACTOR, I certify that I am aware of the provisions of Section 3700 of the Labor Code which requires every employer to be insured against liability for Workers' Compensation or to undertake self insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the work of this contract.

SECTION 8 - NOTICES

All notices shall be in writing and delivered in person or transmitted by mail. Notices required to be given to the COUNTY shall be addressed as follows:

County Administrative Office
825 5th Street, Eureka, California, 95501

Notices required to be given to CONTRACTOR shall be addressed as follows:

SECTION 9 - NUCLEAR FREE HUMBOLDT COUNTY ORDINANCE COMPLIANCE

Neither the Contractor, his Subcontractors or their suppliers are Nuclear Weapons Contractors, and are not knowingly or intentionally engaged in the research, development, production, or testing of nuclear warheads, nuclear weapons systems, or nuclear weapons components, as defined by the Nuclear Free Humboldt County Ordinance. Contractor, his Subcontractors and/or their suppliers agree to notify Owner immediately if they become a nuclear weapons contractor as defined above.

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IN WITNESS WHEREOF, The parties hereto have entered into this Agreement as of the date first above set forth.

COUNTY OF HUMBOLDT

(SEAL)

By: _____
Chairperson, Board of Supervisors of the County of Humboldt, State of California

ATTEST:

By: _____
Clerk of the Board of Supervisors of the County of Humboldt, State of California

CONTRACTOR: Corporations require signature by 2 (two) corporate officers

By: _____

Title: _____

By: _____

Title: _____

APPROVED AS TO FORM:

By: _____
Deputy County Counsel

INSURANCE CERTIFICATES REVIEWED AND APPROVED:

By: _____
Risk Manager

END OF SECTION

SECTION 00 61 13

CONSTRUCTION PERFORMANCE BOND

This Construction Performance Bond ("Bond") is dated _____, is in the penal sum of _____ and is entered into by and between the parties listed below to ensure the faithful performance of the Construction Contract identified below. This Bond consists of this page and the Bond terms and Conditions, Paragraphs 1 through 13, attached hereto. Any singular reference to ("Contractor"), _____ ("Surety"), the County of Humboldt ("Owner") or other party shall be considered plural where applicable.

CONTRACTOR:

SURETY:

Name

Name

Address

Principal Place of Business and Address

County of Humboldt
c/o Humboldt County Public Works
825 5th Street
Eureka, California 95501

CONSTRUCTION CONTRACT:
[PROJECT NAME]

Attn: PROJECT MANAGER

DATED _____, 20____, in
the amount of \$ _____.

CONTRACTOR AS PRINCIPAL
Company: _____ (Corp. Seal)

SURETY
Company: _____ (Corp. Seal)

Signature: _____

Signature: _____

Name and Title:

Name and Title:

Address

BOND TERMS AND CONDITIONS

1. The Contractor and the Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to Owner for the complete and proper performance of the Construction Contract, which is incorporated herein by reference.
2. If the Contractor completely and properly performs all of its obligations under the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond.
3. The Surety's obligation under this Bond shall arise after Owner has declared a Contractor Default under the Construction Contract pursuant to the terms of the Construction Contract.

Upon declaring the Contractor in default, the Owner shall make the Balance of the undisputed Contract Sum available to the Surety for completion of the work on the Project under the Construction Contract.

4. When Owner has satisfied the conditions of Paragraph 3, the Surety shall promptly, and in no event later than fifteen (15) working days after receipt of the notice of default, and at the Surety's sole expense, confirm in writing as to its election to take one of the following actions:
 - A. Arrange for the Contractor, with consent of Owner, to perform and complete the Construction Contract (but Owner may withhold consent in its sole discretion (with or without cause), in which case the Surety must immediately elect option 4B, 4C or 4D, below), and that such performance shall commence within an additional thirty (30) calendar days; or
 - B. Undertake to perform and complete the Construction Contract itself, through its agents or through independent contractors (other than the Contractor), and that such performance shall commence within an additional thirty (30) calendar days; or
 - C. As promptly as reasonably possible, obtain bids from qualified, responsible contractors (other than the Contractor) acceptable to Owner for a contract for performance and completion of the Construction Contract, and, upon determination by Owner that the contractor selected with Owner's concurrence is responsible, and subject to full compliance with all applicable laws as may be required (including, without limitation, any applicable competitive bidding and public contracting and procurement requirements pursuant to California and/or Federal laws, if applicable), arrange for a contract to be prepared for execution by Owner and the contractor selected with Owner's concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract and subject to the consent of Owner; and, if the Surety's obligations defined in Paragraph 6 exceed the Balance of the Contract Sum, then the Surety shall pay to Owner the amount of such excess; or
 - D. Waive its right to perform and complete, arrange for completion, or obtain a new contractor, and subject to its investigation and consultation with Owner, determine in good faith the amount for which it may then be liable to Owner under Paragraph 6 for the performance and completion of the Construction Contract and, within ten (10) additional calendar days, tender payment therefor to Owner with full explanation of the payment's calculation. If Owner accepts the Surety's tender under this paragraph 4(D), the Surety shall remain liable for future damages, then unknown or unliquidated, and including, without limitation, additional costs incurred to complete the Construction Contract and any unsatisfied liquidated damages, resulting from the Contractor Default. If Owner disputes the amount of Surety's tender under this paragraph 4(D), Owner may exercise all remedies available to it at law to enforce the Surety's liability under paragraph 6.
5. If the Surety does not proceed as provided in Paragraph 4, then the Surety shall be deemed to be in default on this Bond ten (10) calendar days after receipt of an additional written notice from Owner to the Surety demanding that the Surety perform its obligations under this Bond. At all times Owner shall be entitled to enforce any remedy available to Owner at law or under the Construction Contract including, without limitation, and by way of example only, rights to perform

- work, protect work, mitigate damages, or coordinate work with other consultants or contractors.
6. The Surety's monetary obligations under this Bond are commensurate with the obligations of the Contractor under the Construction Contract. The Surety's obligations shall include, but are not limited to:
 - A. The responsibilities of the Contractor under the Construction Contract for completion of the Construction Contract and correction of defective, deficient and/or non-compliant work;
 - B. The responsibilities of the Contractor under the Construction Contract to pay liquidated damages, and for damages for which no liquidated damages are specified in the Construction Contract, actual damages, and all damages caused by non-performance or lack of proper performance of the Construction Contract, including but not limited to, all valid and proper backcharges, offsets, payments, indemnities, and/or other damages;
 - C. Additional administrative, management, legal, design professional and delay costs resulting from the Contractor Default or resulting from the actions or failure to act of the Surety under Paragraph 4.
 7. No right of action shall accrue on this Bond to any person or entity other than Owner or its heirs, executors, administrators, or successors.
 8. The Surety hereby waives notice of any change, alteration or addition to the Construction Contract or to related subcontracts, purchase orders and other obligations, including changes of time. The Surety consents to all terms of the Construction Contract, including provisions on changes to the Contract. No extension of time, change, alteration, modification, deletion, or addition to the Contract Documents, or of the work required thereunder, shall release or exonerate Surety on this Bond or in any way affect the obligations of Surety on this Bond.
 9. Any proceeding, legal or equitable, under this Bond shall be instituted in the Superior Court for the County of Humboldt.
 10. As a part of the obligation secured under this Bond, and in addition to the face amount specified therefore, there shall be included costs and reasonable expenses and fees, including reasonable attorney's fees and expert costs, incurred by the County in successfully enforcing any obligation arising under this Bond, all to be taxed as costs and included in any judgment rendered.
 11. Notice to the Surety, Owner or the Contractor shall be mailed or delivered to the address shown on the signature page.
 12. Any provision in this Bond conflicting with any statutory or regulatory requirement shall be deemed deleted herefrom and provisions conforming to such statutory requirement shall be deemed incorporated herein.
 13. Definitions.
 - A. Balance of the Contract Sum: The total amount payable by Owner to the Contractor pursuant to the terms of the Construction Contract after all proper adjustments have been made under the Construction Contract, for example, deductions for progress payments made, and increases/decreases for approved modifications to the Construction Contract.
 - B. Construction Contract: The agreement between Owner and the Contractor identified on the signature page, including all Contract Documents and changes thereto.
 - C. Contractor Default: Material failure of the Contractor, which has neither been remedied nor waived, to perform or otherwise to comply with the terms of the Construction Contract.

END OF DOCUMENT

PAYMENT BOND

SECTION 00 62 00

LET THE FOLLOWING BE KNOWN, THAT WHEREAS, the County of Humboldt, by its order made _____, 20____, has awarded to _____, hereinafter designated as the "Principal," a contract for the work described as follows:

NOW, THEREFORE, we the Principal and _____, Surety, are held and firmly bound unto the County of Humboldt in the penal sum of _____ Dollars (\$_____), lawful money of the United States of America for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH that is said Principal, his/her or its heirs, executors, administrators, successors or assigns, shall fail to pay any of the persons named in Section 9100 of the Civil Code, or amounts due under the Unemployment Insurance Code with respect to work or labor performed by any such claimant, or for any amounts required to be deducted, withheld, and paid over to the Franchise Tax Board from the wages of employees of the Contractor and their subcontractors pursuant to Section 18806 of the Revenue and Taxation Code with respect to such work and labor as required by Sections 9550 et seq. of the Civil Code of California, then said Surety will pay for the same, in or to an amount not exceeding the amount hereinafter set forth, and also will pay in case suit is brought upon this bond, such reasonable attorney's fees, as shall be fixed by the court, awarded and taxed as in the above-mentioned statutes provided.

AND, 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 wise 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 to the specifications.

IN WITNESS WHEREOF, this instrument has been duly executed by the Principal and Surety above named, on the _____ day of _____, 20 ____.

PRINCIPAL

SURETY

BY: _____

BY _____
ATTORNEY-IN-FACT

END OF SECTION

GENERAL CONDITIONS

SECTION 00 70 00

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GC 1. DEFINITIONS

- A. COUNTY: The term "County", or pronouns in place of same where used herein, shall mean Humboldt County acting through its Board of Supervisors.
- B. BOARD: The term "Board", or pronouns in place of same where used herein, shall mean the Humboldt County Board of Supervisors.
- C. OWNER: The "Owner" is the person or entity identified as such in the Owner-Contractor Agreement; the term Owner means the Owner or their authorized representative.
- D. ARCHITECT: The term "Architect" shall mean, Nichols, Melburg & Rossetto as employed by the Owner.
- E. CONTRACTOR: The term "Contractor", where used herein, shall mean the Contractor to whom the contract for the work described and specified herein has been awarded by the Board.
- F. PLANS AND SPECIFICATIONS: The term "Plans and Specifications", where used herein, shall mean and include all specifications and provisions of every kind, whether general, detailed or otherwise, relating to the equipment, material of work, and the installation thereof, and the plans and drawings accompanying same which are made a part thereof. Such Plans and Specifications are recognized as instruments of professional service.
- G. OWNER'S REPRESENTATIVE: The term "Owner's Representative" shall mean agent assigned to the Project by Humboldt County Department of Public Works.
- H. PROJECT INSPECTOR: The term "Project Inspector" shall mean agent assigned to the Project by Humboldt County Department of Public Works.

GC 2. CONTRACT

- A. The Contract Documents include all documents identified as such in the Agreement (Section 00500), any amendments and Change Orders thereto
- B. In the execution of the work or any portion thereof, Contractor shall operate as an independent contractor and not as the agent of Owner or Architect.
- C. No verbal agreement or conversation with any officer, agent, or employee of Owner or Architect, either before or after execution of the Agreement, shall affect or modify any terms or obligations of the Contract unless duly incorporated into the Contract by written Change Order or amendment of the Contract.
- D. The Contract Documents shall not be construed to create any contractual relationship of any kind between the Architect and the Contractor, but the Architect shall be entitled to performance of obligations intended for their benefit, and to enforcement thereof. Nothing contained in the Contract Documents shall create any contractual relationship between the Owner or the Architect and any subcontractor or sub-subcontractor.

GC 3. BONDS

- A. The successful bidder, simultaneously with the execution of the Agreement, will be required to furnish a Payment Bond in an amount equal to one hundred (100%) percent of the contract price, and a faithful Performance Bond in an amount equal to one hundred (100%) percent of the contract price. The Contractor must submit a certificate from the Humboldt County Clerk's Office with all payment bonds. The Clerk's certificate must indicate that the surety is admitted to transact business in the State of California, and certify that the surety's certificate of authority, issued by the Insurance Commissioner, has not been suspended, revoked, canceled, or annulled.
- B. The bonds shall comply with Section 9554 of the Civil Code of the State of California. The payment Bond and the faithful Performance Bond shall each be in a form that is satisfactory to the County Counsel, or Risk Management of the County of Humboldt. A copy of an acceptable format is attached to the Agreement forms of these specifications.

GC 4. INSURANCE REQUIREMENTS

- A. THIS CONTRACT/AGREEMENT SHALL NOT BE EXECUTED BY COUNTY and the CONTRACTOR is not entitled to any rights, unless certificates of insurance, or other sufficient proof that the following provisions have been complied with, and such certificate(s) are filed with the Clerk of the Humboldt County Board of Supervisors.
- B. Without limiting Contractor's indemnification provided herein, Contractor shall and shall require any of its subcontractors to take out and maintain, throughout the period of this Agreement, the following policies of insurance placed with insurers with a current A.M. Bests rating of no less than A:VII or its equivalent against injury/death to persons or damage to property which may arise from or in connection with the activities hereunder of Contractor, its agents, employees or subcontractors:
 - 1. The County, its officers, employees and agents, are covered as additional insured for liability arising out of the operations performed by or on behalf of Contractor. The coverage shall contain no special limitations on the scope of protection afforded to the County, its officers, agents, and employees.
 - 2. The policy shall not be canceled or materially reduced in coverage without thirty (30) days prior written notice (10 days for non-payment of the premium) to County by certified mail.
 - 3. The inclusion of more than one insured shall not operate to impair the rights of one insured against another insured, and the coverage afforded shall apply as though separate policies had been issued to each insured, but the inclusion of more than one insured shall not operate to increase the limits of the insurer's liability.
 - 4. For claims related to this project, the Contractor's insurance is primary coverage to the County, and any insurance or self-insurance programs maintained by the County are excess to Contractor's insurance and will not be called upon to contribute with it.
 - 5. Any failure to comply with reporting or other provisions of the parties, including breach of warranties, shall not affect coverage provided to County, its officers, employees, and agents.
- C. Comprehensive or Commercial General Liability Insurance at least as broad as Insurance Services Office Commercial General Liability coverage (occurrence from CG 0001), in an amount of \$2,000,000 per occurrence. If work involves explosive, underground or collapse risks, XCU must be included. If a general aggregate limit is used, either the general aggregate limit shall apply separately to this project or the general aggregate shall be \$5,000,000. Said policy shall contain, or be endorsed with, the following provisions:
 - 1. The County, its officers, employees and agents, are covered as additional insured for liability arising out of the operations performed by or on behalf of Contractor. The coverage shall contain no special limitations on the scope of protection afforded to the County, its officers, agents, and employees.
 - 2. The policy shall not be canceled or materially reduced in coverage without thirty (30) days prior written notice (10 days for non-payment of the premium) to County by certified mail.
 - 3. The inclusion of more than one insured shall not operate to impair the rights of one insured against another insured, and the coverage afforded shall apply as though separate policies had been issued to each insured, but the inclusion of more than one insured shall not operate to increase the limits of the insurer's liability.
 - 4. For claims related to this project, the Contractor's insurance is primary coverage to the County, and any insurance or self-insurance programs maintained by the County are excess to Contractor's insurance and will not be called upon to contribute with it.
 - 5. Any failure to comply with reporting or other provisions of the parties, including breach of warranties, shall not affect coverage provided to County, its officers, employees, and agents.
- D. Automobile liability insurance with coverage at least as broad as Insurance Services Office form CA 0001 06092, Code 1 (any auto), for vehicles used in the performance of this Agreement with minimum coverage of not less than \$1,000,000 per accident combined single limit (CSL). Such policy shall contain or be endorsed with the provision that coverage shall not be canceled or materially reduced in coverage without thirty (30) days prior written notice (10 days for non-payment of premium) to County by certified mail.

- E. Workers' Compensation insurance meeting statutory limits of the California Labor Code which policy shall contain or be endorsed to contain a waiver of subrogation against County, its officers, agents, and employees and provide for thirty (30) days prior written notice in the event of cancellation.
- F. If applicable, Builder's Risk or Course of Construction, written on an "All-Risk" form, for 100% of the completed value of the insurable part of the project. The Builder's Risk policy shall provide for losses to be payable to County and the Contractor as their interests may appear, and that in the event of payment for any loss under the coverage provided, the insurer shall have no rights of recovery against County and Contractor.
- G. Contractor shall furnish County with certificates and original endorsements effecting the required coverage prior to execution of this Agreement by County. The endorsements shall be on forms as approved by the County's Risk Manager or County Counsel. Any deductible or self-insured retention over \$100,000 shall be disclosed to and approved by County. If Contractor does not keep all required policies in full force and effect, County may, in addition to other remedies under this Agreement, take out the necessary insurance, and Contractor agrees to pay the cost of said insurance.
- H. SUBCONTRACTORS: Should contractor subcontract any portion of the work to be performed under this Agreement, said subcontractors shall be required by contractor to:
 - 1. Enter into a written contract with contractor acknowledging that no employee/employer relationship exists between contractor and subcontractor and that no Workers' Compensation, unemployment benefits, or other personnel benefits are required by or available to subcontractor through contractor or County.
 - 2. Hold harmless and to indemnify, defend and save harmless contractor and County, its Board of Supervisors, officers, agents, employees and volunteers, from any and all claims and losses accruing or resulting to any and all contractors, subcontractors, material suppliers, laborers, and any other person, firm or corporation who may be injured or damaged by subcontractor in the performance of this Agreement.
- I. HOLD HARMLESS/INDEMNIFICATION CLAUSE

Pursuant to Government Code section 895.4, the parties to this Agreement shall indemnify, defend and hold harmless the other parties hereto and their officers, agents, and employees, from any and all claims, demands, losses, damages, and liabilities of any kind or nature, including attorney's fees, which arise by the virtue of its own acts or omissions (either directly or through or by its officers, agents or employees) in connection with its duties and obligations under this Agreement and any amendments hereto.

Acceptance of insurance, if required by this Agreement, does not relieve Contractor from liability under this indemnification clause. This indemnification clause shall apply to all damages or claims for damages suffered by Contractor's operations regardless if any insurance is applicable or not.

GC 5. TERMINATION OF CONTRACT

- A. Each of these general conditions, whether preceding or following this paragraph, is to be considered material and failure to comply with any of such conditions by the Contractor will be deemed a breach of contract.
- B. Should the Contractor fail to perform any of the provisions of the Contract, the Owner shall have the right, whether or not an alternative right is provided, to declare the Contract terminated. A written notice by the Owner to the Contractor that the Contract is terminated shall be deemed a complete termination of same.

C. On the Contract being so terminated, the Contractor shall, provided Contractor is ordered to do so by the Owner, immediately remove from the premises all or any materials and personal property belonging to Contractor which have not been used in the construction of the Work or which is not in place in the Work; and both Contractor and their surety shall be liable upon their bond for all damages caused to the Owner by reason of failure to complete the Contract.

D. See GC Article 29, SUFFICIENT LABOR OR MATERIAL.

GC 6. NON-CONTINUANCE OF WORK

A. Should the Contractor at any time during the progress of the Work refuse, neglect or be unable for any reason, except the documented inability to supply a sufficiency of materials or workmen necessary, to complete the Work within the time specified in the Contract, the Owner shall have the power to terminate the Contract as prescribed.

GC 7. ASSIGNMENT OF CONTRACT

A. The Contractor shall not assign or sublet the Contract in whole or in part without the prior written consent of the Owner. The Contractor shall not assign any monies due or to become due to them under the Contract without the prior written consent of the Owner.

B. Any assignments permitted under these documents or approved by the Owner shall, in addition, have prior written approval of all sureties of the Contractor executing bonds or insurance in the interest of this Contract.

C. If the Contractor seeks to assign any portions or monies as permitted, Contractor shall pay to the Owner \$1,000 to cover Owner's costs each time an assignment occurs.

GC 8. SEPARATE CONTRACTS

A. The Owner reserves the right to let other contracts in connection with this Project. The Contractor shall afford all other such contractors reasonable opportunity for storage of their materials; shall provide that the execution of their work properly connects and coordinates with theirs; and shall cooperate with them to the end of facilitating the Work.

B. The work performed or executed under other contracts in advance of work under this Contract shall be inspected and determined to be in proper condition by the Contractor before permitting related or connecting work to proceed under this Contract.

C. Contractor shall immediately notify Architect of any discrepancies, defects or other conditions found unsuitable for proper execution of the work.

GC 9. CONFERENCES

A. At any time during the progress of the Work, the Owner, Owner's Representative, or Architect shall have authority to require the Contractor to attend a conference of any or all of the contractors engaged in the Work; and any notice of such conference shall be duly observed and complied with by the Contractor.

GC 10. TERMS OF PAYMENT

A. At the end of each calendar month, the Contractor shall submit to the Owner's Representative a statement of all materials actually placed in the building during the month, the labor expended thereon, and the cost thereof; whereupon after verification by the Owner's Representative it is

found to be acceptable, a certificate for the amount less five percent (5%) thereof will be issued by the Owner's Representative except that no certificate will be issued for defective work and materials until they have been removed, replaced and made good. The Owner will also pay the costs of material on hand under the following conditions: Written approval is given by the Owner's Representative prior to requesting payment. Approved items have been inventoried by the Owner's Representative and they are stored in a safe and weather protected manner, and are major items that delay in receiving will adversely affect the construction time schedules. The Owner's Representative will issue a certificate for the certified invoice amount, less five percent (5%) thereof. The Contractor shall be paid monthly as the work progresses, the amount of each such certificate. Final payment shall be made in accordance with E. below.

- B. As a basis for determining the amount of monthly payments, the Contractor shall, before commencing the work, submit to the Owner's Representative for approval a detailed statement of all materials and labor included in their original estimate. This statement shall be so arranged that the value of the work as it progresses may be readily determined. Payment for change order work will be made if the change order work is complete and is approved prior to the Owner's Representative issuing the monthly certification of payment. The regular initial schedule of values shall be prepared and submitted by Contractor twenty (20) calendar days in advance of the time the first request for payment is due, allowing sufficient time for review, approval and modifications as may be required prior to use for said first payment. The total sum of the schedule of values shall equal the Contract Price.
- C. Acceptance of any work and payments therefore shall be made upon written recommendation of the Owner's Representative and Architect.
- D. Payments to the Contractor will be made within 30 days of an approved pay estimate in accordance with Owner's regular approval and accounting procedures, based upon statements or certificates received as issued or approved by the Owner's Representative, including written certification that complete certified payroll records have been, or will be, submitted to the Labor Commissioner as required by the California Labor Code.
- E. Thirty-five (35) days after the acceptance of the work by the Owner's Representative and Architect (provided the project has been accepted by the Board of Supervisors), the Contractor shall be entitled to the balance due for the completion and acceptance of the work, provided that all claims for labor and materials have been paid, and that no claims shall have been filed with the County based upon acts or omissions of the Contractor and that no stop notices have been filed.

GC 11. CONFLICTS OR ERRORS

- A. During construction, if any conflicts are discovered in the plans or specifications, they shall be immediately submitted to the Owner's Representative who will render an interpretation on what was intended and the Contractor agrees to furnish all things necessary by such interpretation to the satisfaction of the Owner's Representative without additional expense to the Owner.
- B. The Contractor shall not contend that any error, delay or default in their work is due to omission or ambiguity in said plans or specifications.
- C. If errors are found in the Construction Documents that can not be termed conflicts (shown, sized or called out differently in different places) the Contractor shall immediately notify the Owner's Representative within 15 calendar days following the discovery of any error so that a change order can be prepared and the item corrected prior to construction.
- D. Refer to G.C. 24, Unity of Documents.

GC 12. CHANGES TO PLANS AND SPECIFICATIONS

- A. No modification or deviation from plans and specifications will be permitted by the Contractor without prior written consent of Owner. However, within the limits allowed by law, the Contractor

agrees that Owner, without invalidating the Contract, may order extra work or make changes by altering, adding to, or deducting from the Work, the contract sum being adjusted accordingly, and that Contractor will enter into a modification of the original contract to make such changes by means of a written Change Order.

- B. Change Orders shall be signed by the Contractor, Architect and authorized representative of the Owner.
- C. All such work shall be executed under the conditions of the original contract except that any claim for extension of time caused thereby shall be adjusted at the time of ordering such change. Both parties agree that the credit to, or charge against the Owner shall be determined as follows:
 - 1. In the event that a modification results in a reduction of the amount of labor and material to be supplied by the Contractor, the Owner shall be given a credit equal to the actual value of such labor and materials plus a reasonable amount for the use of tools, materials and overhead and profit; or, in the event that a modification results in an increase in the amount of labor and materials to be supplied by the Contractor, the Owner shall pay the Contractor the actual value of such labor materials and equipment plus not more than 15% which shall cover the use of Contractor's overhead and profit. In no case shall the total of any subcontractor(s) together with the Contractor's overhead, profit, bonds and insurance exceed 15%. All costs shall be included as a lump sum price on change orders.
 - 2. Cost Estimates for all changes shall be submitted by the Contractor to the Owner's Representative for checking by the Owner's Representative and Architect. The Contractor shall submit all Cost Estimates within 15 calendar days following the discovery of any potential change. The Owner's Representative shall render a written decision as to reasonable costs within 15 calendar days of receiving cost estimate unless more time is agreed to by both Contractor and Owner's Representative.
 - 3. Any increases in cost or extension of time shall be approved by the Owner's Representative, Architect and Owner, on a signed change order.
 - 4. In the event that the Contractor, for whatever reason, does not accept the dollar amount of increase or decrease or extension of time to the contract amount in the decisions rendered by the Owner, Contractor shall, upon receiving written order from the Owner, proceed with the work called for in the Change Order on a force account basis. Any claim for dollar increases or extension of time shall be made in writing to the Owner's Representative in accordance with the provisions of GC 51, Claims Procedures.
- D. In response to a request for a proposed modification, Contractor shall promptly furnish within 15 calendar days, relevant cost breakdowns, time estimates and other information as may be required to the Owner's Representative.

GC 13. GUARANTEE

- A. The Contractor shall be held responsible to make-good any defects due to faulty, improper or inferior workmanship or materials arising or discovered in any part of the Work within one (1) year after the completion and final acceptance of the same by the Owner's Representative, Architect and Owner unless a longer period is called for in the Technical Specification Sections.
- B. Acceptance of the Work by the Owner's Representative, Architect or Owner shall in no way absolve the Contractor from the responsibility of complying with the provisions of the plans and specifications and other contract documents, even though deviations may not be discovered within the aforementioned one year period.
- C. The bond for faithful performance furnished by the Contractor shall cover such defects and protect the Owner against them and remain in force during the one year guarantee period.

GC 14. INTERPRETATIONS

- A. The Contractor shall comply with the obvious intent and meaning of the plans and specifications which shall be construed to include all material, measures and modes or work necessary to complete the work required in a workmanlike manner, in strict accordance with these plans and specifications, and to the satisfaction of the Owner.
- B. Should any question arise as to the intent and interpretation of the plans or specifications, the Contractor shall promptly, upon discovery thereof, refer the same in writing to the Owner's Representative, whose decision thereon shall be final.

GC 15. DECISIONS BY ARCHITECT AND/OR OWNER'S REPRESENTATIVE

- A. The Owner's Representative shall, in all cases, determine whether the amount and quality of the several kinds of work which are to be paid for under the Contract are in accordance with the plans and specifications.
- B. The Owner's Representative shall have power to cause all or any part of the work to be expedited with greater diligence when delayed or stopped.
- C. When requested by the Owner's Representative, the Architect's decisions in matters relating to artistic effect will be final if consistent with the intent of the Contract Documents.
- D. Where not involving a change in the agreed Contract Price or Completion Time, and not inconsistent with the intent of the Contract Documents, the Owner's Representative shall have authority to:
 - 1. Correct any errors or inconsistencies in, and make any deletions from or additions to the drawings and specifications;
 - 2. Order minor changes or adjustments in the work, whether by field order, notations on Contractor's submittals, or other instructions;
 - 3. Order certain portions of the work delayed when particularly involved with or affected by any Change Order in process or being considered by Owner.
- E. The Owner's Representative will be the interpreter of the requirements of the Contract Documents and the judge of the performance thereunder by both the Owner and Contractor.
- F. The Architect through the Owner's Representative will render interpretations necessary for the proper execution or progress of the Work, with reasonable promptness and within fifteen calendar days.
- G. Claims, disputes and other matters in question between the Contractor and the Owner relating to the execution or progress of the Work or the interpretation of the Contract Documents shall be referred to the Owner's Representative for decision which the Owner's Representative will render in writing with a reasonable promptness and within fifteen calendar days.

GC 16. ADMINISTRATION OF THE CONTRACT

- A. The Owner's Representative will provide administration of the Contract. Maintenance of the Project records for the contract shall be as prescribed by the Owner's Representative and as hereinafter described.
- B. The Owner's Representative will be the representative of the Owner during construction and until final payment is due. The Architect will advise and consult with the Owner's Representative and Owner. The Owner's instruction to the Contractor shall be forwarded through the Owner's Representative. The Owner's Representative will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents, unless otherwise modified by written instrument.

- C. The Owner's Representative or Architect will not be responsible for and will not have control or charge of construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the Work, and will not be responsible for the Contractor's failure to carry out the Work in accordance with the Contract Documents. The Owner's Representative or Architect will not be responsible for or have control acts or omissions of the Contractor, Subcontractors, or any of their agents or employees, or any other persons performing any of the Work.
- D. The Owner's Representative and Architect shall at all times have access to the Work wherever it is in preparation and progress. The Contractor shall provide facilities for such access so the Owner's Representative and Architect may perform their functions under the Contract Documents.
- E. Based on the Owner's Representative and Architect's observations and an evaluation of the Contractor's Applications for Payment, the Owner's Representative will determine the amounts owing to the Contractor and will issue Certificates for Payment in such amounts as provided in GC Article 10.
- F. The Owner's Representative shall, upon receipt of a complete submittal from the Contractor, make the submission to the Architect. The Architect shall review and take appropriate action on shop drawings, product data, samples, and other submittals required by the Contract Documents. Such review shall be only for general conformance with the design concept and general compliance with the information given in the Contract Documents. It shall not include review of quantities, dimensions, weights or gauges, fabrication processes, construction methods, coordination with the work of other trades, or construction safety precautions, all of which are the sole responsibility of the Contractor. The Architect's review shall be conducted with reasonable promptness, and within 15 calendar days unless otherwise noted, consistent with sound professional practice. Review of a specific item shall not indicate acceptance of an assembly of which the item is a component. The Architect shall not be required to review and shall not be responsible for any deviations from the Contract Documents not clearly noted by the Contractor, nor shall the Architect be required to review partial submissions or those for which submissions for correlated items have not been received.
- G. The Owner's Representative will prepare Change Orders in accordance with GC Article 12.
- H. The Contractor shall provide sufficient, safe and proper facilities at all times for the full inspection of the Work by the Architect or other representatives of the Owner, at the project site and at the various other locations where project is being performed.
- I. The Owner's Representative and Architect will have authority to reject Work which does not conform to the Contract Documents. Whenever, in their opinion, the Owner's Representative and Architect considers it necessary or advisable for the implementation of the intent of the Contract Documents, the Owner's Representative or Architect will have authority to require special inspection or testing of the Work in accordance with GC Article 31, whether or not such Work be then fabricated, installed or completed. However, the Owner's Representative and Architect's authority to act under this Subparagraph and any decision made by them in good faith to exercise or not to exercise such authority, shall not give rise to any duty or responsibility of the Owner's Representative or Architect to the Contractor, and Subcontractor, any of their agents or employees, or any other person performing any the Work.
- J. The duties, responsibilities and limitations of authority of the Owner's Representative as the representative of the Owner during construction as set forth in the Contract Documents will not be modified or extended without written consent of the Owner.

GC 17. NON-CONFORMING WORK

- A. The fact that the work and materials have been inspected from time to time and payments on account have been made, shall not relieve the Contractor from the responsibility of replacing and making good any defective work or materials that may be discovered within one year from the

date of completion of the Work by the Contractor and its approval by the Owner's Representative, Architect, and its acceptance by the Owner.

- B. Failure of Owner's Representative, Architect or Owner to object to any defects in work or material or variances from the plans and specifications during or after construction shall not be deemed a waiver by Owner, Owner's Representative or Architect of such defects or variances; nor by such failure shall Owner, Owner's Representative or Architect be deemed stopped from requiring Contractor to correct such defects or variances.
- C. At Owner's sole option, if Owner prefers to accept non-conforming work, Owner may do so instead of requiring its removal and correction, in which case a Change Order will be issued to reflect an appropriate reduction in the Contract Sum, or if the amount is determined after final payment it shall be paid by the Contractor.
- D. Uncovering of Work:
 - 1. If any portion of the Work should be covered contrary to the request of the Owner's Representative, Architect or to requirements specifically expressed in the Contract Documents, it must, if required in writing by the Owner's Representative, be uncovered for their observation and shall be replaced at the Contractor's expense.
 - 2. If any other portion of the Work has been covered which the Owner's Representative or Architect has not specifically requested to observe prior to being covered, the Owner's Representative or Architect may request to see such Work and it shall be uncovered by the Contractor. If such Work be found in accordance with the Contract Documents, the cost of uncovering and replacement shall, by appropriate Change Order, be charged to the Owner. If such Work be found not in accordance with the Contract Documents, the Contractor shall pay such costs unless it be found that this condition was caused by the Owner or a separate contractor as provided in GC 8 above, in which event the Owner shall be responsible for the payment of such costs.

GC 18. OWNERSHIP OF DOCUMENTS

- A. All plans and specifications shall remain the property of the Owner and shall be returned to the Owner's Representative or shall be accounted for by the Contractor before the final acceptance of building by the Owner.
- B. Documents for this project shall not be used on or for any other work or purposes without express written consent of Owner's Representative, Architect and Owner.

GC 19. DOCUMENTS FURNISHED

- A. The Contractor will be supplied ten (10) sets of Contract Documents for use in the Work.
- B. Additional sets of Contract Documents may be obtained from Architect, at cost, at Contractor's expense.

GC 20. DRAWING DIMENSIONS

- A. The general dimensions are shown in figures on the drawings furnished to the Contractor. These figured dimensions shall invariably have preference to scaled measurements; but the Contractor shall exercise proper caution and care to verify the figures before laying out the Work, and shall be held responsible for any omissions or errors therein that might have been avoided.

GC 21. DETAILED DRAWINGS

- A. Drawings and details may be furnished to the Contractor as work progresses, showing in more elaboration the work intended to be done and the Contractor shall conform to them as being a part of the Contract.
- B. No work shall be performed in advance of the receipt by the Contractor of such detailed drawings, except such work as the Owner's Representative shall order in writing to be done without details. Any complaint as to the character and extent of the details shall be made to the Owner's Representative within ten days after the Contractor has received the same. The Contractor shall notify the Owner's Representative in ample time as to when the Contractor will require these drawings so they may be prepared without causing any delay to the Work.

GC 22. SUBMITTALS

- A. Shop Drawings are drawings, diagrams, schedules and other data specially prepared for the Work by the Contractor or any Subcontractor, manufacturer, supplier or distributor to illustrate some portion of the Work.
- B. Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information furnished by the Contractor to illustrate a material, product or system for some portion of the Work.
- C. Samples are physical examples which illustrate materials equipment or workmanship and establish standards by which the Work will be judged.
- D. The Contractor shall review, approve and submit, with such promptness as to cause no delay in their own work or in that of any other contractor, copies of all Shop Drawings or Setting Drawings, Schedules for the Work of the various trades and samples of materials and finishes required for the Work, together with information or supporting data as may be required or called for. The Owner's Representative will pass upon them with reasonable promptness in accordance with GC Article 16. The Contractor shall make any corrections required by the Owner's Representative or Architect and resubmit corrected copies.
- E. Samples required or called for shall be exactly as specified for and intended to be used in the work; and Shop Drawings shall accurately portray the Work required. Materials, finishes and workmanship shall be equal in every respect to that of the reviewed submittals.
- F. Submittals shall be delivered as directed by the Owner's Representative, postage or delivery charges prepaid by the Contractor in all cases. Samples returned upon request from the Contractor shall be returned by collect mail, parcel post or any carrier named by Contractor.
- G. The furnishing by the Contractor or the review by the Architect of drawings, samples, schedules or other data shall not relieve the Contractor from responsibility for deviations from drawings or specifications, nor shall it relieve them of responsibility for errors of any sort in shop drawings, schedules or other submittals.
- H. By approving and submitting Shop Drawings, Product Data and Samples, the Contractor represents that they have determined and verified all materials, field measurements, and field construction criteria related thereto, or will do so, and that they have checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.
- I. Each Submittal shall be properly identified as required by the Owner's Representative.
- J. Deviations from requirements of Contract Documents, errors, inconsistencies with submittals previously made to or reviewed by Architect, and corrections to dimensions or supporting data shall be clearly identified by the Contractor by notations on the submittals or attached explanations.

- K. No portion of the Work requiring submission of a Shop Drawing, Product Data or Sample shall be commenced until the submittal has been reviewed by the Architect as provided in Subparagraph of GC Article 16. All such portions of the Work shall be in accordance with reviewed submittals.

GC 23. SURVEY AND LAYOUT

- A. All work pertaining to this Contract shall be laid out on the premises by the Contractor who shall be held responsible for its correctness.
- B. The Contractor shall retain and pay for the services of a registered Engineer or licensed surveyor, when applicable, who shall lay out the main lines of the building and other improvements at the site and provide other primary lines, pile locations and levels as may be required.
- C. All stakes, benchmarks, survey marks, monuments and other line or level points which have been or may be established in the building or on or about the premises shall be carefully preserved and respected by the Contractor.
- D. On-site work shall be laid out to properly meet existing off-site work not required to be removed or replaced, or to lines and levels established by civil authorities having jurisdiction, as applicable to conditions at the place of the Work.

GC 24. UNITY OF DOCUMENTS

- A. The Plans and Specifications are one document and any work shown, required or called for in the one and not in the other, or vice versa, shall be furnished or performed as though it were shown, required or called for in both.
- B. The Contractor admits and agrees that the Contract Documents exhibit the intent and purpose of the Owner in regard to the Work, and that they are not complete in every detail and are to be considered as showing the purpose and intent only; and Contractor further agrees to furnish all labor or material for any detail that is necessary to carry out said intent and purpose without extra charge to the Owner.
- C. The misplacement, addition or omission of any word, letter or punctuation mark shall in no way change the intent, purpose of meaning or the Plans and Specifications.
- D. Any part of the Work or any article or detail pertaining thereto which is not specifically set forth in the Specifications or shown on the Drawings, but which is necessary for the proper completion of the Work, shall be furnished and installed at the Contractor's expense the same as if it had been partly or fully shown or specified. The Contractor shall do and furnish all things necessary to make a complete and workmanlike job in accordance with the intent and purpose of the Contract Documents.

GC 25. INSPECTION BY CONTRACTOR

- A. The Contractor shall inspect, review, compare and familiarize himself with the Contract Documents and the premises of the Work, and shall at once report to the Architect, in writing if requested, any error, omission or inconsistency within the documents or between information given and conditions observed or found at the premises.
- B. The Contractor shall make a close inspection of all materials as delivered, and shall promptly return all damaged or defective materials without waiting for their rejection by the Owner's Representative, Project Inspector, or Architect.
- C. Before beginning any of the work, the Contractor shall examine all construction and work of other contractors or trades that may affect this work, and to satisfy that everything is in proper condition to receive this work; and shall at once notify the Owner's Representative, in writing if requested, of

any exception taken to any construction or condition so affecting this work, whether placed under this Contract or other contracts.

- D. Failure to file with the Owner's Representative any notice to the contrary shall constitute acceptance by the Contractor of the construction of other contractors or trades as being suitable in all ways to receive their work, except as to defects which later develop in the work of other contractors after the execution of their own work.
- E. Contractor's inspection of documents and premises shall include making known to himself the general and particular location, nature and character of the project work, the physical and contractual conditions, provisions and requirements, the nature and extent of work and equipment to be furnished by Owner, and the limitations and various other aspects relative to this project, including all coordination necessary for proper and timely execution of the Work.
- F. Owner will not consider any claims whatsoever on account of Contractor's failure to fully investigate or determine their requirements in advance of commencing the work or the conditions of the work throughout its progress.

GC 26. DEVIATION FROM PLANS OR SPECIFICATIONS

- A. No deviations shall be made from the plans or the specifications. If the Contractor shall vary from the plans the amount or value of the materials herein provided for, the Owner shall have the right to order such improper work or materials removed or replaced; any other work disturbed or damaged by such alteration shall be made good at the Contractor's expense.

GC 27. STANDARDS OF MATERIALS

- A. Wherever the name or brand of a manufacturer's article is specified herein, it is used as a measure of quality and utility; a standard.
- B. If the Contractor desires to use any other brand or manufacturer of equal quality and utility to that specified, Contractor shall make application to the Owner's Representative in writing, and submit samples if requested. The Architect will then determine whether or not the named brand or article is equal in quality and utility to that specified and Architect's decision shall be final. Submit at least 14 days prior to bid date. Refer to sections of Technical Specifications for these items.

GC 28. QUALITY OF MATERIALS AND LABOR

- A. All materials used on this Contract shall be new and the best market quality unless specified or shown otherwise. All labor used on this Contract shall be competent and skilled for the Work. All Work executed under this Contract shall be done in the best, most thorough, substantial and workmanlike manner. All material and labor shall be subject to the approval of the Architect as to its quality and fitness, and shall be immediately removed if it does not meet with approval. The Owner's Representative may refuse to issue a Certificate of Payment for unapproved work until all defective materials or work have been removed and other material of proper quality substituted therefore.

GC 29. SUFFICIENT LABOR OR MATERIALS

- A. Should the Contractor abandon the Work called for under these specifications, or seek to assign this Contract, or if at any time the Owner's Representative shall be of the opinion and so certify in writing to the Owner that the Contractor is unnecessarily and unreasonably delaying the work, or that the Contractor is willfully violating any of the conditions or provisions of the plans and specifications, or is performing their work in bad faith, the Owner shall, in addition to all other remedies provided by Contract or by law, after seven (7) days written notice to the Contractor, have the power to notify the Contractor to discontinue all work or any part thereof under this Contract; and thereupon, the Contractor shall cease to continue said Work or such part thereof as the Owner may designate, and the Owner shall thereupon have the power to obtain by contract,

purchase or hire, such implements, tools, labor or materials by contract or otherwise, as Owner may deem advisable, to work at and be used to complete the Work herein described, or such part thereof as the Owner's Representative shall certify has not been completed, and to use such material as it may find at the building site. The expenses so incurred in the process shall be deducted by the Owner out of such monies as may either be due or may at any time thereafter become due to the Contractor under and by virtue of these plans and specifications, or any part thereof.

- B. If the unpaid balance of the Contract Sum exceeds the cost of finishing the Work, including compensation for the Owner's Representative or Architect's additional services made necessary thereby, such excess shall be paid to the Contractor. If such costs exceed the unpaid balance, the Contractor or their bondsmen shall pay the difference to the Owner on notice to either from Owner. The amount to be paid to the Contractor or to the Owner, as the case may be, shall be certified by the Owner's Representative, upon application, in the manner provided in GC Article 10, and this obligation for payment shall survive the termination of the Contract.

GC 30. OLD MATERIAL

- A. Old material shall not be used.
- B. Construction materials or other items used or placed in the work later shall be considered old materials and not reused.

GC 31. TESTS

- A. Contractor shall comply with the requirements set forth in Division 1, General Requirements Sections.

GC 32. PATENT RIGHTS, COPYRIGHTS, TRADE NAMES AND ROYALTIES

- A. The Contractor shall indemnify and save harmless the Owner and authorized persons acting for the Owner against all liability on account of any patent rights, copyrights or trade names which may affect the articles or materials or their application under the Contract.
- B. The Contractor shall pay all royalties or other charges that may arise due to methods, types of construction, processes, materials or use of equipment and shall hold the Owner harmless from any claims or charges whatsoever which may arise; and shall furnish written assurance satisfactory to the Owner that such charges have been paid.

GC 33. COMPLIANCE WITH BUILDING LAWS

- A. The Contractor shall conform to and abide by all applicable city, county, regional, state and federal building, labor, sanitary, health and safety laws, ordinances, rules and regulations as currently adopted or enforced, including Part 1 & 2 of Title 24, Calif. Code of Regulation and the International Building Code; a copy of Title 24, CCR and the current California Building Code shall be kept at the job site at all times by the Contractor. Such laws and regulations shall be considered a part of these specifications the same as if set forth herein full, and all work hereunder shall be executed in accordance therewith.
- B. All work and materials shall be in full accordance with the latest rules and regulations of the State Fire Marshal, the Safety Orders of the Division of Industrial Safety, the National Electric Code, the Uniform Plumbing & Mechanical Codes published by the International Association of Plumbing and Mechanical Officials, and other applicable state laws or regulation including all of Title 24, Calif. Code of Regulation. Nothing in these plans or specifications is to be construed to permit work not conforming to these codes.

GC 34. PERMITS AND LICENSES

- A. Unless otherwise provided in the Contract Documents, the Owner shall give all notices and procure and pay for permits and governmental fees, licenses and inspections necessary for the proper execution and completion of the Work which are customarily secured after execution of the Contract and not excluded in Paragraph D below.
- B. LICENSES: Professional, trade, business and other licenses required by state statute or local government are entirely the responsibility of the Contractor and Subcontractors, and shall be prerequisite to submitting a bid proposal or performing work on the Project.
- C. PERMITS:
1. Permits shall also include any cash deposits, returnable or otherwise, required by authorities having legal jurisdiction to make such demands;
 2. Owner reserves the right to cancel and declare null and void the Contract should any legal permit be refused or not issued for any reason;
 3. Due to cancellation for said reasons, Owner will not consider any claims by Contractor for loss of anticipated profits; or for work performed or materials procured prior to obtaining all permits required herein.
 4. The Contractor shall obtain Encroachment Permits from the City of Eureka, County of Humboldt, and CalTrans as needed.
- D. Contractor shall procure and deliver to the Owner's Representative, in forms prescribed and complete with dates and authorized signatures, all certificates of inspection, testing or approvals required of or by State or Civil authorities having legal jurisdiction or any public authority bearing on the performance of the Work.
- E. The Contractor shall give all notices and comply with all laws, ordinances, rules, regulations and lawful orders of any public authority bearing on the performance of the Work.

GC 35. TEMPORARY FACILITIES

- A. The Contractor shall provide and maintain a temporary field base of operation on the sites. Said base of operation shall be for the exclusive use of the Contractor; and shall be wind and weatherproof, furnished with sufficient lighting to permit reading of blueprints. A complete set of plans and specifications shall be kept continuously at each site. When vacated, said structure shall be removed and the work in that area completed in accordance with the Contract requirements. Based on need, Contractor shall maintain and pay for all utilities and fuels; shall provide maintenance and other services necessary for proper use and operation; and comply with related provisions as specified.
- B. The Contractor shall maintain a viable communications system at each site acceptable to the Owner's Representative, and shall maintain the same until the final completion of the Contract and the acceptance of the Work. The Owner's Representative, Architect and Inspector shall have free and unrestricted use of this communications system for all purposes in conjunction with the Work.
- C. The Contractor shall provide water closets and urinals for use by their employees and subcontractors and their employees, and in no case shall the permanent plumbing fixtures of buildings on the site be used for this purpose without the written consent of the Owner's Representative.
- D. The Contractor and each subcontractor shall furnish, at their own expense, all tools, equipment, appliances, materials, scaffolding or other means necessary for the entire completion of the Work; and shall be responsible for the care and guarding of same.
- E. The Contractor and each subcontractor shall erect and maintain where necessary to the progress and completion of the Work, all exterior and interior scaffolding which shall be erected in

accordance with the safety rules of the State of California; and use of which shall be unrestricted for all persons performing work on the Project.

- F. The Contractor shall pay the cost of all water, gas and electricity used by their employees or subcontractors during the process of the Work, or as required for temporary services or tests and inspections.
- G. Also refer to Division 1, General Requirements Sections.

GC 36. LIABILITY FOR ACCIDENTS

- A. The Contractor shall be liable for any and all loss, accident, neglect, injury, or damage to person, life or property which may be the result of or may be caused by their building operations or their execution of this Contract, and for which the Owner might be held liable; and shall protect and indemnify the Owner, the Owner's Representative, the Project Inspector, the Architect, and/or any officer, agent or employee of the Owner and hold them harmless in every way from all claims and from all suits or actions at law for damage or injury to persons, life or property that may arise or be occasioned in any way because of their building operations or their execution of this Contract.
- B. Safety Precautions and Programs:
 - 1. The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work.
- C. The Contractor shall assume the full responsibility for personnel safety on the project and the means and methods of construction that pertain to personnel safety. Contractor is responsible that such means and methods of construction are adequate to provide safety to all personnel while accomplishing all requirements and standards of the Contract Documents. The Owner, Architect, Inspector and/or their representatives have no obligation, responsibility, or jurisdiction over safety or means and methods of construction that pertain to personnel safety on the project.

GC 37. ACCIDENT PREVENTION

- A. The Contractor shall erect and maintain, as required by existing conditions and progress of the Work, all reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards, and any other necessary construction required to secure safety of life or property; and shall maintain during all night hours sufficient lights to prevent accidents or damage to life or property.
- B. No earth, building, temporary or other structure shall be loaded, used or stressed so as to endanger its safety.
- B. In the event of an emergency affecting the safety of persons or property, the Contractor shall act, at their discretion, to prevent threatened damage, injury or loss. Claims by Contractor on account of alleged emergency actions shall be filed in writing with the Owner's Representative.

GC 38. EXISTING PREMISES AND IMPROVEMENTS

- A. The Contractor shall care for, preserve and protect existing structures, utilities and other features, fixtures or improvements at the premises, including adjacent or co-terminus properties which are not required to be removed or altered by reason of work under this Contract; and shall, likewise, care for and protect work or improvements newly placed or recently installed at the premises. Any part or portion of said existing or newly placed improvements which are removed, damaged or disturbed because of this work, shall be replaced, cleaned or otherwise returned to the original condition entirely at the expense of the Contractor.
- B. The removal and/or replacing of any existing structure, pipe, conduit, pavement or other existing improvement necessary for the proper completion of any work under the Contract shall be

performed by the Contractor, and no claim for extra work shall be made on account of such removal and replacement.

- C. In case it shall be necessary to remove any telephone, telegraph or electrical power transmission poles, water pipes, electrical conduits, or underground structures of any character, or any portion thereof, the Owner or their agents shall be notified by the Contractor and the Contractor shall make the necessary arrangements for such removal. The right is reserved to the Owner and to gas, water, telephone, telegraph and electrical power transmission companies to enter upon the Work for purpose of making repairs and changes that have become necessary by reason of work related to the Project.
- D. The Contractor shall thoroughly investigate all existing poles, wires, pipes and conduits above and below ground and shall provide for the maintenance or replacing of same, in good condition and at no expense to the Owner. Any necessary new or additional pipe or materials shall be furnished by the Contractor at their expense.
- E. At the completion of the Work, the Contractor shall furnish the Owner's Representative with a written certificate from the owner of each and all conduits, pipes or structures to the effect that such replacements and maintenance have been satisfactorily performed.
- F. The Contractor shall amply protect all work or improvements, set in the building or at the premises, against any possible damage; and shall furnish all necessary building paper, rough boarding or other means or materials necessary therefore.
- G. Also refer to Division 1, General Requirements Sections.

GC 39. USE OF PREMISES AND CLEAN-UP

- A. During the progress of the Work, materials shall be neatly stacked at such points so as not to interfere with site access and shall be properly cared for and protected against damage by weather or other causes. Project staging and parking area are defined in the plans.
- B. In the case where there are several contractors operating at one time, arrangements must be made to allow the joint use of storage space so as to prevent delays in the work and unnecessary inconveniences.
- C. At the end of each working day, or as directed by the Owner's Representative, Project Inspector or Architect, the Contractor shall clean the building, premises, streets and adjacent properties of accumulated rubbish, debris, unnecessary appliances or any unused material which may constitute an obstruction to the progress or completion of the Work, whether the same was caused by their work or by the work of other crafts. Failure by the Contractor to maintain the site and building premises in a safe and clean condition will be considered a breach of contract and Contractor agrees to pay Owner for costs to have site cleaned or deduct said costs from any money due the Contractor under the contract.
- D. At the completion of the Work, and as one of the requisites thereof, the Contractor shall remove any and all tools, construction equipment, machinery, surplus materials, appliances, rubbish, packing, debris or other extraneous matter of any kind from the building, premises, sidewalks, streets or adjacent premises; Contractor shall go over all of their work and put the same in perfect order and condition and in strict accordance with the terms of the Contract; and shall repair or replace all damaged, broken or stained parts of their work, whether so injured by their workmen or others.
- E. No advertising signs of any kind shall be displayed on the building, premises, fences, offices or elsewhere upon the job, except the Project sign as called for in the specifications.
- F. At the completion of each phase of work of each kind of work or activity, the areas so used or involved shall be left in a "broom clean" condition daily unless otherwise more particularly required.

GC 40. DIRECTION OF THE WORK

- A. The Contractor shall have control or charge over their Subcontractors; shall be responsible to the Owner for the acts and omissions of their employees, subcontractors and their agents and employees, and other persons performing any of the Work under a contract with the Contractor, and for all orders or instructions from the Owner, Owner's Representative or the Architect.
- B. It shall be the Contractor's duty to see that all of the subcontractors commence their work properly at the proper time and carry it on with due diligence as not to cause delay or injury either to work or materials; and that all damage caused by them or their workmen be properly made good by them or by himself at no cost to the Owner.
- C. The Contractor shall keep on the Work Site at all times and until the acceptance certificate is issued, a competent Project Manager and Project Superintendent for the purpose of receiving and executing without delay any orders in keeping with the terms of the Contract issued by the Owner, Owner's Representative or Architect. This Superintendent shall have charge of Plans and Specifications kept on the job; shall be instructed to be familiarized closely with all the provisions of the plans and specifications and to follow them in a precise manner.
- D. If at any time the Superintendent or workman who shall be employed by the Contractor or any of their Subcontractors shall be declared by the Owner's Representative to be incompetent or unfaithful in executing the work, then the Contractor upon receiving written notice shall, forthwith, dismiss such person and shall not again employ him on any part of the Work.
- E. Contractor shall supervise and direct the Work using their best skill and attention, and shall be solely responsible for all construction means, methods, techniques, sequences and procedures and for coordinating all portions of the work under the Contract; except that said responsibilities shall not be construed to permit use of any material, process, method or means if they are deemed unsuitable by Owner's Representative.
- F. Processing of Change Orders, Cost Estimates and like administrative matters, shall follow the procedures established and approved by the Owner at commencement of Work under the Contract. Change orders and other forms shall be as approved by the Owner's Representative or otherwise required or directed by Owner. Refer to GC 12.
- G. Review of Contract Documents: The Contractor shall carefully study and compare the Contract Documents and shall at once report to the Architect through the Owner's Representative any conflict, error, inconsistency or omission Contractor may discover. Refer to GC 11 A.
- H. The Contractor shall not be relieved from their obligations to perform the Work in accordance with the Contract Documents by the activities or duties of the Owner's Representative in their administration of the Contract, or by inspections, tests or approvals required or performed under GC 31, by person other than the Contractor.
- I. Progress Schedule:
 - 1. The Contractor shall prepare and submit to the Owner's Representative with copy to the Architect and the Construction Inspector the Contractor's Initial Construction Schedule within ten (10) calendar days after date on the Notice to Proceed. The Contractor's Initial Construction Schedule shall be comprised of either a Detailed Bar Chart, if the contract value is less than one million dollars (\$1,000,000), or a Critical Path Method network, if the contract value is one million dollars (\$1,000,000) or more. The Contractor's Initial Construction Schedule shall show the dates on which each part or division of the work is expected to be started and completed, and shall show all submittals associated with each work activity, allowing a minimum of fifteen (15) calendar days (per GC 16 F) for the Architect's review of each submittal unless a longer period of time is specified elsewhere in these Contract Documents. The work activities making up the schedule shall be of sufficient detail to assure that adequate planning has been done for proper execution of

- the work and such that, in the sole judgment of the Owner, it provides an appropriate basis for monitoring and evaluating the progress of the work. The schedule shall show the interdependence of each activity and a single critical path. The Contractor shall also submit a separate progress schedule listing all submittals required under the contract and when it is anticipated that each submittal will be submitted.
2. The Contractor's Initial Construction Schedule shall show the sequence, duration in calendar days, and interdependence of activities required for the complete performance of all work. The Contractor's Initial Construction Schedule shall begin with the date of issuance of the Notice to Proceed and conclude with the date of final completion.
 3. Float, slack time, or contingency within the schedule (i.e., the difference in time between the project's early completion date and the required contract completion date), and total float within the overall schedule, is not for the exclusive use of either the Owner or the Contractor, but is jointly owned by both and is a resource available to and shared by both parties as needed to meet contract milestones and the contract completion date.
 4. The Contractor shall not sequester shared float through such strategies as extending activity duration estimates to consume available float, using preferential logic, or using extensive crew/resource sequencing, etc. Since float time within the schedule is jointly owned, no time extensions will be granted nor delay damages paid until a delay occurs which extends the work beyond the Contract completion date. Since float time within the construction schedule is jointly owned, it is acknowledged that Owner caused delays on the project may be offset by Owner caused time savings (i.e., critical path submittals returned in less time than allowed by the contract, approval of substitution requests which result in a savings of time to the Contractor, etc.) In such an event, the Contractor shall not be entitled to receive a time extension or delay damages until all Owner caused time savings are exceeded and the contract completion date is also exceeded.
 5. Comments made by the Owner on the Contractor's Initial Construction Schedule during review will not relieve the Contractor from compliance with the requirements of the contract documents. The review is only for general conformance with the scheduling requirements of the contract documents. Upon the Owner's request, the Contractor shall participate in the review of the Contractor's Initial Construction Schedule submissions (including the original submittal, all update submittals, and any re-submittals). The Owner may request the participation of subcontractor in these reviews, as determined necessary by the Owner. All revisions shall be resubmitted within fifteen (15) calendar days after the Owner's review.
 6. The submittal of a fully revised and acceptable Contractor's Initial Construction Schedule shall be a condition precedent to the processing of the first monthly payment application.
 7. On any project with a construction value equal to or greater than one million dollars (\$1,000,000), the Contractor must submit a Critical Path Method (CPM) network. The network shall provide a workable plan for monitoring the progress of all the elements of the work, establish and clearly display the critical elements of the work, forecast completion of the construction, and match the contract duration in time. Exclusive of those activities for submittal review and material fabrication and delivery, activity duration shall not be less than one (1) or more than thirty (30) calendar days, unless otherwise approved by the Owner. In addition to the detailed network diagram, the Contractor shall submit the following reports with the original submittal and all updates and revisions:
 - a. Predecessor/Successor Report or a list showing the predecessor activities and successor activities for each activity in the schedule.
 - b. Activity Report sorted by early start or a list showing each activity in the schedule, arranged by early start dates.
 8. Regardless of which schedule method the Contractor elects to use in formulating the Contractor's construction schedule, and unless the Owner's Representative in writing each month, specifically waives this requirement, an updated construction schedule shall be submitted to the Owner's Representative five (5) days prior to the submittal of the Contractor's monthly payment request. The submittal of the updated construction schedule which satisfies the requirements of the Contract Documents accurately reflects the status of the work, and incorporates all changes into the schedule, shall be a condition precedent to the processing of the monthly payment application. Updated schedules shall

also be submitted at such other times as the Owner may direct. Upon approval of a change order or issuance of a direction to proceed with a change, the approved change shall be reflected in the next schedule update submittal by the Contractor, or other update submittal approved by the Owner.

9. If completion of any part of the work, the delivery of equipment or materials, or submittal of the Contractor submittals is behind the updated construction schedule and will impact the end date of the work past the contract completion date, the Contractor shall submit in writing, a plan acceptable to the Owner for completing the work on or before the current contract completion date.
 10. No time extensions shall be granted nor delay damages paid unless the delay can be clearly demonstrated by the Contractor on the basis of the updated construction schedule current as of the month the change is issued or the delay occurred and which delay cannot be mitigated, offset, or eliminated through such actions as revising the intended sequence of work or other means. Contractor shall submit all disputes or claims under the provisions of GC 51, Claims Procedure, otherwise it shall be waived.
 11. As a condition precedent to the release of retained funds, the Contractor shall, after completion of the work has been achieved, submit a final Contractor's construction schedule which accurately reflects the manner in which the project was constructed and includes actual start and completion dates for all work activities on the construction schedule.
- J. The Contractor shall forward all communications to the Owner and Architect through the Owner's Representative.

GC 41. CUTTING, FITTING AND PATCHING

- A. The Contractor shall do all cutting, fitting and patching of Work that may be required to make its several parts come together properly, and prepare it to join or be joined by the work of other contractors; and Contractor shall make good after them.
- B. The Contractor shall not endanger any work by cutting, digging or otherwise; and shall not cut or alter the work of any other contractor without the written consent of the Architect; and shall not cut a beam, timber or support of any kind without the consent of the Architect. Under no circumstances shall any principal brace, timber, truss, support or other structural member be cut or structurally weakened in any way.
- C. Where the construction is required to join with or match existing work, it shall be finished exactly similar to that work so as to form complete, unified and finished work.
- D. Contractor shall be responsible for and particularly supervise each and every operation and all work which in any way may affect the structural integrity of the various works, including below, or, or above grade structures, and whether for temporary or permanent work.
- E. Any cost for repairs or restoration caused by cutting, digging or otherwise due to ill-timed or defective work shall be borne by the Contractor.
- F. Also refer to Division 1, General Requirements Sections.

GC 42. RIGHT TO OCCUPY OR USE

- A. The Owner reserves the right to occupy or use any part or parts, or the entirety of the building and/or grounds when the Owner deems the same may be safe for use or occupancy.
- B. The exercising of this right shall in no way constitute an acceptance of such parts, or any part of the work, nor shall it in any way affect the dates and times when payments shall become due from the Owner to the Contractor, nor shall it in any way prejudice the Owner's right under the Contract or any bonds guaranteeing the same. The Contract shall be deemed completed only when all the

Work contracted for shall be duly and properly performed and accepted by the Board of Supervisors.

- C. When any part or portion of the Project is to be used or occupied by Owner in advance of final completion and acceptance, and when duly notified by Owner's Representative, the Contractor shall arrange for completion of said portions of the Work the same as required under the Documents for the whole Work, including cleaning and other readying by the date stipulated with such notice.
- D. Contractor shall not be held responsible for any damage to the occupied part of the Project resulting from Owner's occupancy.
- E. Occupancy by Owner shall not be deemed to constitute a waiver of existing claims on behalf of Owner or Contractor against each other.
- F. Use and occupancy by Owner prior to project acceptance shall not relieve Contractor's responsibility to maintain all insurance and bonds required of Contractor under the Contract until the entire Project is completed and accepted by Owner.
- G. If after written notification by the Owner of the intent to occupy, the Contractor feels that such occupancy will delay progress of the work or will cause additional expense to the Contractor, Contractor may file a request for an equitable adjustment in Contract Price or Time of Completion, or both, with the Owner's Representative. If the Owner's Representative agrees he will either prepare a written change order for the Owner to sign or advise the Owner to delay occupancy.

GC 43. CHANGE OF CONTRACT TIME & LIQUIDATED DAMAGES

- A. Change by Change Order. The contract time may only be changed by change order. A request for an extension or shortening of the contract time shall be based on written notice delivered by the party making the request to County promptly after the occurrence of the event giving rise to the request and stating the general nature of the request. Notice of the extent of the request with supporting data shall be delivered to County and shall be accompanied by the written statement that the adjustment requested is the entire adjustment to which the requesting party has reason to believe it is entitled as a result of the occurrence of said event. No request for an adjustment in the contract time will be valid if not submitted in accordance with the requirements of this paragraph.
- C. Contract time may be extended. The contract time will be extended in an amount equal to time lost due to delays beyond the control of Contractor if the request is made therefor as provided in this article. Such delays shall include, but not be limited to, acts of neglect by County or others performing additional work, or to fires, floods, labor disputes, epidemics, abnormal weather conditions or acts of God.
- D. Delay and price change. All time limits stated in the contract documents are of the essence. There shall be no adjustment of contract price due to delays for fires, floods, labor disputes, epidemics, abnormal weather conditions or acts of God. The provisions of this Provision shall not exclude recovery for damages (including but not limited to fees and charges of engineers, architects, attorneys and other professionals and court costs) for delay by either party.
- E. Delays in completion of work :
 - 1. Notice of delays. Whenever the Contractor foresees any delay in the prosecution of the work, and in any event immediately upon the occurrence of any delay which the Contractor regards as unavoidable, Contractor shall notify County in writing of the probability of the occurrence of such delay and its cause in order that County may take immediate steps to prevent, if possible, the occurrence or continuance of the delay or, if this cannot be done, may determine whether the delay is to be considered avoidable or

unavoidable, how long it continues, and to what extent the prosecution and completion of the work are to be delayed thereby. It will be assumed that any and all delays which have occurred in the prosecution and completion of the work have been avoidable delays, except such delays as shall have been called to the attention of County at the time of their occurrence and found by County to have been unavoidable. The Contractor shall make no requests for extensions of time as to delay not called to the attention of County at the time of its occurrence.

2. Avoidable delays. Avoidable delays in the prosecution or completion of the work shall include all delays which in the opinion of County would have been avoided by the exercise of care, prudence, foresight and diligence on the part of the Contractor or Contractor's subcontractors.
3. Unavoidable delays. Unavoidable delays in the prosecution or completion of the work shall include all delays which, in the opinion of County, result from causes beyond the control of the Contractor and which could not have been avoided by the exercise of care, prudence, foresight and diligence on the part of the Contractor or the subcontractors and/or any suppliers. Delay in completion due to contract modifications ordered by County and unforeseeable delays in the completion of work or interference by other contractors employed by County will be considered unavoidable delays insofar as they interfere with the Contractor's completion of the work.

F. Extension of time:

1. Avoidable delays. In case the work is not completed in the time specified, including such extensions of time as may have been granted for unavoidable delays, the Contractor will be assessed damages for delay in accordance with liquidated damages provision. The County, however, shall have the right to grant an extension of time for avoidable delay if it is deemed in County's best interest to do so. During such extension of time, the Contractor will be charged for engineering and inspection services and other costs but will not be assessed damages for the delay.
2. Unavoidable delays. For delays which County considers to be unavoidable, the Contractor shall, pursuant to Contractor's application, be allowed an extension of time beyond the time herein set forth, proportional to such delay or delays, in which to complete the contract. During such extension of time, neither extra compensation for engineering and inspection provided nor damages for delay will be charged to the Contractor.
3. Liquidated damages. County and Contractor recognize that time is of the essence and that County will suffer financial loss if the work is not completed within the time specified above, plus any extensions thereof allowed in accordance with this contract. They also recognize the delays, expense and difficulties involved in proving the actual loss suffered by County if the work is not completed on time. Accordingly, instead of requiring any such proof, and due to impracticality and difficulty of ascertaining exact damages caused by delay, County and Contractor agree that as liquidated damages for delay (but not as a penalty) Contractor shall pay County that amount set forth in the Contract, or if no such amount is specified, then one-half of one percent of the total contract price for each day that expires after the time specified above for completion. In case of joint responsibility for delay in the final completion of the work, where two or more separate contracts are in force at the same time and cover work at the same site, liquidated damages assessed against any one Contractor will be based upon the individual responsibility of that Contractor for the delay as determined by, and in the judgment of, County.

County shall have the right to deduct the liquidated damages from any money in its hands, otherwise due, or to become due, to Contractor, or to sue for and recover compensation for damages for nonperformance of this contract within the time stipulated. County has determined and the Contractor acknowledges that the liquidated damages as established herein are governed by the provisions of Government Code § 53069.85 and are predicated upon the reasonable damages accruing to County stemming from any delay in the completion of this project.

GC 44. HOURS OF WORK

- A. The time of service of any labor, workman or mechanic employed upon any of the Work herein specified, shall be limited and restricted to that allowed by law, and no laborer, workman or mechanic employed upon said Work herein specified shall be required or permitted to labor more than that allowed by law, except in cases of extraordinary emergency caused by fire, military or naval defenses or works in time of war.
- B. Within thirty (30) days after any workman is permitted to work over that allowed by law in any one calendar day due to such an extraordinary emergency, the Contractor shall file with the Owner a verified report setting forth the nature of the said emergency, which shall contain the name of said workman and the hours worked by them on said particular day; and failure to file said report within the said thirty day period shall be prima facie evidence that no extraordinary emergency existed.
- C. The Contractor and each subcontractor shall keep an accurate record showing the name of and actual hours worked by each worker employed by said Contractor and subcontractor in connection with the work contemplated by this agreement. The record shall be kept open at all reasonable hours to inspection by the Owner or its officers or agents and by the Division of Labor Law Enforcement of the Department of Industrial Relations.
- D. The Contractor shall forfeit as a penalty to the Owner twenty-five dollars (\$25) for each laborer, workman or mechanic employed in the execution of this Contract by them or by any subcontractor under him, upon any public work herein specified for (a.) each calendar day during which any laborer, workman or mechanic is required or permitted to labor more than that allowed by law; or (b.) each calendar week during which any laborer, workman or mechanic is required or permitted to labor more than that allowed by law of the Labor Code of the State of California. Said sums and amounts which shall have been so forfeited pursuant to the herein paragraph and said provisions of said Labor Code shall be withheld and retained from payments due to the Contractor under this Contract, pursuant to this Contract, and the terms of said Code; but no sum shall be so withheld, retained or forfeited except from the final payment without a full investigation by either the Division of Labor Law Enforcement of the State Department of Industrial Relations or by the Owner.

GC 45. PREVAILING WAGE RATES & PAYROLL RECORDS

- A. Prevailing Wage Rates
 - 1. Pursuant to section 1770 and following of the Labor Code of the State of California, the Director of Industrial Relations has ascertained the general prevailing rate of per diem wages and the rates for overtime and holiday work in the locality in which the work is to be performed for each craft, classification or type of worker needed to execute the Contract which will be awarded to the successful bidder, copies of which are on file at Humboldt County Public Works, 1106 Second Street, Eureka, CA 95501, Phone (707) 445-7493 and are available to interested parties on request and by reference are incorporated herein and made a part hereof. Contractor will maintain a copy of prevailing rates and wages on the job site during the contract period.
 - 2. It shall be mandatory upon the Contractor and upon any subcontractor under it, to pay not less than the specified rates to all laborers, workers, and mechanics employed in the execution of the Contract. It is further expressly stipulated that the Contractor shall, as a penalty to the Owner, forfeit not more than \$200 for each calendar day, or portion thereof, for paying less than the stipulated prevailing rates for any work done under this contract by Contractor or by any subcontractor under it; and Contractor agrees to comply with all provisions of Section 1775 of the Labor Code.

3. In case it becomes necessary for the Contractor or any subcontractor to employ on the project under this Contract any person in a trade or occupation (except executives, supervisory, administrative, clerical, or other non-manual workers as such) for which no minimum wage rate is herein specified, the Contractor shall immediately notify the Owner, who will promptly thereafter determine the prevailing rate for such additional trade or occupation and shall furnish the Contractor with the minimum rate based thereon. The minimum rate thus furnished shall be applicable as a minimum for such trade or occupation from the time of the initial employment of the person affected and during the continuance of such employment. Each contractor shall file a certified copy of the payroll records with the entity that requested the records within ten (10) days after receipt of a written request.
 4. Any copy of records made available for inspection as copies and furnished upon request to the public or any public agency by the Owner, shall be marked or obliterated in such a manner as to prevent disclosure of an individual's name, address, and social security number. The name and address of the contractor awarded the contract for performing the contract shall not be marked or obliterated.
 5. The Contractor shall inform the Owner of the location of the payroll records, including the street address, city and county, and shall, within five working days, provide a notice of any change of location and address.
 6. The Prime Contractor shall be responsible for compliance with this section.
- B. Payroll Records. The Contractor agrees to comply with all requirements of Section 1776 of the Labor Code, including, without limitation, the following:
1. The Contractor and each subcontractor shall keep an accurate payroll record, showing the name, address, social security number, work classification, straight time and overtime hours worked each day and week, and the actual per diem wages paid to each journeyman, apprentice, worker, or other employee employed by it in connection with the public work. Each payroll record shall be verified by written declaration, under penalty of perjury, stating both the following:
 - a. The information contained in the payroll record is true and correct.
 - b. The employer has complied with the requirements of sections 1771, 1811 and 1815 of Labor Code for any work performed by his employees on the project.
 2. The above-referenced payroll records shall be certified and shall be available for inspection at all reasonable hours at the principal office of the Contractor on the following basis:
 - a. A certified copy of an employee's payroll record shall be made available for inspection or furnished to the employee or their authorized representative on request;
 - b. A certified copy of all payroll records shall be made available for inspection or furnished upon request to the Owner, the Division of Labor Standards Enforcement, or the Division of Apprenticeship Standards of the Department of Industrial Relations.
 - c. A certified copy of all payroll records shall be made available upon request by the public for inspection or copies thereof made; provided, however, that a request by the public shall be made through either the Owner, the Division of Apprenticeship Standards, or the Division of Labor Standards Enforcement. If the requested payroll records have not been provided, pursuant to paragraph b. above, the requesting party shall, prior to being provided the records, reimburse the cost of the Contractor, subcontractors, and the entity through which the request was made. The public shall not be given access to the records at the principal office of the Contractor.
- C. Pursuant to Section 1771.1(a) of the California Labor Code, a contractor or subcontractor shall not be qualified to bid on, be listed in a bid proposal, subject to the requirements of Section 4104 of the Public Contract Code, or engage in the performance of any contract for public work, as defined in Sections 1770 et seq. of the Labor Code, unless currently registered and qualified to perform public work pursuant to Section 1725.5 of the Labor Code. It is not a violation of Section 1771.1(a) for an unregistered contractor to submit a bid that is authorized by Section 7029.1 of the

Business and Professions Code or by Section 10164 or 20103.5 of the Public Contract Code, provided the contractor is registered to perform public work pursuant to Section 1725.5 at the time the contract is awarded.

GC 46. TAXES

- A. Any federal, state or city tax, including sales, excise, use and other taxes payable on articles furnished by the Contractor under the Contract shall be included in the Contract Price and paid for by the Contractor.

GC 47. SUBCONTRACTORS

- A. In accordance with the provisions of Section 4100 et seq, of the Public Contract Code of the State of California, each bidder for the work herein specified shall set forth in their Bid Proposal the name and location of the place of business of each subcontractor who will perform work or labor or render service to the General Contractor in or about the construction of the Work or improvements an the amount in excess of one-half (1/2) of one percent (1%) of the General Contractor's total Base Bid; and the portion of the Work which will be done by each subcontractor if the Contract or said Work is awarded to said Bidder.
- B. If any General Contractor fails to specify a subcontractor or specifies more than one subcontractor for the same portion of the Work to be performed on the Contract in excess of one-half of one percent of the General Contractor's total Bid, Contractor agrees to perform such portion himself and, if Contractor's Bid is accepted, Contractor shall not be permitted to subcontract that portion of the Work.
- C. Should the General Contractor violate any provision of the subletting and subcontracting Fair Practices Act, the Contractor will be deemed in violation of the contract and the Owner may at it's option, (1) cancel the Contract. (2) assess upon the Contractor a penalty in an amount of not more than ten percent (10%) of the amount of the subcontract involved.
- D. Prior to the award of the Contract, the Owner's Representative shall notify the successful bidder in writing if the Owner, after due investigation, has reasonable objection to any person or organization on the required list of subcontractors. Failure of the Owner to make an objection to any person or organization on the list prior to the award shall constitute acceptance of such person or organization.
- E. The Contractor shall not contract with any subcontractor or any person or organization for any portion of the work who has not been accepted by the Owner. The Contractor will not be required to contract with any subcontractor or person or organization against whom Contractor has a reasonable objection.
- F. If after the award of the contract, the Owner refuses to accept any person or organization on the required list of subcontractors, the Contractor shall submit an acceptable substitute and the Contract Sum shall be increased or decreased by the difference in cost occasioned by such substitution, and an appropriate Change Order shall be issued; however, no increase in the Contract Sum shall be allowed for any such substitution unless the Contractor has acted promptly and responsively in submitting a name with respect thereto prior to the award.
- G. After the award, the Contractor shall resubmit the list of subcontractors, corrected or modified as may be necessary as directed by the Owner.

- H. Subcontracting
1. Nothing contained in the Contract Documents shall be construed as creating any contractual relationship between Owner and any subcontractor. The Divisions or Sections of the Specifications, and the divisioning of the Drawings are not intended to control the Contractor in dividing the Work among subcontractors or to limit the Work performed by any trade.
 2. The Owner, Owner's Representative or Architect will not undertake to settle any differences between the Contractor and their subcontractors or between subcontractors.
 3. The Contractor shall cause appropriate provisions to be inserted in all subcontracts relative to the work to bind subcontractors to the Contractor by the terms of the General Conditions, and other Contract Documents insofar as applicable to the work of subcontractors; and to give the Contractor the same power as regards terminating any subcontract that the Owner may exercise over the Contractor under any provision of the Contract Documents. The Contractor shall make available to each proposed subcontractor prior to the execution of the Subcontract, copies of the Contract Documents to which the subcontractor will be bound by this Paragraph and identify to the subcontractor any terms and conditions of the proposed Subcontract which may be at variance with the Contract Documents. Each subcontractor shall similarly make copies of such Documents available to their sub-subcontractors.
- I. Payments to Subcontractors:
1. Contractor shall pay each subcontractor or supplier upon receipt of payment from Owner, an amount equal to the percentage of completion allowed to Contractor on account of such work performed or material supplied. Contractor shall also require each subcontractor to make similar payments to their subcontractors or suppliers.
 2. Contractor shall pay each subcontractor a just share of any insurance monies received by Contractor when and as applicable, and Contractor shall require each subcontractor to make similar payments to their subcontractors or suppliers.
 3. The Owner's Representative may, on request and at their discretion, furnish to any subcontractor, if practicable, information regarding percentages of completion certified to the Owner on account of Work done under the Contract.
 4. Neither Owner, Owner's Representative or Architect shall have any obligation to see to the payment of any monies to any subcontractor except as may otherwise be required by law.

GC 48. RECORDS, ACCOUNTS AND SEGREGATED PRICES

- A. Contractor agrees to keep one complete set of records and books of accounts, on a recognized cost accounting basis, satisfactory to Owner and Owner's Representative showing all expenditures, of whatever nature, made pursuant to this Contract.
- B. Contractor shall furnish such records, information and data as may be reasonably required and shall cooperate with Owner or Owner's Representative in establishing total costs for various major portions of the Work as will be designated by the Owner's Representative.
- C. If required for convenience of Owner's accounting, Contractor shall furnish segregated prices for various other portions of the Work. These segregated prices shall be in addition to or separate from the required Schedule of Values.

GC 49. LIABILITY FOR TREES

- A. In case of damage to or loss of trees due to carelessness or lack of sufficient protective measures specified, Contractor shall forfeit an amount in proportion to the extent of damage or loss, which shall not be less than Two hundred (\$200) dollars nor exceed One Thousand (\$1,000) dollars per tree for total loss.

GC 50. LIABILITY FOR SURVEY MARKS

- A. In case of damage to, disturbance or removal of survey marks, field markers, monuments, or other survey or layout devices due to carelessness or lack of sufficient protective means, the party responsible for such damage, disturbance or removal shall be liable for the expense to have them replaced and reset in compliance with specified requirements.

GC 51. CLAIMS PROCEDURES

- A. For purposes of this section:
1. "Claim" means a separate demand by a contractor sent by registered mail or certified mail with return receipt requested, for one or more of the following:
 - a. A time extension, including, without limitation, for relief from damages or penalties for delay assessed by the County under the contract for the project.
 - b. Payment by the County of money or damages arising from work done by, or on behalf of, the contractor pursuant to the contract for the project and payment for which is not otherwise expressly provided or to which the claimant is not otherwise entitled.
 - c. Payment of an amount that is disputed by the County.
 2. "Contractor" means any type of contractor within the meaning of Chapter 9 (commencing with Section 7000) of Division 3 of the California Business and Professions Code who has entered into a direct contract with the County for a project.
 3. "Subcontractor" means any type of contractor within the meaning of Chapter 9 (commencing with Section 7000) of Division 3 of the California Business and Professions Code who either is in direct contract with a Contractor or is a lower tier subcontractor.
- B. Upon receipt of a Contractor's claim, the County shall conduct a reasonable review of the claim and, within a period not to exceed 45 days, shall provide the claimant a written statement identifying what portion of the claim is disputed and what portion is undisputed. Upon receipt of a claim, the County and a contractor may, by mutual agreement, extend the time period provided in this section.
- C. The claimant shall furnish reasonable documentation to support the claim.
- D. If the County needs approval from its Board of Supervisors to provide the claimant a written statement identifying the disputed portion and the undisputed portion of the claim, and the governing body does not meet within the 45 days or within the mutually agreed to extension of time following receipt of a claim sent by registered mail or certified mail, return receipt requested, the County shall have up to three days following the next duly publicly noticed meeting of the governing body after the 45-day period, or extension, expires to provide the claimant a written statement identifying the disputed portion and the undisputed portion.
- E. Any payment due on an undisputed portion of the claim shall be processed and made within 60 days after the County issues its written statement. If the County fails to issue a written statement, paragraph (K) shall apply.
- F. If the Contractor disputes the County's written response, or if the County fails to respond to a claim issued pursuant to this section within the time prescribed, the Contractor may demand in writing an informal conference to meet and confer for settlement of the issues in dispute. Upon receipt of a demand in writing sent by registered mail or certified mail, return receipt requested, the County shall schedule a meet and confer conference within 30 days for settlement of the dispute.
- G. Within 10 business days following the conclusion of the meet and confer conference, if the claim or any portion of the claim remains in dispute, the County shall provide the Contractor a written statement identifying the portion of the claim that remains in dispute and the portion that is undisputed. Any payment due on an undisputed portion of the claim shall be processed and made within 60 days after the County issues its written statement.

Any disputed portion of the claim, as identified by the contractor in writing, shall be submitted to

nonbinding mediation, with the County and the claimant sharing the associated costs equally. The County and Contractor shall mutually agree to a mediator within 10 business days after the disputed portion of the claim has been identified in writing. If the parties cannot agree upon a mediator, each party shall select a mediator and those mediators shall select a qualified neutral third party to mediate with regard to the disputed portion of the claim. Each party shall bear the fees and costs charged by its respective mediator in connection with the selection of the neutral mediator. If mediation is unsuccessful, the parts of the claim remaining in dispute shall be subject to applicable procedures outside this section.

- H. For purposes of this section, mediation includes any nonbinding process, including, but not limited to, neutral evaluation or a dispute review board, in which an independent third party or board assists the parties in dispute resolution through negotiation or by issuance of an evaluation. Any mediation utilized shall conform to the timeframes in this section.
- I. Unless otherwise agreed to by the County and the Contractor in writing, the mediation conducted pursuant to this section shall excuse any further obligation under Section 20104.4 to mediate after litigation has been commenced.
- J. This section does not preclude the County from requiring arbitration of disputes under private arbitration or the Public Works Contract Arbitration Program, if mediation under this section does not resolve the parties' dispute.
- K. Failure by the County to respond to a claim from the Contractor within the time periods described in this subdivision or to otherwise meet the time requirements of this section shall result in the claim being deemed rejected in its entirety. A claim that is denied by reason of the County's failure to have responded to a claim, or its failure to otherwise meet the time requirements of this section, shall not constitute an adverse finding with regard to the merits of the claim or the responsibility or qualifications of the claimant.
- L. Amounts not paid in a timely manner as required by this section shall bear interest at 7 percent per annum.
- M. If a subcontractor or a lower tier subcontractor lacks legal standing to assert a claim against the County because privity of contract does not exist, the Contractor may present to the County a claim on behalf of a subcontractor or lower tier subcontractor. A subcontractor may request in writing, either on his or her own behalf or on behalf of a lower tier subcontractor, that the Contractor present a claim for work which was performed by the subcontractor or by a lower tier subcontractor on behalf of the subcontractor. The subcontractor requesting that the claim be presented to the County shall furnish reasonable documentation to support the claim. Within 45 days of receipt of this written request, the Contractor shall notify the subcontractor in writing as to whether the Contractor presented the claim to the County and, if the original Contractor did not present the claim, provide the subcontractor with a statement of the reasons for not having done so.
- N. A waiver of the rights granted by this section is void and contrary to public policy, provided, however, that (1) upon receipt of a claim, the parties may mutually agree to waive, in writing, mediation and proceed directly to the commencement of a civil action or binding arbitration, as applicable, and (2) the County may prescribe reasonable change order, claim, and dispute resolution procedures and requirements in addition to the provisions of this section, so long as the contractual provisions do not conflict with or otherwise impair the time frames and procedures set forth in this section.

GC 52. ATTORNEY'S FEES

- A. Contractor hereby agrees to pay Owner, Owner's Representative and/or Architect a reasonable sum as attorney's fees in all court actions including arbitration brought by either of them against the other or in which they are both plaintiffs or defendants, and also in court actions involving

claims of subcontractors or material suppliers and in actions involving offsetting claims between Contractor and Owner, Owner's Representative or Architect because of any doubts, disputes or actions arising out of this Contract, except in the following cases:

1. When Contractor obtains a favorable net judgment against the Owner, Owner's Representative and/or Architect after consideration of claims and offsets of Owner which are allowed by the court against Contractor for breach of this Contract;
2. When Owner, Owner's Representative and/or Architect is denied a favorable judgment by a court in a suit against Contractor which may be brought by Owner, Owner's Representative or Architect.

END OF GENERAL CONDITIONS

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SGC 1. GUARANTEE WORK

- A. In the event of failure of Contractor to comply with the requirements of any guarantee by this Contract within seven (7) days after being notified in writing, Owner is authorized to proceed to have the defects repaired and made good at the expense of Contractor, who shall pay the costs and charges therefore immediately on demand.

SGC 2. LAWS AFFECTING PUBLIC WORKS

- A. Attention to bidders is called to necessity of being familiar with the various Federal, State and Local laws affecting public work, especially, but not limited to, those laws relating to hours of employment, minimum wage rates, payment of wages, sanitary and safety conditions for workmen, workmen's compensation insurance, type and kind of materials that can be used, non-discrimination in employment and affirmative-action programs. Contractor is advised that this project is being paid for by State and local funds. Contractor shall comply with applicable regulations and hold harmless the Owner for their failure to comply. Certain of those provisions may be set forth herein or in the General Construction Contract. The existence of these provisions does not excuse the Contractor from complying with other statutory requirements or provisions which are not set forth in these Contract Documents.

SGC 3. OWNER'S REPRESENTATIVE, INSPECTOR

- A. The Owner will employ an "Owner's Representative" and "Inspector". The Inspector will observe the installation of all materials and equipment to be incorporated into the Work and the placing of such materials and equipment to determine in general if the Work is proceeding in accordance with the Contract Documents. On the basis of their observations, the Inspector will keep the Owner's Representative informed as to the progress of the Work and will endeavor to guard the Owner against defects and deficiencies in the Work of the Contractor and subcontractors employed by the Contractor in the prosecution of the Work. The Owner's Representative and Inspector shall not be responsible for means, methods, techniques, sequences or procedures of construction, nor be responsible for the Contractor's failure to carry out the Work in accordance with the Contract Documents.

SGC 4. RESPONSIBILITY FOR COMPLIANCE WITH OSHA

- A. All work, materials, work safety procedures and equipment shall be in full accordance with the latest OSHA rules and regulations.
- B. Contractor warrants that Contractor and each of their subcontractors shall, in performance of this Contract, comply with each and every compliance order issued pursuant to OSHA and CAL-OSHA. The Contractor assumes full and total responsibility for compliance with OSHA and CAL-OSHA Standards by their subcontractors as well as himself. The cost of complying with any compliance order and/or payment of any penalty assessed pursuant to OSHA and CAL-OSHA shall be borne by the Contractor. Contractor shall save, keep and hold harmless the Owner and all officers, employees and agents thereof from all liabilities, costs or expenses in law or in equity, that may at any time arise or be set up because of Contractor's or subcontractor's non-compliance or alleged non-compliance with OSHA and CAL-OSHA requirements.
- C. Nothing contained herein shall be deemed to prevent the Contractor and their subcontractors from otherwise allocating between themselves responsibility for compliance with OSHA and CAL-OSHA requirements; provided, however, that the Contractor shall not thereby be, in any manner whatsoever, relieved of their responsibility to the Owner as herein above set forth.

SGC 5. AS BUILT DRAWINGS

- A. The Contractor shall be given an extra set of drawings and specifications which shall be kept at the site of the Work at all times. Exact locations of all pipes and conduits, and all changes in

construction and details shall be indicated and dimensioned upon these drawings, and all changes in materials and equipment installed shall be indicated in these specifications. The as-built drawings shall be current (up-to-date) to qualify for payment; the job Inspector will verify. Upon completion of the Work, the As-Built Drawings shall be prepared by the Contractor and Specifications shall be reviewed by the Owner's Representative and Consultants and returned to the Owner prior to the final payment. The As-Built Drawings shall be neatly drafted on erasable mylar reproducible transparencies, or printed on vellum and submitted as a .dwg file if prepared electronically.

SGC 6. FINAL CERTIFICATES

- A. When the Work is ready for acceptance, by the Owner, the Owner's Representative shall so certify in writing to the Owner, indicating substantial completion and that the building can be occupied and used and a Certificate of Acceptance will be issued to the Contractor which will bring their Progress Payment up to ninety-five (95%) percent of the Contract Price, with five (5%) percent to remain in retention until after Notice of Completion, less sums withheld regarding liquidated damages, if any, or any other damages incurred by owner, or other sums withheld pursuant to the terms of this agreement or by law.
- B. Notice of Completion will be filed by the Owner after substantial completion and acceptance of the Work by the Board of Supervisors. Providing no stop notices have been filed, thirty-five days after filing of such notice of completion, payment due under the Contract will become due to the Contractor and the Owner's Representative shall so certify to the Owner authorizing the final payment. Such payment may withhold any reasonable sums payable to Contractor for any Work which has not been completed on said date, or that the Owner may have found defective and ordered to be replaced; final payment for withholding to be made when certified by Owner's Representative in writing to Owner.

SGC 7. LIENS AND STOP NOTICES

- A. Should Stop Notices be filed with the Owner, Owner shall in accordance with California Civil Code Section 9358, withhold the amount claimed, plus an allowance of 25% to cover its litigation costs plus interest at the rate of 10%, from certificates until such claims have been resolved pursuant to law.

SGC 8. GUARANTEES AND MAINTENANCE MANUALS

- A. The Contractor and each subcontractor and each supplier shall provide to the Owner, copies of all maintenance guarantees, maintenance manuals and technical specifications relating to their portion of the Project prior to completion of the Project, and in accordance with the GENERAL REQUIREMENTS, PROJECT CLOSE-OUT.

SGC 9. THE WORK

- A. The Work comprises the completed construction required by the Contract Documents and approved change orders and includes all labor necessary to produce such construction, and all materials and equipment incorporated or to be incorporated in such construction.

SGC 10. THE PROJECT

- A. The Project is the total construction of which the Work performed under the Contract Documents may be the whole or a part.
- B. By executing the Contract, the Contractor represents that Contractor has visited the sites, familiarized themselves with the local conditions under which the Work is to be performed, and correlated their observations with the requirements of the Contract Documents.

- C. The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work. The Contract Documents are complementary, and what is required by any one shall be as binding as if required by all. Work not covered in the Contract Documents will not be required unless it is consistent therewith and is reasonably inferable therefrom as being necessary to produce the intended results. Words and abbreviations which have well-known technical or trade meanings are used in the Contract Documents in accordance with such recognized meanings.
- D. The organization of the Specifications into divisions, sections and articles, and the arrangement of Drawings shall not control the Contractor in dividing the Work among subcontractors or in establishing the extent of Work to be performed by any trade.

SGC 11. OWNER

- A. The Owner shall forward all instruction to the Contractor through the Owner's Representative.
- B. Information or services under the Owner's control shall be furnished by the Owner with reasonable promptness to avoid delay in the orderly progress of the Work.

SGC 12. OWNER'S RIGHT TO STOP THE WORK

- A. If the Contractor fails to correct defective Work as required by GC 17, or persistently fails to carry out the Work in accordance with the contract Documents, the Owner, by a written order signed personally or by an agent specifically so empowered by the Owner in writing, may order the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of the Owner to stop the Work shall not give rise to any duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity.

SGC 13. OWNER'S RIGHT TO CARRY OUT THE WORK

- A. If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within seven calendar days after receipt of written notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may, after seven calendar days following receipt by the Contractor of an additional written notice and without prejudice to any other remedy the Owner may have, make good such deficiencies. In such case an appropriate Change Order shall be issued deducting from the payments then or thereafter due the Contractor the cost of correcting such deficiencies, including compensation for the Owner's Representative or Architect's additional services made necessary by such default, neglect or failure. If the payments then or thereafter due the Contractor are not sufficient to cover such amount, the Contractor shall pay the difference to the Owner immediately upon demand.

SGC 14. INDEMNIFICATION

- A. To the fullest extent permitted by law, the Contractor shall indemnify, defend and hold harmless the Owner, Owner's Representative, Inspector and the Architect and their agents and employees from and against all claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of or resulting from the performance of the Work, provided that any such claim, damage, loss or expense is (1) attributable to bodily injury, sickness, disease or death, or the injury to or destruction of tangible property (other than the Work itself) including the loss of use resulting therefrom, and (2) is caused in whole or in part by any negligent act or omission of the Contractor, and subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder; excepting only such claims as are caused by the sole negligence or willful misconduct of the Owner, Owner's Representative, Inspector or Architect. Such obligation shall

not be construed to negate, abridge, or otherwise reduce any other right or obligation of indemnity which would otherwise exist as to any party or person described in this paragraph.

- B. In any and all claims against the Owner, Owner's Representative, Inspector or the Architect or any of their agents or employees by any employee of the Contractor, any subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, the indemnification obligation under this paragraph shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the Contractor or any subcontractor under Workers' or Workmen's Compensation Acts, disability benefit acts or other employee benefit acts.
- C. The obligations of the Contractor under this paragraph shall not extend to the liability of Owner's Representative or the Architect, their agents or employees, arising out of (1) the preparation or approval of maps, drawings, opinions, reports, surveys, change orders, design or specification, or (2) the giving of or the failure to give directions or instruction by the Owner's Representative or the Architect, their agents or employees provided such giving or failure to give is the primary cause of the injury or damage.

SGC 15. COMPLIANCE WITH TITLE 24, CALIFORNIA CODE OF REGULATIONS AND THE INTERNATIONAL BUILDING CODE

- A. Governing Codes: Title 24, California Code of Regulations (C.C.R.), latest edition which adopts and amends the International Building Code, latest edition; International Fire Code, latest edition; Uniform Mechanical Code, latest edition; National Electrical Code, latest edition; Uniform Mechanical Code, latest edition; and the Uniform Plumbing Code, latest edition. The project shall also comply with the Americans with Disabilities Act, and the latest editions of associated regulations.

SGC 16. LIABILITY OF CONTRACTOR

- A. The Contractor shall do all of the Work and furnish all labor, materials, tools, and appliances, except as otherwise herein expressly stipulated, necessary or proper for performing the Work herein required in the manner and within the time herein specified. The mention of any specific duty or liability imposed upon the Contractor shall not be construed as a limitation or restriction of any general liability or duty imposed upon the Contractor by this contract, said reference to any specific duty or liability being made herein merely for the purpose of explanation.
- B. The right of general supervision by the Owner shall not make the Contractor an agent or employee of the Owner, and the liability of the Contractor for all damages to persons or to public or private property arising from the Contractor's execution of the Work shall not be lessened because of such general supervision.
- C. Until the completion and final acceptance by the Owner of all of the Work under and implied by this contract, the Work shall be under the responsible care and charge of the Contractor. The Contractor shall rebuild, repair, restore and make good all injuries, damages, re-erections and repairs occasioned or rendered necessary or caused of any nature whatsoever, excepting only acts of God not covered by the all-risk insurance policy called for in Article GC 4 and not other, to all or any portions of the Work except as otherwise expressly stipulated.

SGC 17. NUCLEAR FREE HUMBOLDT COUNTY ORDINANCE COMPLIANCE

- A. Neither the Contractor, their Subcontractors or their suppliers are Nuclear Weapons Contractors, and are not knowingly or intentionally engaged in the research, development, production, or testing of nuclear warheads, nuclear weapons systems, or nuclear weapons components, as defined by the Nuclear Free Humboldt County Ordinance. Contractor, their Subcontractors and/or their suppliers agree to notify Owner immediately if they become a nuclear weapons contractor as defined above.

SGC 18. REQUIRED LISTING OF PROPOSED SUBCONTRACTORS

- A. Each proposal shall have listed therein the name, address, description of work, contractor's license number, and DIR registration number of each subcontractor to whom the bidder proposes to subcontract portions of the work in the amount of 1/2 of one percent of their total bid, in accordance with the Subletting and Subcontracting Fair Practices Act, commencing with Section 4100 of the Public Contract Code and for verification of conformance with Labor Code Sections 1771 and 1725.5. The bidder's attention is invited to other provisions of said Act related to the imposition of penalties for a failure to observe its provisions by using unauthorized subcontractors or by making unauthorized substitutions.
- B. Pursuant to Section 1771.1(a) of the California Labor Code, a contractor or subcontractor shall not be qualified to bid on, be listed in a bid proposal, subject to the requirements of Section 4104 of the Public Contract Code, or engage in the performance of any contract for public work, as defined in Sections 1770 et seq. of the Labor Code, unless currently registered and qualified to perform public work pursuant to Section 1725.5 of the Labor Code. It is not a violation of Section 1771.1(a) for an unregistered contractor to submit a bid that is authorized by Section 7029.1 of the Business and Professions Code or by Section 10164 or 20103.5 of the Public Contract Code, provided the contractor is registered to perform public work pursuant to Section 1725.5 at the time the contract is awarded.
- C. A sheet for listing the subcontractors, as required herein, is included in the proposal.

SGC 19. NONDISCRIMINATION

- A. During the performance of this contract, the Contractor and its subcontractors shall not deny the contract's benefits to any person on the basis of religion, color, ethnic group identification, sex, age, physical or mental disability, nor shall they unlawfully discriminate, harass or allow harassment, against any employee or applicant for employment because of sex, race, color, ancestry, religious creed, national origin, disability (including HIV and AIDS), medical condition (cancer), age (over 40), marital status, denial of family care leave and denial of pregnancy disability leave in connection with any program or activity funded in whole or in part by Federal and/or State funds provided through this grant contract.
- B. Contractor and all subcontractors shall insure that the evaluation and treatment of their employees and applicants for employment are free from such discrimination and harassment. Contractor and subcontractors shall comply with the provisions of the Fair Employment and Housing Act (Government Code, Section 12990 [a-f] et seq.) and the applicable regulations promulgated thereunder (California Code of Regulations, Title 2, Section 7285.0 et seq.).
- C. The applicable regulations of the Fair Employment and Housing Commission implementing Government Code, Section 12990 (a-f), set forth in Chapter 5 of Division 4 of Title 2 of the California Code of Regulations are incorporated into this contract by reference and made a part hereof as set forth in full. Contractor and subcontractors shall give written notice of their obligations under this clause to labor organizations with which they have a collective bargaining or other agreement.
- D. Contractor shall comply with all applicable nondiscrimination laws and regulations.
- E. The Contractor and all subcontractors shall include the nondiscrimination and compliance provisions of this clause in all contracts and subcontracts to perform work under the contract.

SGC 20. HAZARDOUS WASTE IN EXCAVATION

- A. If the Contractor encounters material in excavation which Contractor has reason to believe may be hazardous waste, as defined by Section 25117 of the Health and Safety Code, Contractor shall immediately so notify the Owner's Representative in writing. Excavation in the immediate area of the suspected hazardous material shall be suspended until the OWNER authorizes it to be

resumed. If such suspension delays the current controlling operation, the Contractor will be granted an extension of time by means of a change order.

- B. The Owner reserves the right to use other forces for exploratory work to identify and determine the extent of such material and for removing hazardous material from such area.

SGC 21. CONSTRUCTION ACTIVITIES

- A. Construction activities at the site shall be as required by the Contractor to complete the project by the prescribed completion date. Contractor must comply with Noise Abatement Provisions.

SGC 22. DISCOVERY OF HUMAN REMAINS OR AN ARCHAEOLOGICAL SITE

- A. If during construction activities, human remains or evidence of an archaeological site, including outhouse pits, construction shall be immediately halted and the Owner's Representative notified who will request an evaluation by a qualified archaeologist, approved by the Owner as to whether the discovery constitutes an "important archaeological resource" as defined in Section III, Appendix K of the CEQA Guidelines.
- B. If the resource is determined to be important, mitigation shall proceed as outlined by Appendix K of the Guidelines and as recommended by the archaeologist.

SGC 23. CONTRACTOR RESPONSIBILITY AND DEBARMENT

- A. A responsible contractor is a contractor who has demonstrated the attribute of trustworthiness, as well as quality, fitness, capacity and experience to satisfactorily perform the contract. It is the County's policy to conduct business only with responsible contractors. (Ord. 2291, § 1, 01/07/2003)
- B. The contractor is hereby notified that, in accordance with Title II, Division 14 of the County Code, if the County acquires information concerning the performance of the contractor on this or other contract which indicates that the contractor is not responsible, the County may, in addition to other remedies provided in the contract, debar the contractor from bidding on County contracts for a specified period of time, not to exceed three (3) years, and terminate any or all existing contracts the contractor may have with the County. (Ord. 2291, § 1, 01/07/2003)
- C. The County may debar a contractor if the Board of Supervisors finds, in its discretion, that the contractor has done any of the following: (1) violated any term of a contract with the County; (2) committed any act or omission which negatively reflects on the contractor's quality, fitness, or capacity to perform a contract with the County or any other public entity, or engaged in a pattern or practice which negatively reflects on same; (3) committed an act or offense which indicates a lack of business integrity or business honesty; or (4) made or submitted a false claim against the County or any other public entity. (Ord. 2291, § 1, 01/07/2003)
- D. If there is evidence that the contractor may be subject to debarment, the department will notify the contractor in writing of the evidence which is the basis for the proposed debarment and will advise the contractor of the scheduled date for a debarment hearing before the CHB (Contractor's Hearing Board). (Ord. 2291, § 1, 01/07/2003)
- E. The CHB will conduct a hearing where evidence on the proposed debarment is presented. The contractor and/or the contractor's representative shall be given an opportunity to submit evidence at that hearing. After the hearing, the CHB shall prepare a proposed decision, which shall contain a recommendation regarding whether the contractor should be debarred, and, if so, the

appropriate length of time of the debarment. If the contractor fails to avail itself of the opportunity to submit evidence to the CHB, the contractor may be deemed to have waived all rights of appeal. (Ord. 2291, § 1, 01/07/2003)

- F. A record of the hearing, the proposed decision and any other recommendation of the CHB shall be presented to the Board of Supervisors. The Board of Supervisors shall have the right to modify, deny or adopt the proposed decision and recommendation of the hearing board. (Ord. 2291, § 1, 01/07/2003)
- G. These terms shall also apply to subcontractors and subconsultants of County contractors. (Ord. 2291, § 1, 01/07/2003)

SGC 24. BID PROTEST

Any bid protest must be in writing and must be received by the Director of Public Works, Humboldt County Department of Public Works, 1106 Second Street, Eureka, CA, 95501, Fax: (707) 445-7409 or by email before 5:00 p.m. no later than three (3) working days following bid opening (the "Bid Protest Deadline") and must comply with the following requirements:

- A. Only a bidder who has actually submitted a Bid Proposal is eligible to submit a bid protest against another bidder. Subcontractors are not eligible to submit bid protests. A bidder may not rely on the bid protest submitted by another bidder, but must timely pursue its own protest.
- B. The bid protest must contain a complete statement of the basis for the protest and all supporting documentation. Material submitted after the Bid Protest Deadline will not be considered. The protest must refer to the specific portion or portions of the Contract Documents upon which the protest is based. The protest must include the name, address and telephone number of the person representing the protesting bidder if different from the protesting bidder.
- C. A copy of the protest and all supporting documents must also be transmitted by fax or by e-mail, by or before the Bid Protest Deadline, to the protested bidder and any other bidder who has a reasonable prospect of receiving an award depending upon the outcome of the protest.
- D. The protested bidder may submit a written response to the protest, provided the response is received by the Department Director before 5:00 p.m., within two (2) working days after the Bid Protest Deadline or after receipt of the bid protest, whichever is sooner (the "Response Deadline"). The response must include all supporting documentation. Material submitted after the Response Deadline will not be considered. The response must include the name, address and telephone number of the person representing the protested bidder if different from the protested bidder.
- E. The procedure and time limits set forth in this section are mandatory and are the bidder's sole and exclusive remedy in the event of bid protest. The bidder's failure to comply with these procedures shall constitute a waiver of any right to further pursue a bid protest, including filing a Government Code Claim or initiation of legal proceedings.

END SUPPLEMENTARY GENERAL CONDITIONS

SUMMARY OF WORK

SECTION 01 11 00

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Contractor's use of site and premises.
- B. County-furnished, Contractor-installed (OFCl) items.
- C. County's occupancy requirements.
- D. Specification formats and conventions.

1.2 CONTRACTOR'S USE OF SITE AND PREMISES

- A. Vehicle access to Project site shall be held to a minimum. Vehicle access will be on one specific route approved by County; no exceptions will be allowed.
- B. Coordinate use of the premises under the direction of the County.
- C. Assume full responsibility for the protection and safekeeping of materials, products, and equipment under this Contract, stored on the site.
- D. Move any stored materials, products, and equipment under Contractor's control which interfere with the operations of County or a separate contractor.
- E. Obtain and pay for the use of additional storage or work areas needed for Contractor's operations.
- F. Contractor shall be aware of and abide by the Humboldt County and local Noise Ordinance and County's noise prevention requirements. Contractor to verify County's requirements.

1.3 COUNTY-FURNISHED AND CONTRACTOR-INSTALLED (OFCl) ITEMS

- A. County-Furnished and Contractor-Installed (OFCl) Items: As indicated on the Drawings and Technical Specifications.
- B. County's Responsibilities:
 - 1. County will furnish products indicated. Schedule relocation of items with County.
 - 2. After relocation, County will inspect delivered items for damage, jointly with Contractor.
- C. Contractor's Responsibilities:
 - 1. Contractor is responsible for relocating, unloading, and handling County-furnished items at Project site.
 - 2. Contractor is responsible for protecting County-furnished items from damage during storage and handling, including damage from exposure to the elements.
 - 3. Contractor shall install and incorporate County-furnished items into the Work, as indicated and as required. Work includes providing support systems to receive County's equipment and making plumbing, mechanical, electrical connections, and miscellaneous work items associated with installation of County-furnished items.
 - 4. Contractor shall repair or replace County-furnished items damaged by Contractor's operations, as approved by County in writing.

5. Contractor shall furnish and install fasteners and other accessories, as required for complete installation of County-furnished items.

1.4 COUNTY'S OCCUPANCY REQUIREMENTS

- A. Full County Occupancy: County will occupy the Project site, with the exception of areas under construction, during the entire construction period to conduct normal operations.
- B. Cooperate with County to minimize conflicts, and to facilitate County's operations.
- C. Verify occupancy requirements with County, and schedule the Work to accommodate County's requirements.
- D. Maintain access to existing walkways and other adjacent occupied or used facilities. Do not close or obstruct walkways or other occupied or used facilities without written permission from County and authorities having jurisdiction.
- E. Provide not less than 72 hours' notice to County of activities that will affect County's operations.

1.5 ENVIRONMENTAL MANAGEMENT

- A. Spills: Contractor shall clean up all fluid spills caused by leaks in the equipment or generated while Contractor is performing the work under this Contract. Contractor shall provide drip catch pans for all equipment that drips or leaks oils or other fluids. Spills generated by Contractor's operation shall be cleaned up by Contractor at no cost to County.
- B. Dust and Noise Control:
 1. Precaution shall be exercised at all times to control dust and excessive noise created as a result of any operations during the construction period.
 2. If serious problems and/or complaints arise due to airborne dust and excessive noise, and when directed by the County, operations causing such problems shall be temporarily discontinued until a suitable remedy is established. The remedy shall be approved by the County before implementation, and shall be considered part of Contractor's normal effort to maintain safety and cleanliness without cause for further payment.

1.6 MATERIALS AND WORKMANSHIP

- A. Except as otherwise specified all materials and equipment incorporated in the Work under the Contract shall be new. All workmanship shall be first-class and by persons qualified in the respective trades.

1.7 ACCIDENT PREVENTION AND PROTECTION OF LIVES AND HEALTH

- A. Precaution shall be exercised at all times for protection of all personnel and occupants, including employees of Contractor, County, and property.
- B. The California Department of Industrial Relations, Division of Occupational Safety and Health (DOSH, also known as Cal/OSHA) requirements for safety and health protection of workers and public apply. Other requirements not covered by Cal/OSHA, shall be in accordance with U.S. Department of Labor, Occupational Safety and Health Administration (OSHA) requirements.
- C. Comply with safety requirements of CCR, Title 8, Division 1, Chapter 4, "Division of Industrial Safety," and Title 8, Division 1, Chapter 3.2, "Cal/OSHA Regulations"; CCR, Title 24, CBC; and other applicable building and construction codes. Machinery, equipment, openings, power lines, and all other safety hazards shall be guarded or eliminated in accordance with safety requirements of Title 8, and Manual of Accident Prevention in Construction published by the Associated General Contractors of America.

1.8 PROTECTION OF EXISTING FACILITIES

- A. Contractor shall take appropriate measures to prevent damage to existing facilities. Should damage occur, such facilities shall be restored to original condition, at no cost to County.
 - 1. Contractor shall arrange for protection of existing buildings at all times. Contractor shall furnish, install, and maintain, necessary barricades, temporary coverings, etc., as required for protection, and remove them at completion of the Work. When all Work is complete, damaged areas of the premises shall be restored to original undamaged condition that existed prior to installation of temporary protection.
- B. Housekeeping: The premises shall be kept in a clean, safe condition at all times. Rubbish shall be removed as fast as it accumulates.
- C. Burning: Burning of refuse, debris, and construction waste at Project site will not be permitted.

1.9 OVERLOADING

- A. Contractor shall not overload any part or parts of structures beyond their safe calculated carrying capacities by placing materials, equipment, tools, machinery or any other item thereon. No loads shall be placed on floors or roofs before they have attained their permanent and safe strength.

1.10 MANUFACTURER'S INSTRUCTIONS

- A. Where required in the Specifications that materials, products, equipment, and processes be installed or applied in accordance with manufacturer's instructions, directions, or specifications, or stated in words to that effect, it shall be construed to mean that said installation or application shall be in strict accordance with printed instructions furnished by manufacturer of the specified item and is suitable for use under conditions similar to those at the jobsite. Three copies of such instructions shall be included in the applicable submittal and furnished to the County for review. Obtain County's acceptance prior to commencement of the Work.

1.11 RESPONSIBILITY FOR THEFT AND DAMAGE

- A. County will not be responsible for the loss or theft of Contractor's tools, equipment and materials.

1.12 FIRE PROTECTION

- A. Contractor shall at all times maintain good housekeeping practices to reduce the risk of fire and water damage. All scrap materials, rubbish and trash shall be removed daily from jobsite, inside and around the buildings or structures, as applicable, and shall not be scattered on adjacent property.
- B. Suitable storage space shall be provided outside immediate building areas during construction for temporary storage of flammable materials and paints, as required by CFC Chapter 14 and NFPA 241. Excess flammable liquids being used inside the building shall be kept in closed metal containers and be removed from the building during unused periods.
- C. Contractor shall provide temporary fire extinguishers during construction in accordance with the recommendations of CBC Chapter 33, CFC Chapter 14, and NFPA Bulletins Nos. 10 and 241. However, in all cases a minimum of one fire extinguisher shall be available for use.
- D. Under provisions of CFC Chapters 14 and 26, provide a fire extinguisher at each location where cutting, soldering, or welding is being performed. Where electric or gas welding or cutting work is done, interposed shields of noncombustible material shall be used to protect against fire damage due to sparks and hot metal. When temporary heating devices are used, a watchman shall be present to cover periods when other workmen are not on the premises.

1.13 EMERGENCY CONDITIONS

- A. Emergency condition shall be any condition at the Project site which has the actual or potential for significant adverse effects to persons or property, whether or not resulting from Contractor's operations.
- B. Immediate action shall be taken by Contractor by whatever means necessary to alleviate the condition and to prevent damage or injury to persons or property. County shall be notified of the existence of such a condition, but shall not be called upon to perform emergency service.
- C. County may not respond to the emergency condition, which shall not be used as an excuse by Contractor to neglect immediate action; County will not be responsible or liable for any resulting conditions. Absence of Contractor's Representative during emergency conditions at jobsite shall not relieve Contractor from contractual responsibility of providing an immediate response to the situation, for restoration of conditions to normalcy.
- D. If the emergency conditions are not caused by Contractor's fault or neglect, the Contract Sum shall be adjusted to reflect the actual direct field costs of labor and materials to perform and complete emergency measures.
- E. The Contract Time shall also be adjusted to reflect the actual direct effect of such actions to the then critical path of the Construction Progress Schedule. The foregoing notwithstanding, adjustments of the Contract Sum or the Contract Time for actions taken by Contractor in response to emergency circumstances shall be subject to Contractor's strict compliance with all other applicable provisions of the Contract Documents relating to notices and time for delivery of notices.

1.14 SPECIFICATION FORMATS AND CONVENTIONS

- A. Specification Format: The Specifications are organized into Divisions and Sections using the 50-division format and numbering system of CSI "MasterFormat, 2004 Edition.
- B. Division 01 Sections govern the execution of the Work of all Sections in the Specifications.
- C. Specifications Conventions: Singular words shall be interpreted as plural and plural words shall be interpreted as singular, where applicable, as the context of the Contract Documents indicates.
- D. These specifications are written in imperative mood and streamlined form. This imperative language is directed to the Contractor, unless specifically noted otherwise. The words "shall be" are included by inference where a colon (:) is used within sentences or phrases.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

PRODUCT SUBSTITUTION PROCEDURES

SECTION 01 25 13

PART 1 – GENERAL

1.1 SUMMARY

- A. There are two time periods allowed for submission of data substantiating a request for a substitution of "an equal" item:
1. Bidders may request a substitution up to six (6) calendar days prior to the time indicated for receipt of bids in Notice to Bidders. The burden of proof as to the quality and suitability of alternatives shall be upon the Contractor, and the Contractor shall furnish all information necessary as required by County. County shall be the sole judge as to the quality and suitability of alternative articles or materials, and the County's decision shall be final. The Contractor's attention is directed to these Special Provisions.
 2. Contractor may request a substitution after the award of the contract for a period of thirty five (35) calendar days immediately following award of the contract.
- B. Contractor shall provide products from one manufacturer for each type or kind as applicable. Contractor shall provide secondary materials as recommended by manufacturers of primary materials.
- C. Contractor shall provide products selected or equal. Products submitted for substitution as an equal shall be submitted with acceptable documentation, and include costs of substitution including related work.
- D. Request for substitution must be in writing. Conditions for substitution include:
1. An 'or equal' phrase in the specifications.
 2. Specified material shall be coordinated with other work.
 3. Specified material is acceptable to authorities having jurisdiction.
 4. For requests for substitution made after the award of the contract, substantial advantage is offered to the County in terms of cost, time, or other valuable consideration.
- E. Approval of shop drawings, product data, or samples is not a substitution approval unless clearly presented as a substitution at the time of submittal.
- F. For convenience in designation on the plans or in the specifications, certain articles or materials to be incorporated in the Work may be designated under a trade name or the name of a manufacturer and the manufacturer's catalogue information. The use of an alternative article or material which is of equal quality and of the required characteristics for the purpose intended will be permitted, subject to the following requirements:

1. The burden of proof as to the quality and suitability of alternatives shall be upon the Contractor and the Contractor shall furnish all information necessary as required by the County. The County shall be the sole judge as to the quality and suitability of alternative articles or materials, and the County's decision shall be final.
2. Whenever the Specifications permit the substitution of a similar or equivalent material or article, no tests or action relating to the approval of the substitute material will be made until the request for substitution is made in writing by the Contractor accompanied by complete data as to the equality of the material or article proposed. The request shall be made in ample time to permit approval without delaying the Work.

END OF SECTION

PROJECT MEETINGS

SECTION 01 31 19

PART 1 – GENERAL REQUIREMENTS

1.1 RELATED DOCUMENTS:

- A. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions bidding documents and drawings.

1.2 PRECONSTRUCTION CONFERENCE

- A. The Preconstruction Conference will be scheduled within 15 working days after the County has issued the Notice to Proceed, but prior to actual start of the Work.
- B. Attendance: Representative of County, Project Architect, Contractor, contractor's subcontractors and representatives from the agencies occupying the building.
- C. Minimum agenda: Data will be distributed and discussed on:
 - 1. Organizational arrangement of Contractor's forces and personnel, and those of subcontractors, materials suppliers, and the County.
 - 2. Channels and procedures for communication.
 - 3. Review set-up area.
 - 4. Review all required permits.
 - 5. Review insurance requirements.
 - 6. Construction schedule, including sequence of critical work.
 - 7. Contract Documents, including distribution of required copies of Drawings and revisions.
 - 8. Processing of Shop Drawings and other data submitted to the County for review.
 - 9. Processing of field decisions and Change Orders.
 - 10. Rules and regulations governing performance of the work. How will Contractor's people on site respond to fire accident or other emergencies.
 - 11. Procedures for safety and first aid, security, quality control, housekeeping, and related matters.
 - 12. How will Contractor work with the security, noise and access limitations of this facility and the agencies that occupy this facility.
 - 13. How will Contractor get materials to and from the roof and throughout the facility?

1.3 PROGRESS MEETINGS

- A. Will be scheduled by the County bi-weekly.
- B. Attendance: County, Contractor, Job Superintendent, Project Architect, Subcontractors and representatives of the agencies that occupy the building, as appropriate.
- C. Minimum Agenda:
 - 1. Review of work progress.
 - 2. Field observations, problems, and decisions.
 - 3. Identification of problems which impede planned progress.
 - 4. Maintenance of progress schedule.
 - 5. Corrective measures to regain projected schedules.
 - 6. Planned progress during succeeding work period.
 - 7. Coordination of projected progress.
 - 8. Maintenance of quality and work standards.
 - 9. Effect of proposed changes on progress, schedule, and coordination.
 - 10. Impacts of the work on the agencies occupying the building.
 - 11. Other business relating to work.

1.4 PRE-FINAL INSPECTION

- A. Contractor must inform Project Architect and County that Contractor is ready for pre-final inspection and that the pre-final inspection will then be scheduled.
- B. Installations or details noted as deficient during inspection must be repaired and corrected by Contractor.
- C. Once corrections have been made, contractor must inform Project Architect and County so a second inspection can be scheduled.

1.5 FINAL INSPECTION

- A. Scheduled by Contractor upon job completion.
- B. Attendance: County or designated representative, Contractor, Project Architect.
- C. Minimum Agenda:
 - 1. Walkover inspection.
 - 2. Identification of needed corrections to be completed by Contractor and final approval from warrantor.

END OF SECTION 01 31 19

CONSTRUCTION PROGRESS SCHEDULES

SECTION 01 32 16

PART 1 – GENERAL

- 1.1 The Contractor shall submit to the County construction schedules as required by and conforming to Section 00 31 13, "Construction Schedule and Liquidated Damages;" to Part 8, "Time," of Section 00 72 13, "General Conditions;" and to Section 01 33 00, "Submittal Procedures."
- 1.2 The Contractor may furnish the construction schedule on a form of its choice.
- 1.3 The construction schedule shall show the order in which the Contractor proposes to carry out the Work, the dates on which he will start the salient features of the Work (including the submission of required submittals and the procurement of materials), the proposed dates and times of utility shut downs or any contractor operation that might impact the Work Site's operations, and the contemplated dates for completing the said salient features. The Contractor shall coordinate Contractor's activities with the County's use of the Work Site.
- 1.4 The construction schedules submitted shall be consistent in all respects with the time and order of work requirements of the Contract, conform to Section 00 31 13, "Construction Schedule and Liquidated Damages;" to Part 8, "Time," of Section 00 72 13, "General Conditions."

PART 2 – PRODUCTS

NOT USED

PART 3 – EXECUTION

NOT USED

END OF SECTION

SUBMITTAL PROCEDURES

SECTION 01 33 00

PART 1 – GENERAL

- 1.1 Timing: Make submittals far enough in advance of scheduled dates of installation to allow the time required for reviews, for securing necessary approvals, for possible revision and resubmittal, and for placing orders and securing delivery. Contractor shall allow the County a minimum of 14 calendar days from receipt by the County for review. Contractor is to coordinate submittal review items with critical timelines with the County to avoid problems.
- 1.2 Identification:
- A. Identify each submittal and resubmittal with the following information:
1. Project name and address as they appear on the Contract Documents.
 2. Contract number.
 3. Contractor's name and address.
 4. Date of submission.
 5. Numbering System: Submittals shall be identified by specification section (i.e., 02 81 02-001, 07 21 13-001, 11 19 10-001, etc.). Any resubmittals shall be numbered sequentially according to the original submittal section, followed by the subscript 1, .2, .3 submittal number (i.e., 001.1, 001.2, etc.). Submittals and resubmittals shall be kept intact with the original number. Do not add new drawing or information outside the scope of the original submittal, unless specifically requested. Do not assign a new number for a resubmittal.
 6. Reference: List Specification Section number and product reference as a cross-reference for each submittal.
- B. Identify each submittal with the following additional identification:
1. Contractor's stamp with initials or signature, certifying to review of submittal, compliance with Contract Documents, and coordination with other impacted work, and verification of field measurements. The County will return any submittal not bearing this stamp without being reviewed.
 2. Drawing and Specification Section numbers to which the submittal applies.
 3. Subcontractor's or supplier's name and address.
 4. Name and telephone number of the individual to contact for additional information regarding the submittal.
 5. Whether it is an original or a resubmittal.
- 1.3 Coordination of Submittals:
- A. General: Prior to submittal for the County's review, as applicable, fully coordinate material as follows:

1. Determine and verify field dimensions and conditions, materials, catalog numbers, and similar data.
 2. Coordinate shop drawing submittals with previously issued addenda and information bulletins.
 3. Coordinate with the various types of work and public agencies involved.
 4. Secure necessary approvals from public agencies and others and signify by stamp, or other means, that approvals have been secured.
 5. Unless otherwise specifically permitted by the County, make submittals in groups containing all associated items.
- B. Completeness: Submittals shall be complete; partial submittals will be rejected for not complying with the Contract Documents.

PART 2 – SUBMITTALS PROCEDURES

- 2.1 Requests for deviation from Contract Documents shall be submitted for consideration before submittal of affected items. Only deviations, which have been previously accepted in writing, shall be included in submittals.
- 2.2 Place permanent label or title block on each submittal for identification. Indicate name or entity preparing each submittal in label or title block. Refer to Part 1.3.1 above for further information required on each submittal label or title block.
- A. Provide space on label or beside title block to record Contractor's and County's review and approval markings and action taken.
- 2.3 Contractor's Review:
- A. Review submittals for accuracy, completeness, and conformity with Contract Documents.
1. Submittal shall be construed as stipulating Contractor has thoroughly and completely reviewed, and coordinated data.
 2. Submittals that indicate less than Contractor's full compliance will be returned without action.
 3. Delays caused by failure to comply will not be acceptable basis for extension of Completion Time.
- B. Certify submittals have been reviewed and coordinated by adding following affidavit to each submittal:
- "The undersigned certifies this submittal has been reviewed, approved, and coordinated in compliance with requirements of this section and the contract documents."
- Signature _____ Date _____
- Name Printed _____ Title _____
- C. Submittals not certified by being stamped and signed by Contractor will be returned without action, as will submittals, which, in the County's opinion, have not been

- adequately reviewed and coordinated by the Contractor.
- 2.4 Allow sufficient review time so that installation will not be delayed as a result of the time required to process submittals, including time for resubmittals.
- 2.5 Package each submittal appropriately for transmittal and handling.
- 2.6 County's Review:
- A. Submittals are reviewed for general conformance with design concept and general compliance with information given in Contract Documents only.
 - B. Review of separate item shall not indicate acceptance of assembly of which item is part.
 - C. The County or its consultants, as applicable, will review the submittal; mark the required revisions; stamp the submittals and indicate "No Exceptions Noted," "Make Corrections Noted," "Revise and Resubmit," or "Rejected," and return the submittals. "Revise and Resubmit" or "Rejected" stamps shall not be construed by the Contractor as a valid reason for an extension of time.
- 2.7 Contractor shall review the returned drawings and take appropriate action as indicated.
- A. If drawings are marked "Revise and Resubmit," make revisions and indicate them with a "cloud," stamp and date, and resubmit in the same manner and number as for the original submittal.
 - B. If drawings are marked "Rejected," make a new submittal and submit in the same manner and number as for the original submittal.
 - C. If drawings are marked "No Exceptions Noted" or "Make Corrections Noted," print and distribute copies as required for Inspector, Contractor and Subcontractors.
- 2.8 Review shall not relieve Contractor from responsibility for errors or deviations from requirements of Contract Documents.
- 2.9 Revisions: Make only those revisions required or accepted by County.
- 2.10 Submittal Log: Maintain accurate submittal log for duration of Contract. Indicate status of all submittals at all times. Make submittal log available for the County's review upon request.
- 2.11 Number of Submittal items required:
- A. Shop Drawings: submit a minimum of four (4) black-line or blue-line prints.
 - B. Product Data: Submit in the quantity required to be returned, together with three additional copies each of brochures, catalog cuts, and similar material for mechanical, electrical, hardware, and elevator items; and three additional copies for all others.
 - 1. 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, rough-in diagrams and templates, 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."

2. 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:
 - a. Manufacturer's printed recommendations.
 - b. Compliance with recognized trade association standards.
 - c. Compliance with recognized testing agency standards.
 - d. Application of testing agency labels and seals.
 - e. Notation of dimensions verified by field measurement.
 - f. Notation of coordination requirements.
3. Do not submit Product Data until compliance with requirements of the Contract Documents has been confirmed.

C. Samples:

1. Submit in the size specified in the individual Specification Sections, and in the quantity required to be returned to the Contractor, together with two additional Samples, which will be retained by the County or the County's consultants, as applicable.
2. Submit samples to illustrate functional and aesthetic characteristics of product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
3. Preliminary Submittals:
 - a. Unless precise color, pattern, and texture or similar characteristics are specifically described, submit full set of choices for material or product.
 - b. Preliminary submittals will be reviewed and returned with County's mark indicating selection and other action.
 - c. County reserves right not to make individual determination or selections until all samples of all materials are submitted.
 - d. Submit samples of all selected colors, patterns, textures or other similar characteristics as selected by County.
4. Where variations in color, pattern, texture or other characteristics are inherent in material or product, submit multiple units (not less than 3) that show approximate limits of variations.
5. Accepted samples will form standard of comparison for finished work. Defects, and deviations in excess of those in accepted samples, are unacceptable and are subject to rejection of completed work.
6. Include identification on each sample, with full project information, including:
 - a. Project name and location.

- b. Manufacturer and supplier.
 - c. Name, finish, and composition of material.
 - d. Location where material is to be used.
 - e. Specification Section number.
 - f. Reviewed samples that may be used in the Work are indicated in individual specification sections.
 - g. Field Samples: Provide field samples as required by individual sections. Install samples in locations as directed, completed and finished.
7. Other Submittals: Submit as specified in the individual Specification Sections.

PART 3 – MANUFACTURERS’ INSTRUCTION

- 3.1 When specified in individual specification Sections, submit manufacturers’ printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, in quantities specified for Product Data.
- 3.2 Identify conflicts between manufacturers’ instructions and the Contract Documents.

PART 4 – PATTERNS AND COLORS

- 4.1 Unless the exact pattern and color of a product are indicated in the Contract Documents, whenever a choice of pattern or color is available for a product, submit accurate color charts and pattern charts to the County for review and selection.

PART 5 – CERTIFICATES OF COMPLIANCE

- 5.1 Submit certificates of compliance with the associated Shop Drawings, Product Data, Samples, and other submittals required for the product.
- 5.2 Submit on 8-1/2-inch-x-11-inch white paper.
- 5.3 Submit three copies.
- 5.4 Submit in form of letter or company standard forms, signed by officer of manufacturer.
- 5.5 Each certification shall include the following:
 1. Project name and location
 2. Contractor’s name and address
 3. Quantity and date or dates of shipment or delivery to which certificate applies
 4. Manufacturer’s name
- 5.6 Indicate material or product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
- 5.7 Certificates may be based on recent or previous test results of materials or products, but must be acceptable to County.

NICHOLS, MELBURG & ROSSETTO
ARCHITECTS
IMPROVEMENTS

HUMBOLDT COUNTY COURTHOUSE
4TH STREET

5.8 The County will retain the certificates of compliance; no review reply is intended.

END OF SECTION

MODIFICATION PROCEDURES

SECTION 01 35 00

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section specifies administrative and procedural requirements for handling and processing the following contract modifications:
 - 1. Request for Information.
 - 2. Field Order.
 - 3. Request for Cost Proposal.
 - 4. Cost Proposal.
 - 5. Change Orders.

1.2 DEFINITIONS

- A. Request for Information (RFI)
 - 1. Written request submitted by Contractor to Owner's Representative via the County's online project management system on a form supplied by Owner's Representative requesting clarification, interpretation, or additional information pertaining to Contract Documents.
 - 2. An RFI shall not be used as a vehicle for only confirming or verifying issues.
- B. Field Order (FO)
 - 1. Owner's Representative written directives to the Contractor covering a specific aspect of work, signed by the Owner or Owner's lead agency that authorizes changes in the Work to expedite the change order process.
- C. Request for Cost Proposal (RFCP)
 - 1. Written request by the Owner's Representative to the Contractor to quote change to Contract Sum and/or Contract Time for proposed change to Contract Document.
- D. Cost Proposal (CP)
 - 1. Written request by the Contractor to the Owner's Representative to change Contract Sum and/or Contract Time for proposed change to Contract Document.
- E. Change Order (CO)
 - 1. Initiated by the Owner, Contractor, Consultant, Owner's lead agency, or the Owner's Representative and signed by the Owner and Contractor stating their agreement to a change to Contract Documents and adjustment to Sum and/or Contract Time.

1.3 REQUEST FOR INFORMATION (RFI)

- A. Submit RFIs numbered in sequential order, reviewed by the Contractor with respect to Contract Documents.
 - 1. Submit RFIs on forms designated by the Owner's Representative.

- B. Owner's Representative will monitor the RFI process and responses from the Consultant. The Consultant will receive RFIs only from the Owner's Representative; Consultant will not accept RFIs directly from any other entity.
- C. Owner's Representative will receive only legible, properly prepared RFI:
 - 1. Unreadable facsimile machine RFIs, illegibly written RFIs, or RFIs with incomplete information, will be returned promptly without action.
 - 2. RFIs may be transmitted to Owner's Representative by online project management system.
 - a. Owner's Representative will forward to Consultant for review, and return response by same method received from Contractor.
 - 3. Consultant will review RFIs with respect to Contract Documents and return response in a timely manner, generally within 7 calendar days, or commensurate with RFI subject.
 - a. RFIs marked "URGENT" will take precedence over outstanding RFIs and be answered by Consultant as soon as possible.
- D. Contractor being fully familiar with Contract Documents, shall not be relieved of responsibility to coordinate the Work to prevent adverse impact to Project schedule when submitting RFIs to Owner's Representative for clarification or interpretation of Contract Documents, or additional information.
- E. If the Contractor believes the scope of work referenced in the RFI has a cost and /or time impact, he will not proceed with the work until either a Field Order or a Change Order has been issued.

1.4 FIELD ORDER (FO)

- A. Field Orders may include supplementary or revised Drawings and/or Specification to describe changes to Contract Documents.
- B. Field Orders will be executed on forms designated by the Owner's Representative.
- C. Field Orders may be generated by the Contractor's written notice submitted on a Cost Proposal form, that an RFI response or other unforeseen condition has changed the Contract cost and /or time, and that schedule impact will result if written directive is not provided in a timely manner.
- D. Contractor shall provide an estimate of cost and/or time impact at the time of the request for a Field Order.
- E. Owner's Representative will review the request for a Field Order and initiate a written Field Order for authorization by the Owner or Owner's lead agency.
- F. If the Field Order is approved by the Owner or Owner's lead agency, Owner's Representative will release the signed Field Order to the Contractor. If rejected, the Contractor is so notified by the Owner's Representative.

1.5 REQUEST FOR COST PROPOSAL (RFCP)

- A. Request for Cost Proposal is an informational request only, and is not an instruction or authorization to execute a change, or an order to stop Work in progress.
- B. Request for Cost Proposal may include supplementary or revised Drawings and/or Specification to describe proposed changes to Contract Documents.
- C. Contractor shall submit cost and/or time quotation to Owner's Representative within 15 calendar days following receipt of Request for Cost Proposal.

1.6 COST PROPOSAL (CP)

- A. Contractor shall submit to the Owner's Representative a Cost Proposal for all occurrences the Contractor believes impacts Scope of Work cost and/or time.
 - 1. A Cost Proposal shall be submitted within 15 calendar days of the occurrences.
- B. Submit Cost Proposal numbered in sequential order, reviewed by the Contractor with respect to Contract Documents.
 - 1. Submit Cost Proposals on forms designated by the Owner's Representative.
- C. All Cost Proposals submitted shall have detailed breakdown for all associated work, cost and/or time.
- D. Owner's Representative will solicit and monitor independent cost estimates responses from the Consultant.
- E. Owner's Representative shall return Cost Proposal responses and reviews to the Contractor within 15 calendar days following receipt of Cost Proposal.
- F. A processed Cost Proposals is informational back-up for a potential Change Order, and not an instruction or authorization to execute a change, or an order to stop Work in progress.

1.7 CHANGE ORDER (CO)

- A. Change Orders may be initiated by the Owner, Contractor, Consultant, Owner's lead agency, or the Owner's Representative.
- B. Changes to the Project Contract Sum and/or Contract Time listed or indicated in Change Orders shall include or be determined by methods described in the General Conditions.
- C. Owner's Representative has responsibility for processing and administering Change Orders for the Project, and will prepare each Change Order using form designated by the Owner's Representative.
- D. Contractor shall provide all pricing proposals Cost Proposals for a Change Order. The Consultant shall provide independent cost estimates to Cost Proposals.
 - 1. Cost differentials between the Contractor's Cost Proposal and the Owner's Representative may negotiate the Consultants cost estimates.
 - 2. If no agreement is reached, the Owner's Representative may issue a time and material change Order.
 - a. Use Daily Force Account Report designated by Owner's Representative.
- E. The Contractor, Consultant, Owner's Representative, Owner's lead agency and Owner will sign a fully documented Change Order.

1.8 CORRELATING CHANGE ORDERS WITH OTHER CONTRACT REQUIREMENTS

- A. Revise Schedule of Values and Applications for Payment to record each Change Order as a separate item of work with adjustment to Contract Sum and Contract Time.
- B. Revise Construction Schedule to reflect each change in Contract Time.
- C. Record modifications in Record Documents.

END OF SECTION

REFERENCES

SECTION 01 42 00

PART 1 – GENERAL

1.1 SECTION INCLUDES

- A. Reference Standards.
- B. Industry Standards.
- C. Definitions.
- D. Specification format and content explanation.
- E. Codes, regulations and governing agencies.
- F. References, abbreviations, and acronyms.

1.2 REFERENCE STANDARDS

- A. General: References are made throughout the Specification to various codes, reference standards, practices and requirements for materials, work quality, installation, inspections and tests which are published and issued by government agencies, professional and trade organizations, societies, associations and testing agencies. References to these publications are made by acronyms or abbreviations as listed in this Section.
- B. Obtain copies of reference standards, manuals and codes directly from publication sources as needed for proper performance and completion of the Work.
- C. Standards, manuals and codes referenced in the Specifications form part of these Specifications to the extent referenced. No provisions of any such standard, specification, manual, or code or instruction shall be effective to change the duties and responsibilities of County, or Contractor; any of their subcontractors, consultants, agents, or employees from those set forth in the Contract Documents; nor shall it be effective to assign to County or any of County's consultants, agents, or employees, a duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.
- D. Reference to standards, manuals, and codes refer to the latest edition of such standards, manuals, and codes as of the date of issue of this Contract Book unless noted otherwise.

1.3 INDUSTRY STANDARDS

- A. Applicability of Standards: Except where the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents. Such standards are made a part of the Contract Documents by reference. Individual Sections indicate which codes and standards the Contractor must keep available at the Work Site for reference.

- B. Publication Dates: Where the date of issue of a referenced standard is not specified, comply with the standard in effect as of date of these specifications.
- C. Updated Standards: At the request of the County, Contractor, or authority having jurisdiction, submit a Change Order Request where an applicable code or standard has been revised and reissued after the date of the Contract Documents and before performance of Work affected. The County will decide whether to issue a Proposal Request to proceed with the updated standard.
- D. Conflicting Requirements: Where compliance with two or more standards is specified, and they establish different or conflicting requirements for minimum quantities or quality levels, the most stringent requirement will be enforced, unless the Contract Documents indicate otherwise. Refer requirements that are different, but apparently equal, and uncertainties as to which quality level is more stringent to the County for a decision before proceeding.
- E. Minimum Quantity or Quality Levels: In every instance the quantity or quality level shown or specified shall be the minimum to be provided or performed. The actual installation may comply exactly, within specified tolerances, with the minimum quantity or quality specified, or it may exceed that minimum within reasonable limits. In complying with these requirements, indicated numeric values are minimum or maximum values, as noted, or appropriate for the context of the requirements. Refer instances of uncertainty to the County for a decision before proceeding.
- F. Copies of Standards: Each entity engaged in construction on the Work is required to be familiar with industry standards applicable to that entity's construction activity. Copies of applicable standards are not bound with the Contract Documents.
 - 1. Where copies of standards are needed for performance of a required construction activity, the Contractor shall obtain copies directly from the publication source.
- G. Abbreviations and Names: Trade association names and titles of general standards are frequently abbreviated. Where such acronyms or abbreviations are used in the Specifications or other Contract Documents, they mean the recognized name of the trade association, standards generating organization, authority having jurisdiction, or other entity applicable to the context of the text provision. Refer to the "Encyclopedia of Associations," published by Gale Research Co., available in most libraries.

1.4 DEFINITIONS

- A. General: Words and abbreviations used in the Specifications are given meaning as defined in "The American Heritage Dictionary of the English Language" and as commonly used and accepted in the construction industry. Abbreviations and symbols used on Drawings are identified on Drawings.
- B. Words and Terms: The following words and terms used in the Specifications shall mean as indicated.
 - 1. Accepted Equal: Reviewed and accepted by County as being equal in quality, utility, and appearance.
 - 2. Words and terms "or Approved Equal" and "or Equal" used in the Specifications shall have the same meaning as "Accepted Equal."

3. Contractor Shall: To be concise; sentences, statements, and clauses used in the Specifications that exclude any form of the verb “shall”, which is normally expressed in a verb phrase with verbs such as “furnish”, “install”, “provide”, “perform”, “construct”, “erect”, “comply”, “apply”, “submit”, etc. Any such sentences, statements, and clauses are to be interpreted to include applicable form of phrase “Contractor shall”.
4. Furnish: Supply and deliver to Work Site, ready for installation; unload and inspect for damage.
5. Install: Anchor, fasten, or connect in place and adjust for use; place or apply in proper position and location; establish in place for use or service including all necessary labor, tools, equipment, and implements necessary to perform work indicated, ready for operation or use.
6. Observe: Used in reference to Architect means to become familiar with the process and quality of the Work and to determine if the Work is proceeding in general accordance with the Contract Documents based on what is plainly visible at the construction site, without removal of its materials or other construction that is in place.
7. Products: New material, machinery, components, equipment, fixtures, and systems forming the Work, but does not include machinery and equipment used for preparation, fabrication, conveying and erection of the Work.
8. Provide: Furnish and install all items necessary to complete work, ready for operation or use.
9. “Indicated” refers to graphic representations, notes or schedules on the Drawings, or other Paragraphs or Schedules in Specifications, and similar requirements in Contract Documents. Where terms such as “shown,” “noted,” “scheduled,” and “specified” are used, it is to help locate the reference; no limitation on location is intended except as specifically noted.
10. Directed: Terms such as “directed”, “requested”, “authorized”, “selected”, “approved”, “required”, and “permitted” mean “directed by the County”, “requested by the County”, and similar phrases. However, no implied meaning shall be interpreted to extend the County’s responsibility into the Contractor’s area of construction supervision.
11. Approve: The term “approved,” where used in conjunction with the County’s action on the Contractor’s submittals, applications, and requests, is limited to the duties and responsibilities of the County as stated in General and Supplementary Conditions. Such approval shall not release the Contractor from responsibility to fulfill Contract requirements unless otherwise provided in the Contract Documents.
12. Regulation: The term “Regulation” includes laws, ordinances, statutes, regulations, and lawful orders issued by authorities having jurisdiction, as well as rules, conventions, and agreements within the construction industry that control performance of the Work, whether lawfully imposed by authorities having jurisdiction or not.

13. Unless otherwise indicated, the term "experienced," when used with the term "Installer" means having a minimum of 5 previous projects similar in size and scope to this Work, being familiar with the precautions required, and having complied with requirements of the authority having jurisdiction.
14. "Work Site" is the space available to the Contractor for performance of construction activities, either exclusively or in conjunction with others performing other construction activities as part of the Work.
15. Installer: An "Installer" is the Contractor or an entity engaged by the Contractor, either as an employee, subcontractor, or sub-subcontractor for performance of a particular construction activity, including installation, erection, application, and similar operations. Installers are required to be experienced in the operations they are engaged to perform.
16. Demolish: Unless otherwise indicated, to demolish an item indicates that the Contractor shall take apart, remove and dispose of the subsequent materials. "Demo" shall mean the same as demolish.

1.5 SPECIFICATION FORMAT AND CONTENT EXPLANATION

- A. Specification Format: These Specifications are organized into Divisions and Sections based on the Construction Specifications Institute's 48-Division format and Master Format numbering system.
- B. Specification Content: This Specification uses certain conventions in the use of language and the intended meaning of certain terms, words, and phrases when used in particular situations or circumstances. These conventions are explained as follows:
 1. Abbreviated Language: Language used in the Specifications and other Contract Documents is the abbreviated type. Implied words and meanings will be appropriately interpreted. Singular words will be interpreted as plural and plural words interpreted as singular where applicable and where the full context of the Contract Documents so indicates.
 2. Imperative and streamlined language is used generally in the Specifications. Requirements expressed in the imperative mood are to be performed by the Contractor. At certain locations in the text, for clarity, subjective language is used to describe responsibilities that must be fulfilled indirectly by the Contractor, or by others when so noted.
 - a. The words "shall be" shall be included by inference wherever a colon (:) is used within a sentence or phrase.
- C. Assignment of Specialists: The Specification requires that certain specific construction activities shall be performed by specialists who are recognized experts in the operations to be performed. The specialists must be engaged for those activities, and assignments are requirements over which the Contractor has no choice or option. Nevertheless, the ultimate responsibility for fulfilling Contract requirements remains with the Contractor.
 1. This requirement shall not be interpreted to conflict with enforcement of building codes and similar regulations governing the Work. It is also not intended to interfere with local trade union jurisdictional settlements and similar conventions.

2. Trades: Use of titles such as "carpentry" is not intended to imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as "carpenter." It also does not imply that requirements specified apply exclusively to tradespersons of the corresponding generic name.

1.6 CODES, REGULATIONS AND GOVERNING AGENCIES

A. California Code of Regulations (CCR).

1. Title 8, Division 1, Chapter 3.2 – California Occupational Safety and Health Regulations (Cal/OSHA).
2. Title 8, Division 1, Chapter 4, Subchapter 4 – Construction Safety Orders.
3. Title 8, Division 1, Chapter 4, Subchapter 6 – Elevator Safety Orders
4. Title 19, Division 1 – Regulations of the State Fire Marshal (SFM).
5. Title 24 – California Building Standards Code (CBSC).
 - a. Part 1 – California Administrative Code (CAC).
 - b. Part 2 – California Building Code (CBC).
 - c. Part 3 – California Electrical Code (CEC).
 - d. Part 4 – California Mechanical Code (CMC).
 - e. Part 5 – California Plumbing Code (CPC).
 - f. Part 6 – California Energy Code.
 - g. Part 7 – California Elevator Safety Construction Code.
 - h. Part 8 – California Historical Building Code.
 - i. Part 9 – California Fire Code.
 - j. Part 10 – California Existing Building Code.
 - k. Part 11 – California Green Building Standards Code.
 - l. Part 12 – California Referenced Standards Code.

B. California Department of Transportation (Caltrans).

C. California Department of General Services (DGS).

D. California Environmental Protection Agency (Cal/EPA).

1. California Air Resources Board (ARB).
2. California State Water Resources Control Board (SWRCB).
3. Department of Pesticide Regulation (DPR).

- E. Code of Federal Regulations (CFR) Title 28, Part 36 – ADA Standards for Accessible Design, Appendix A – ADA Accessibility Guidelines (ADAAG) for Buildings and Facilities.
- F. Occupational Safety and Health Act (OSHA).
- G. U.S. Environmental Protection Agency (EPA).
- H. U.S. Department of Energy (DOE).

1.7 REFERENCES, ABBREVIATIONS AND ACRONYMS

AA	Aluminum Association.
AAADM	American Association of Automatic Door Manufacturers.
AABC	Associated Air Balance Council.
AAC	Aluminum Anodizers Council.
AAMA	American Architectural Manufacturers Association.
AASHTO	American Association of State Highway and Transportation Officials.
AATCC	American Association of Textile Chemists and Colorists.
ABMA	American Boiler Manufacturer's Association.
ACGIH	American Conference of Government Industrial Hygienists, Inc.
ACI	American Concrete Institute.
ACPA	American Concrete Pipe Association.
AF&PA	American Forest and Paper Association (formerly National Forest Products Association).
AFBMA	Anti-Friction Bearing Manufacturer's Association.
AGA	American Gas Association.
AGC	Associated General Contractors of America.
AGMA	American Gear Manufacturers Association
AHA	American Hardboard Association.
AHJ	Authority Having Jurisdiction.
AI	Asphalt Institute.
AIA	American Institute of Architects.
AIEE	American Institute of Electrical Engineers.
AIHA	American Industrial Hygiene Association.
AISC	American Institute of Steel Construction.
AISI	American Iron and Steel Institute.
AITC	American Institute of Timber Construction.
ALSC	American Lumber Standards Committee.
AMCA	Air Movement and Control Association.
ANSI	American National Standards Institute, Inc.
APA	The Engineered Wood Association.
API	American Petroleum Institute.
APWA	American Public Works Association.
AQMD	Air Quality Management District.
ARI	Air-Conditioning and Refrigeration Institute.
ARMA	Asphalt Roofing Manufacturers Association.
ASCE	American Society of Civil Engineers.

ASD	Advanced Simulation and Design.
ASHRAE	American Society of Heating Refrigerating and Air Conditioning Engineers.
ASME	American Society of Mechanical Engineers.
ASPA	American Sod Producers Association.
ASSE	American Society of Sanitary Engineers.
ASTM	American Society for Testing and Materials.
ATF	Academy of Textiles and Flooring.
AWC	American Wood Council.
AWCI	Association of Wall and Ceiling Industries.
AWG	American Wire Gage.
AWI	Architectural Woodwork Institute.
AWPA	American Wood Protection Association.
AWS	American Welding Society.
AWWA	American Water Works Association.
BAAQMD	Bay Area Air Quality Management District
BHMA	Builders Hardware Manufacturers Association.
BIA	Brick Industry Association.
BOCA	Building Officials and Code Administrators International, Inc.
CAN/ULC	Underwriters' Laboratory of Canada.
CAS	Chemical Abstracts Service (division of the American Chemical Society).
CBC	California Building Code
CBM	Certified Ballast Manufacturers.
CCR	California Code of Regulations
CDA	Copper Development Association.
CE	US Army Corps of Engineers
CFFA	Chemical Fabrics and Film Association, Inc.
CFR	Code of Federal Regulations
CISCA	Ceiling and Interior Systems Construction Association.
CISPI	Cast Iron Soil Pipe Institute.
CLFMI	Chain Link Fence Manufacturing Institute.
CPA	Composite Panel Association.
CRA	California Redwood Association.
CRI	Carpet and Rug Institute.
CRSI	Concrete Reinforcing Steel Institute.
CS	Commercial Standard.
CSI	Construction Specifications Institute.
CSIAC	California State Industrial Accident Commission.
DHI	Door Hardware Institute.
EIA	Electronic Industries Association.
EIMA	EIFS Industry Manufacturers Association.
ETL	Electrical Testing Laboratories.
EWS	Engineered Wood Systems
FEMA	Federal Emergency Management Agency.
FM	Factory Mutual Research and Engineering Corporation.
FMRC	Factory Mutual Research Corporation.
FS	Federal Specification – U.S. General Services Administration.

FSC	Forest Stewardship Council.
GA	Gypsum Association.
GANA	Glass Association of North America.
GMA	Flat Glass Marketing Association.
HPVA	Hardwood Plywood and Veneer Association.
IAPMO	International Association of Plumbing and Mechanical Officials.
ICC	International Code Council, Inc.
ICC	Interstate Commerce Commission.
ICC-ES	ICC Evaluation Service, Inc.
ICEA	Insulated Cable Engineers Association.
ICRI	International Concrete Repair Institute
IEEE	Institute of Electrical and Electronics Engineers.
IESNA	Illuminating Engineering Society of North America
IMIAC	International Masonry Industry All-Weather Council.
IPCEA	Insulated Power Cable Engineers Association.
ISO	International Standards Organization.
ITS	Intertek Testing Services.
LEED™	Leadership in Energy and Environmental Design (USGBC standard).
LRFD	Load and Resistance Factor Design.
LSGA	Laminators Safety Glass Association.
MBMA	Metal Building Manufacturers Association.
MFMA	Maple Flooring Manufacturers Association.
MFMA	Metal Framing Manufacturers Association.
MIA	Marble Institute of America
MIL	Military Specifications (U.S. Department of Defense).
ML/SFA	Metal Lath/Steel Framing Association Division of NAAMM.
MPI	Master Painters Institute.
MS4	Municipal Separate Storm Sewer Systems.
MSDS	Material Safety and Data Sheet.
MSJC	Masonry Standards Joint Committee.
MSMA	Metal Stud Manufacturers Association.
MSS	Manufacturers Standardization Society of the Valve and Fittings Industry.
MUTCD	Manual of Uniform Traffic Control Devices (U.S. Department of Transportation).
NAAMM	National Association of Architectural Metal Manufacturers.
NAFS	North American Fenestration Standard (Co-published by AAMA & WDMA).
NAPHCC	National Association of Plumbing Heating Cooling Contractors.
NBBPVI	National Board of Boiler and Pressure Vessel Inspectors.
NBFU	National Board of Fire Underwriters.
NBGQA	National Building Granite Quarries Association, Inc.
NCMA	National Concrete Masonry Association.
NCPWB	National Certified Pipe Welding Bureau.
NCRP	National Council on Radiation Protection and Measurement.
NEBB	National Environmental Balancing Bureau.
NEC	National Electrical Code.
NEHRP	National Earthquake Hazards Reduction Program.
NEMA	National Electrical Manufacturers Association.

NES	National Evaluation Service, Inc.
NFPA	National Fire Protection Association.
NFRC	National Fenestration Rating Council.
NIBS	National Institute of Building Sciences.
NIST	National Institute of Science and Technology.
NOFMA	National Oak Flooring Manufacturers Association.
NPDES	National Pollutant Discharge Elimination System.
NRCA	National Roofing Contractors Association.
NRMCA	National Ready Mixed Concrete Association.
NSF	National Sanitation Foundation.
NTMA	National Terrazzo and Mosaic Association.
NWWDA	National Wood Window and Door Association.
OSHA	Occupational Safety and Health Act of 1970.
PCA	Portland Cement Association.
PCI	Precast Prestressed Concrete Institute.
PDI	Plumbing and Drainage Institute.
PEI	Porcelain Enamel Institute.
PS	Voluntary Product Standard (US Department of Commerce / NIST).
RCSC	Research Council on Structural Connections.
RIS	Redwood Inspection Service.
RMA	Rubber Manufacturers Association.
SC	Shading Coefficient.
SCAQMD	South Coast Air Quality Management District
SDI	Steel Deck Institute.
SDI	Steel Door Institute.
SFBC	South Florida Building Code.
SHGC	Solar Heat Gain Coefficient.
SIGMA	Sealed Insulating Glass Manufacturers Association.
SMACNA	Sheet Metal and Air Conditioning Contractors National Association.
SPRI	Single-Ply Roofing Institute.
SSMA	Steel Stud Manufacturers Association.
SSPC	The Society for Protective Coatings.
SWI	Steel Window Institute.
SWPPP	Storm Water Pollution Prevention Plan.
SWRI	Sealant, Waterproofing, and Restoration Institute.
TCA	Tile Council of America.
TEMA	Tubular Exchanger Manufacturers Association, Inc.
TMS	The Masonry Society.
TPI	Truss Plate Institute.
TRI	Tile Roofing Institute.
UL	Underwriters Laboratories, Inc.
ULC	Underwriters Laboratories of Canada.

USGBC	US Green Building Council.
VOC	Volatile Organic Compounds.
WCLIB	West Coast Lumber Inspection Bureau.
WDMA	Window and Door Manufacturers Association (formerly NWWDA - National Wood Window and Door Association).
WDMA	Window and Door Manufacturers Association.
WH	Warnock Hersey.
WI	Woodwork Institute (formerly WIC – Woodwork Institute of California).
WSRCA	Western States Roofing Contractors Association.
WSFI	Wood and Synthetic Flooring Institute.
WWPA	Western Wood Products Association.

PART 2 – PRODUCTS

(NOT USED)

PART 3 – EXECUTION

(NOT USED)

END OF SECTION

TEMPORARY FACILITIES BARRIERS, CLOSURES AND CONTROLS

SECTION 01 56 00

PART 1 – GENERAL

1.1 SECTION INCLUDES

- A. Temporary Utilities: Electricity, water and sanitary facilities.
- B. Construction Facilities: Vehicular access, parking, progress cleaning, and fire prevention facilities.
- C. Temporary Controls: Barriers, enclosures, security, water control, dust control, erosion control, noise control, and pollution control.
- D. Protection of Work.
- E. Removal of utilities, facilities, and controls

1.2 TEMPORARY ELECTRICITY

- A. 110V electrical service is available in the facility. Contractor shall provide generator power for use in excess of what is available in the Work Site.

1.3 TEMPORARY WATER

- A. Domestic water service is available near the Work Site. Water in excess of that which can be conveniently be supplied by the County shall be supplied by the Contractor.

1.4 TEMPORARY SANITARY FACILITIES

- A. Provide and maintain required temporary facilities for use by construction personnel. Maintain daily in sanitary and clean condition. Locate sanitary facilities in parking lot as directed by the County.

1.5 VEHICULAR ACCESS

- A. Limit access of construction equipment to designated areas.
- B. Extend and relocate vehicular access as Work progress requires, provide detours as necessary for unimpeded traffic flow.
- C. Provide unimpeded access for emergency vehicles.
- D. Provide and maintain access to fire hydrants and control valves free of obstructions.

1.6 PARKING

- A. Coordinate parking areas to accommodate construction personnel with County.

1.7 PROGRESS CLEANING AND WASTE REMOVAL

- A. Maintain all areas free of waste materials, debris and rubbish. Maintain site in a clean and orderly condition.
- B. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces and other closed or remote spaces prior to enclosing the space.
- C. Remove waste materials, debris and rubbish from site daily and dispose off-site.

1.8 BARRIERS AND ENCLOSURES

- A. Contractor shall provide and maintain temporary fencing or other barriers sufficient to prevent hazard to the public and County employees in the vicinity of the Work.
- B. Provide security and facilities to protect Work and County occupied areas affected by the Work from unauthorized entry, vandalism or theft.
- C. Initiate program at mobilization. Maintain program throughout construction period.

1.9 DUST CONTROL

- A. Execute Work by methods to minimize raising dust from construction operations.
- B. Provide positive means to prevent air-borne dust from dispersing into atmosphere.
- C. Protect all adjacent spaces and systems from dust during construction.
- D. Provide barriers/protection for all existing systems and equipment during construction including, but not limited to: HVAC system, plumbing system, fire alarm system, paging system, body scanner.

1.10 (NOT USED)

1.11 NOISE CONTROL

- A. Provide methods, means, and facilities to minimize noise produced by construction operations.

1.12 POLLUTION CONTROL

- A. Provide methods, means, and facilities to prevent contamination of soil, water, and atmosphere from discharge of noxious, toxic substances, and pollutants produced by construction operations.
- B. Comply with pollution and environmental control requirements of authorities having jurisdiction.

1.13 PROTECTION OF INSTALLED WORK

- A. Protect installed Work and provide special protection where specified in individual specification Sections.
- B. Provide temporary and removable protection for installed Products. Control activity in immediate work area to minimize damage.

- C. Provide protective coverings at walls, projections, jambs, sills and soffits of openings.
- D. Protect finished floors, stairs and other surfaces from traffic, dirt, wear, damage or movement of heavy objects, by protecting with durable sheet materials.

1.14 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

- A. Remove temporary above-grade or buried utilities, equipment, facilities, and materials prior to Completion of the Work.
- B. Clean and repair damage caused by installation or use of temporary work.
- C. Restore existing facilities used during construction to original condition. Restore permanent facilities used during construction to specified condition.

PART 2 – PRODUCTS

(NOT USED)

PART 3 – EXECUTION

(NOT USED)

END OF SECTION

PRODUCT REQUIREMENTS

SECTION 01 60 00

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Products.
- B. Product Delivery Requirements.
- C. Product Storage and Handling Requirements.
- D. Product Options.

1.2 PRODUCTS

- A. Products: Means new material, machinery, components, equipment, fixtures, and systems forming the Work. Does not include machinery and equipment used for preparation, fabrication, conveying and erection of the Work. Products may also include existing materials or components required for reuse.
- B. All products shall be new, of first class quality, and shall be delivered, installed, connected and finished in every detail, and shall be so selected and arranged as to fit correctly into the proper spaces. Where no specific kind or quality of material is given, a first-class standard article as approved by Architect shall be furnished. Contractor shall provide satisfactory evidence as to the kinds and quality of material and workmanship.
- C. Do not use materials and equipment removed from existing premises, except as specifically permitted by the Contract Documents.
- D. Furnish interchangeable components from same manufacturer for components being replaced.

1.3 PRODUCT DELIVERY REQUIREMENTS

- A. Transport and handle products in accordance with manufacturer's instructions.
- B. Delivery of materials to the Project site shall be coordinated by and received by Contractor or his representative, and stored in secured areas as agreed upon at the job start meeting.
- C. Promptly inspect shipments to assure that products comply with requirements, quantities are correct and products are undamaged.
- D. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement or damage.
- E. Contractor shall take into consideration the available space and location of work site when delivery of materials is necessary.

1.4 PRODUCT STORAGE AND HANDLING REQUIREMENTS

- A. Store and protect products in accordance with manufacturer's instructions, with seals and labels intact and legible. Store sensitive products in weather tight, climate controlled, enclosures in an environment favorable to product.
- B. For exterior storage of fabricated products, place on sloped supports above ground.

- C. Provide off-site storage and protection when site does not permit on-site storage or protection.
- D. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to avoid condensation and degradation of products.
- E. Store loose granular materials on solid flat surfaces in well-drained area. Prevent mixing with foreign matter.
- F. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.
- G. Arrange storage of products to permit access for inspection. Periodically inspect to assure products are undamaged and are maintained under specified conditions.
- H. Contractor shall be responsible to provide all new materials in unopened manufacturer's original containers and deliver such items to Project site in good condition for use on this project. Contractor shall be responsible to store all new materials received as per manufacturer recommendations. Any and all materials discovered to be improperly stored and/or damaged will be replaced at the sole expense to Contractor. Any requests for delays or extension of the Contract Time due to the above will not be considered.
- I. Contractor shall use all means necessary to protect all materials before, during and after installation and to protect the installed work and materials of all other trades and of existing structures. In event of damage, Contractor is to immediately make all repairs and replacements necessary using compatible and like materials.

1.5 PRODUCT OPTIONS

- A. Products Specified by Reference Standards or by Description Only: Any product meeting those standards or description.
- B. Products Specified by Naming One Manufacturer and stating "No Substitutions Allowed, County's Standard": Products of manufacturer named and meeting specifications, no options or substitutions allowed.
- C. Products Specified by Naming One or More Manufacturers without naming a Product, with a Provision for Substitutions: Submit a request for substitution for any manufacturer not named.
- D. Products specified by Naming One or More Manufacturers and Naming Product(s) by the first listed Manufacturer, with a Provision for Substitutions: Submit a request for substitution for any product, by any manufacturer, listed or not listed, other than the product(s) listed.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Materials furnished shall be new and never been used before, unless specified otherwise, and will satisfy the requirements herein and all specifications referenced by provisions within these specifications. Contractor shall furnish, upon request of Project Manager, an affidavit from the manufacturer or supplier to the effect that materials furnished shall conform to the General Conditions, the latest revision of AWWA Specifications, ASTM, and Federal Specifications that pertain. All materials shall be installed in accordance with manufacturer's recommendations and the Standard Drawings and Specifications that pertain. Material for one specific product shall be one manufacturer unless otherwise approved by Architect. All materials shall be subject to inspection after delivery to the site and during installation of the Work. Failure of the Inspector, Project Manager or Architect to note faulty material shall not relieve Contractor of the responsibility for removing or replacing any such material at no additional cost to County.

- B. For the ease of maintenance and parts replacement, to the maximum extent possible use materials of a single manufacturer, delivered in manufacturer's original, unopened containers with labels intact and legible, and in sufficient quantity to allow continuity of work. Deviation from this requirement shall require written approval from County.
- C. County reserves the right to reject any materials list which contains materials from various manufacturers if suitable materials can be secured from fewer manufacturers and to require that source of materials be unified to maximum extent possible.

PART 3 EXECUTION

Not Used

END OF SECTION

CUTTING AND PATCHING

SECTION 01 73 29

PART 1 – GENERAL

1.1 DESCRIPTION

- A. This Section describes the requirements for performing cutting and patching; patching includes the insertion or projection of other products in or from a surface.

1.2 QUALITY ASSURANCE

A. Design Criteria:

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

1.3 COORDINATION AND PROTECTION

- A. Contractor shall protect from damage all portions of the Work or work of the County or separate contractors adjacent to cutting or patching operations, including excavation.
- B. Contractor shall obtain written permission prior to commencing cutting, patching or excavation operations on the work of the County or any separate contractors.
- C. Contractor shall protect adjacent occupied spaces from damage during concrete cutting and coring.
- D. Contractor shall maintain the security and weather protection of facility at all times.
- E. Contractor shall, when requested in writing, allow the County or any separate contractor to perform reasonable cutting, patching or excavation operation on the Work.

1.4 SUBMITTALS

- A. Cutting and Patching Proposal: Where approval of procedures for cutting and patching is required before proceeding, Contractor shall submit a proposal describing procedures well in advance of the time cutting and patching will be performed and request approval to proceed. Include the following information, as applicable, in the proposal:
1. Describe the extent of cutting and patching required and how it is to be performed; indicate why it cannot be avoided.
 2. Describe anticipated results in terms of changes to existing construction; include changes to structural elements and operating components as well as changes in the building's appearance and other significant visual elements.
 3. List products to be used and firms or entities that will perform the Work.

4. Indicate dates when cutting and patching is to be performed.
5. List utilities that will be disturbed or affected, including those that will be relocated and those that will be temporarily out-of-service. Indicate how long service will be disrupted.
6. Where cutting and patching involves addition of reinforcement to structural elements, submit details and engineering calculations to show how reinforcement is integrated with the original structure.
7. Approval by the County to proceed with cutting and patching does not waive the County's right to later require complete removal and replacement of a part of the Work found to be unsatisfactory.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. Materials shall be as specified in the applicable, individual Sections of the Specifications and as required to match existing construction. Contractor shall use materials that are identical to existing materials. If identical materials are not available or cannot be used where exposed surfaces are involved, use materials that match existing adjacent surfaces to the fullest extent possible with regard to visual effect after consulting with the County. Contractor shall use materials whose installed performance will equal or surpass that of existing materials.

PART 3 – EXECUTION

3.1 GENERAL

- A. Contractor shall perform cutting associated with structural reinforcing, and patching in a manner to prevent damage to other Work and to provide proper surfaces for the installation of materials, equipment, and repairs.
- B. Contractor shall not cut or alter structural members without prior consultation with the County.
- C. Wherever practicable, Contractor shall employ original installer or fabricator providing Work under this Contract to perform cutting and patching for new:
 1. Weather-exposed and moisture-resistant products.
 2. Finished surfaces exposed to view.
- D. Contractor shall adjust and fit products to provide a neat installation.
- E. Contractor shall finish or refinish, as required, cut and patched surfaces to match adjacent finishes. Paint over complete surface plane, unless otherwise indicated. Over patched wall or ceiling surfaces, paint to nearest cutoff line for entire surface, such as intersection with adjacent wall or ceiling, beam or pilasters or to nearest opening frame, unless otherwise indicated. Painted surfaces shall not present a spotty, touched-up appearance.

3.2 INSPECTION

- A. Before cutting existing surfaces, Contractor shall examine surfaces to be cut and patched and conditions under which cutting and patching is to be performed. Take corrective action

before proceeding, if unsafe or unsatisfactory conditions are encountered.

1. Before proceeding, Contractor shall meet at the Work Site with parties involved in cutting and patching, including mechanical and electrical trades. Review areas of potential interference and conflict. Coordinate procedures and resolve potential conflicts before proceeding.

3.3 PREPARATION

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

3.4 PERFORMANCE

- A. General: Contractor shall employ skilled workmen to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time and complete without delay.
 1. Cut existing construction to provide for installation of other components or performance of other construction activities and the subsequent fitting and patching required restoring surfaces to their original condition.
- B. Cutting: Contractor shall cut existing construction using methods least likely to damage elements to be retained or adjoining construction. Where possible, review proposed procedures with the original installer; comply with the original installer's recommendations.
 1. In general, where cutting is required use hand or small power tools designed for sawing or grinding, not hammering and chopping. Cut holes and slots neatly to size required with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
 2. To avoid marring existing finished surfaces cut or drill from the exposed or finished side into concealed surfaces.
 3. Cut through concrete and masonry using a cutting machine such as a Carborundum saw or diamond core drill.
 4. (NOT USED)
 5. Contractor shall by-pass utility services such as pipe or conduit, before cutting, where services are shown or required to be removed, relocated or abandoned. Cut-off pipe or conduit in walls or partitions to be removed. Cap, valve or plug and seal the remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after by-passing and cutting.
- C. Patching: Contractor shall patch with durable seams that are as invisible as possible. Comply with specified tolerances.

1. Where feasible, inspect and test patched areas to demonstrate integrity of the installation.
2. Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.
3. Where removal of walls or partitions extends one finished area into another, patch and repair floor and wall surfaces in the new space to provide an even surface of uniform color and appearance. Remove existing floor and wall coverings and replace with new materials, if necessary to achieve uniform color and appearance.
4. Where patching occurs in a smooth painted surface, extend final paint coat over entire unbroken area containing the patch, after the patched area has received primer and second coat.
5. Patch, repair or rehang existing ceilings as necessary to provide an even plane surface of uniform appearance.

3.5 CLEANING

- A. Contractor shall thoroughly clean areas and spaces where cutting and patching is performed or used as access. Remove completely paint, mortar, oils, putty and items of similar nature. Thoroughly clean piping, conduit and similar features before painting or other finishing is applied. Restore damaged pipe covering to its original condition.

END OF SECTION

CONTRACT CLOSEOUT

SECTION 01 75 00

PART 1 - GENERAL

1.1 SUMMARY

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

1.2 SUBSTANTIAL COMPLETION

- A. Prior to requesting inspection for certification of Substantial Completion, complete the following. List exceptions in the request.
 - 1. In the Application for Payment that coincides with, or first follows, the date Substantial Completion is claimed, show 100 percent completion for the portion of the Work claimed as substantially complete.
 - a. 100 percent completion will bring the Contractor's progress Payment up to (95%) ninety percent of the Contract Price with (5%) percent to remain in retention until after Notice of Completion.
 - b. Include supporting documentation for completion as indicated in these Contract Documents and a statement showing an accounting of changes to the Contract Sum.
 - c. If 100 percent completion cannot be shown, include a list ("punchlist") of incomplete items, the value of incomplete construction, and reasons the Work is not complete.
 - 2. Advise the Owner of pending insurance changeover requirements.
 - 3. Submit specific warranties, workmanship bonds, maintenance agreements, final certifications, and similar documents.
 - 4. Obtain and submit releases enabling the Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
 - 5. Submit record drawings, maintenance manuals, final project photographs, damage or settlement surveys, property surveys, and similar final record information.
 - 6. Deliver tools, spare parts, extra stock, and similar items.
 - 7. Make final changeover of permanent locks and transmit keys to the Owner. Advise the Owner's personnel of changeover in security provisions.
 - 8. Complete startup testing of systems and instruction of the Owner's operation and maintenance personnel. Discontinue and remove temporary facilities from the site, along with mockups, construction tools, and similar elements.
 - 9. Complete final cleanup requirements, including touchup painting.
 - 10. Touch up and otherwise repair and restore marred, exposed finishes.
- B. Substantial Completion will not be issued without the following:
 - 1. Issuance of a Certificate of Occupancy.
 - 2. The electrical system, fire alarm, and sprinkler system 100% complete.
 - 3. Operation manuals, maintenance manuals and warranties submitted and approved.

4. Instruction of staff in the operation and maintenance of equipment and systems.
5. Record drawings submitted and approved.
6. Any extra material required by contract delivered.

C. Inspection Procedures:

1. On receipt of a request for inspection, the Owner's Representative and the Architect will either proceed with inspection or advise the Contractor of unfilled requirements.
2. The Owner's Representative will prepare the Certificate of Substantial Completion following inspection or advise the Contractor of construction that must be completed or corrected before the certificate will be issued.
 - a. The Owner's Representative and the Architect will repeat inspection when requested and assured that the Work is substantially complete.
 - b. Results of the completed inspection will form the basis of requirements for final acceptance.
3. Owner will allow the Contractor no longer than 30 calendar days from the Date of Substantial Completion to remedy deficiencies.

1.3 FINAL ACCEPTANCE

A. Prior to requesting final inspection for certification of final acceptance and final payment, complete and submit the following:

1. Final payment request with releases and supporting documentation not previously submitted and accepted. Include insurance certificates for products and completed operations where required.
2. Submit an updated final statement, accounting for final additional changes to the Contract Sum.
3. Certified copy of the Owner's Representative and Architect's final inspection list of items to be completed or corrected endorsed and dated by the Owner's Representative and Architect.
 - a. Certification shall state that each item has been completed or otherwise resolved for acceptance.
4. Submit consent of surety to final payment.
5. Submit all subcontractor final unconditional lien releases.
6. Submit a final liquidated damages settlement statement.
7. Submit evidence of final, continuing insurance coverage complying with insurance requirements.

B. Re-inspection Procedure:

1. Owner's Representative and /or Architect will re-inspect the Work upon receipt of notice that the Work, including inspection list items from earlier inspections, has been completed.
 - a. Indicate items whose completion is delayed under circumstances acceptable to the Owner's Representative.
2. Should the Owner's Representative determine that Work is incomplete or defective:
 - a. Owner's Representative will notify the Contractor, in writing, listing incomplete or defective Work.
 - b. Contractor shall remedy deficiencies promptly and notify Owner's Representative when ready for re-inspection.

C. Final Acceptance Certificate

1. Upon completion of inspection or any re-inspections, the Owner's Representative and /or Owner's Lead Agency will prepare a certificate of final acceptance in accordance with the Project Specification Section 00800, Supplemental General Conditions.
2. Final Acceptance will be presented to the County Board of Supervisors.
 - a. Only the County Board of Supervisors has final authority over Acceptance of Project.

D. Notice of Completion

1. Upon final acceptance by the County Board of Supervisors, the Owner's Lead Agency will prepare and file a Notice of Completion in accordance with the Project Specification Section 00800, Supplemental General Conditions.
 - a. Start of mandatory 35-day lien period.

1.4 RECORD DOCUMENT SUBMITTALS

A. Project Record Drawings:

1. Maintain a clean, undamaged set of Contract Drawings and Shop Drawings and identify as "RECORD DRAWINGS - PROJECT SET".
2. Mark the Drawings to show the actual installation where the installation varies substantially from the Work as originally shown.
 - a. Using an erasable colored pencil (not ink or indelible pencil) clearly describes change by graphic line or note.
 - b. Date all entries, and note related Change Order number where applicable.
 - c. Call attention to all entries by a "cloud" drawn around area affected.
 - d. Where overlapping changes occur, mark with different colors.
3. Conversion of schematic layouts:
 - a. Design of future modifications of facility may require accurate information as to final physical layout of items that are shown schematically on Drawings.
 - b. Show on Project set of Record Drawings, by dimension accurate to within one inch, centerline of each run of items shown schematically on Drawings. Clearly identify item by accurate note such as "cast iron drain", "galv. water", and the like. Show, by symbol or note, vertical location of item ("under slab", "in ceiling plenum", "exposed" and the like).
4. Prior to request for Substantial Completion, secure from the Owner's Representative at no charge to the Contractor, a complete set, full sized drawings and (.DWG) files of all Contract Documents.
 - a. Clearly transfer change data shown on Project set of Record Drawings to corresponding transparencies, coordinating changes as required.
 - b. Clearly indicate at each affected detail and other drawings a full description of changes made during construction, and actual location of items.
 - c. Show final location of electrical junction boxes and outlets, telephone and data outlets, supply and return registers, and like items.
 - d. Call attention to all entries by a "cloud" drawn around area affected.
 - e. Make changes neatly, consistently, and with proper media to assure longevity and clear reproduction.

B. Record Specifications:

1. Maintain one complete copy of the Project Manual, including addenda and other written construction documents, such as Change Orders and modifications issued during construction.
2. Mark Specifications to show substantial variations in actual Work performed in comparison with the text of the Specifications.
3. Note substitutions in reference to items specified.

C. Maintenance Manuals:

1. Contractor to submit a written summary of all maintenance manuals to be transmitted to Owner's Representative.
2. Submit 3 complete copies of all maintenance manuals prior to start-ups and instruction of operation to maintenance personnel.

3. Provide manuals in 8-1/2 x 11 inch format with plastic/fiberboard covers and colored fly-sheets separating sections, to include the following:
 - a. Covered labeled as "Operating and Maintenance Instructions" with name and address of Project, and names of Contractor and Subcontractor.
 - b. Typewritten index near front of manual, providing immediate information as to location within manual of emergency information regarding installation.
 - c. Complete instructions regarding operation and maintenance of all equipment, including lubrication, disassembly, and re-assembly.
 - d. Complete nomenclature of all parts of all equipment.
 - e. Complete nomenclature and part number of all replacement parts, name and address of nearest vendor, and all other data pertinent to procurement and procedures.
 - f. Copy of garnets and warranties issued.
 - g. Manufacturers' bulletins, cuts, and descriptive data, where applicable, clearly indicating precise items included in this installation and deleting, or otherwise clearly indicating, all manufacturers' data which this installation is not concerned.
 - h. Such other data as required in applicable Specification Sections.

D. Guarantees/warranties and Bonds:

1. General:

- a. Manufacturers' warranties notwithstanding, warrant the entire Work against defects in materials and workmanship for twelve (12) months from the date of Substantial Completion in accordance with the GENERAL CONDITIONS AND SUPPLEMENTARY CONDITIONS.
- b. Guarantee/warrant or bond Work as required in the Specifications.
- c. Warranties between the Contractor and manufacturers, and the Contractor and suppliers, shall not affect guarantees/ warranties between the Contractor and the Owner.
- d. The Contractor will not be held responsible for defects due to misuse, negligence, willful damage, improper maintenance, or accident caused by Others, nor shall he be responsible for defective parts whose replacement is necessitated by failure of the Owner's maintenance forces to properly clean and service them, provided the Contractor has furnished complete maintenance instructions to the Owner.
- e. Compile specified guarantees/warranties and bonds.
- f. Time of Submittal:
 - i. For equipment or component parts of accepted equipment put into service for the Owner's benefit during the progress of the Work, submit guarantees/warranties within ten (10) calendar days after acceptance of the Work.
 - ii. Otherwise, submit guarantees/warranties within ten (10) calendar days after date of Substantial Completion and prior to the Final Application for Payment.
 - iii. For items of Work where acceptance is delayed materially beyond the date of Substantial Completion, furnish updated submittal within ten (10) calendar days after such delayed acceptance, listing the date of delayed acceptance as the start of the guarantee/warranty period.

E. Other Documents:

1. Three sets of warranties, guaranties and bonds.
2. Spare parts and materials extra stock list.
3. One set of evidence of compliance with requirements of governmental agencies having jurisdiction including, but not limited to:
 - a. Certificates of Inspection.
 - b. Certificates of Occupancy.
4. One set of certificates of insurance for products and completed operations.
5. One set of evidence of payment and release of liens.
6. One copy of list of Subcontractors, service organizations, and principal vendors, including names, addresses, and telephone numbers where they can be reach for emergency service at all times including nights, weekends, and holidays.

1.5 INSTRUCTION

- A. Arrange for each Installer of equipment and systems that requires regular maintenance to meet with the Owner's personnel for instruction in proper operation and maintenance of systems, equipment and similar items, which were provided as part of the Work.
 - 1. Submit to Owner's Representative an instruction schedule listing instruction subjects and proposed dates at least 15 calendar days prior to the first proposed date.

1.6 FINAL CLEANING

- A. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion.
 - 1. Remove labels that are not permanent labels.
 - 2. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other substances that are noticeable vision-obscuring materials. Replace chipped or broken glass and other damaged transparent materials.
 - 3. Clean exposed exterior and interior hard-surfaced finishes to a dust-free condition, free of stains, films, and similar foreign substances. Restore reflective surfaces to their original condition. Leave concrete floors broom clean. Vacuum carpeted surfaces.
 - 4. Wipe surfaces of mechanical and electrical equipment. Remove excess lubrication and other substances. Clean plumbing fixtures to a sanitary condition. Clean light fixtures and lamps.
 - 5. Clean the site, sweep paved areas broom clean; remove stains, spills, and other foreign deposits. Rake grounds that are neither paved nor planted to a smooth, even-textured surface.
- B. Remove temporary protection and facilities installed for protection of the Work during construction.
- C. Comply with regulations of authorities having jurisdiction and safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on the Owner's property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove waste materials from the site and dispose of lawfully.
 - 1. Where extra materials of value remain after completion of associated Work, they become the Owner's property. Dispose of these materials as directed by the Owner.

END OF SECTION

DEMOLITION

SECTION 02 41 16

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes the following:
 - 1. Demolition and removal of existing building elements.
 - 2. Disconnecting, capping or sealing, and removing utilities.
 - 3. Salvaging items for reuse by Owner.
 - 4. Removal of hazardous materials shall be performed by a licensed abatement contractor, and shall be under a separate contract.
 - 5. Protect existing building from weather damage.
 - 6. Repair procedures for selective demolition operations.

1.2 MATERIALS OWNERSHIP

- A. Unless otherwise indicated, demolition waste becomes property of Contractor.
- B. Historic items, relics, antiques, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, and other items of interest or value to Owner that may be uncovered during demolition remain the property of Owner.
 - 1. Carefully salvage in a manner to prevent damage and promptly return to Owner.

1.3 SUBMITTALS

- A. Proposed Protection Measures: Submit informational report, including drawings, that indicates the measures proposed for protecting individuals and property for dust control and, for noise control. Indicate proposed locations and construction of barriers.
- B. Schedule of Building Demolition Activities: Indicate the following:
 - 1. Detailed sequence of demolition work, with starting and ending dates for each activity.
 - 2. Temporary interruption of utility services.
 - 3. Shutoff and capping of utility services.

1.5 QUALITY ASSURANCE

- A. Regulatory Requirements: Comply with hauling and disposal regulations of authorities having jurisdiction.
- B. Standards: Comply with ANSI A10.6 and NFPA 241.
- C. Pre-demolition Conference: Conduct conference at Project site.

1.6 PROJECT CONDITIONS

- A. Existing building will be occupied during the entire course of construction. Conduit demolition to minimize interference with adjacent building areas.
- B. Maintain protected egress and access at all times.
- C. Provide not less than 72 hours' notice of activities that will affect operations on adjacent spaces.
- D. Hazardous Materials: It is expected that hazardous materials will be encountered in the Work.
 - 1. Hazardous materials will be removed by Owner or under a separate contract. Coordinate removal schedule with the County.
 - 2. If materials suspected of containing hazardous substances are encountered, do not disturb; immediately notify Owner.
 - 3. Refer to Appendix for Hazardous Materials Surveys by Brunelle and Clark Consulting identifying hazardous materials.

1.7 COORDINATION

- A. Arrange demolition schedule so as not to interfere with Owner's on-site operations.

PART 2 - PRODUCTS

2.1 REPAIR MATERIALS

- A. Where available and appropriate for use, provide repair materials that are identical to existing materials.
- B. Where identical materials are unavailable or cannot be used for exposed surfaces, use materials that visually match existing adjacent surfaces to the fullest extent possible.
- C. Use materials whose installed performance equal or surpass that of existing materials.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that utilities have been disconnected and capped before starting demolition operations.
- B. Review Project Record Documents of existing construction provided by Owner. Owner does not guarantee that existing conditions are same as those indicated in Project Record Documents.
- C. Inventory and record the condition of items to be removed and salvaged if any. These should be removed prior to demolition by Owner.
- D. Verify that hazardous materials have been remediated before proceeding with demolition operations.

3.2 PREPARATION

- A. Existing Utilities: Locate, identify, disconnect, and seal or cap off indicated utilities serving building components to be demolished.
 - 1. Owner will arrange to shut off indicated utilities when requested by Contractor.
 - 2. If removal, relocation, or abandonment of utility services will affect adjacent occupied buildings, then provide temporary utilities that bypass buildings and structures to be demolished and that maintain continuity of service to other buildings and structures.
- B. Temporary Shoring: Provide and maintain shoring, bracing, or structural support to preserve stability and prevent unexpected movement or collapse of construction being demolished.

3.3 PROTECTION

- A. Existing Facilities: Protect adjacent walkways, building entries, and other building facilities during demolition operations. Maintain exits from existing building.
- B. Existing Utilities: Maintain utility services to remain and protect from damage during demolition operations.
 - 1. Do not interrupt existing utilities serving adjacent occupied or operating facilities unless authorized in writing by Owner and authorities having jurisdiction.
 - 2. Provide temporary services during interruptions to existing utilities, as acceptable to Owner and authorities having jurisdiction.
 - a. Provide at least 72 hours' notice to occupants of affected buildings if shutdown of service is required during changeover.
- C. Temporary Protection: Erect temporary protection.
 - 1. Protect adjacent facilities from damage due to demolition activities.
 - 2. Protect existing site improvements, appurtenances, and landscaping to remain.
 - 3. Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent facilities to remain.
 - 4. Provide protection to ensure safe passage of people around building demolition area and to and from occupied portions of building.
 - 5. Protect walls, windows, roofs, and other adjacent exterior construction that are to remain and that are exposed to building demolition operations.
- D. Remove temporary barriers and protections where hazards no longer exist. Where open excavations or other hazardous conditions remain, leave temporary barriers and protections in place.

3.4 DEMOLITION, GENERAL

- A. General: Demolish indicated existing construction completely. Use methods required to complete the Work within limitations of governing regulations and as follows:
 - 1. Do not use cutting torches until work area is cleared of flammable materials. Maintain portable fire-suppression devices during flame-cutting operations.
 - 2. Maintain fire watch during and for at least two hours after flame cutting operations.
 - 3. Maintain adequate ventilation when using cutting torches.

4. Locate building demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls or framing.
- B. Site Access and Temporary Controls: Conduct building demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
1. Do not close or obstruct streets, walks, walkways, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic ways if required by authorities having jurisdiction.
 2. Use water mist and other suitable methods to limit spread of dust and dirt. Comply with governing environmental-protection regulations. Do not use water when it may damage adjacent construction or create hazardous or objectionable conditions, such as ice, flooding, and pollution.
- C. Explosives: Use of explosives is not permitted.
- D. Remove debris from elevated portions of the building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.
- E. Existing Utilities: Demolish existing utilities and below-grade utility structures that are within 5 feet outside footprint indicated for new construction. Abandon utilities outside this area.
1. Fill abandoned utility structures with satisfactory soil materials according to backfill requirements in Division 31 Section "Earth Moving."

3.5 REPAIRS

- A. Promptly repair damage to building caused by demolition operations.

3.6 DISPOSAL OF DEMOLISHED MATERIALS

- A. Remove demolition waste materials from Project site and legally dispose of them in an approved landfill acceptable to authorities having jurisdiction.
1. Do not allow demolished materials to accumulate on-site.
 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
- B. Do not burn demolished materials.

3.7 CLEANING

- A. Clean adjacent structures and improvements of dust, dirt, and debris caused by building demolition operations. Return adjacent areas to condition existing before building demolition operations began.

END OF SECTION

CONCRETE CRACK REPAIR

SECTION 03 94 00

PART 1 - GENERAL

1.1 SUMMARY:

- A. Furnish all materials, labor, tools, equipment and incidentals required to make all concrete crack repairs. The County will direct the Contractor where to perform concrete crack repairs.
- B. Concrete Crack Repairs are classified as follows:
 - 1. Type 1- Repair to be used, as directed by the County, for 1/16" to 1/8" wide structural cracks.
 - 2. Type 2- Repair to be used, as directed by the County, for 1/16" to 1/8" wide structural cracks, with exposed surfaces ground smooth for finishes.
- C. Measurement and Payment Procedures:
 - 1. Work documented on the contract drawings shall be included in the base bid.
 - 2. Undocumented Concrete Crack Repair Type 1 discovered during construction will be measured separately for payment and be paid for at the contract unit price per linear foot of repair length.
 - 3. Undocumented Concrete Crack Repair Type 2 discovered during construction will be measured separately for payment and be paid for at the contract unit price per linear foot of repair length. Concrete REFERENCES
- D. Codes, Regulations and Referenced Standards:
 - 1. ASTM C-881: "Standard Specification for Epoxy-Resin-Base Bonding Systems for Concrete."

1.2 SUBMITTALS

- A. The Contractor shall furnish recent independent laboratory tests showing compliance with requirements specified. Certification or affidavits will not be acceptable.
- B. The Contractor shall furnish manufacturer's literature describing product and instructions for use.

1.3 QUALITY ASSURANCE

- A. Qualifications:
 - 1. The Contractor qualifications shall include:
 - a. A minimum of five years experience in applying crack repair materials similar to those specified.
 - b. A list of the five previous jobs that successfully utilized the application of the crack repair material.
 - c. A letter from the crack repair material manufacturer, on the manufacturer's letterhead, signed by an officer of the company, stating that the applicator has been trained in the proper techniques for the proper preparation of the surface, and

proper methods of mixing, placing, curing, caring and application of the manufacturer's product.

1.4 DELIVERY, STORAGE AND HANDLING

- A. Product shall be delivered in moisture proof containers with the manufacturer's name, product name and general instructions for placement printed on the container.
- B. Product shall be stored and handled per manufacturer's instructions and protected from damage and freezing. Material that freezes shall be discarded.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Concrete Crack Repair Types 1 and 2 — Product shall be very low viscosity, low VOC, high strength moisture tolerant epoxy adhesive.
 - 1. Product shall be:
 - a. Sikadur 35, Hi-Mod LV, as manufactured by Sika Corporation.
 - b. Eucopoxy Injection Resin, as manufactured by The Euclid Chemical Company.
 - c. Or Accepted Equal.

PART 3 - EXECUTION

3.1 SURFACE PREPARATION:

- A. Crack must be clean and sound, free of standing water and in accordance with the Manufacturer's written instructions regarding surface preparation. Removal of all dust, grease, and foreign particles from cracks shall be done with compressed air.

3.2 MIXING:

- A. Product shall be mixed in strict accordance with the manufacturer's written instructions.
- B. At most mix only that quantity of material that can be placed within 20 minutes after mixing.

3.3 APPLICATION:

- A. All work shall be done in strict accordance with the manufacturer's recommendations, including special procedures for hot and cold weather application.
- B. At the request of the County, the manufacturer's representative shall be called to the job site for consultation regarding detailed use of the product.
- C. At enclosed, occupied spaces, seal area and keep under constant negative pressure as required to minimize odor.

3.4 PROCEDURES:

- A. Concrete Crack Repair Types 1 and 2
1. All cracks identified by the Engineer for Type 1 or 2 Crack Repair shall have resin product pressure injected into crack. The manufacturer's installation instructions and recommendations shall be followed.
 2. Location of Injection Ports: Injection ports shall be spaced as recommended by the manufacturer and as needed to insure complete penetration of the joint of crack with the injected material. Spacing of injection ports shall not exceed 2 feet.
 3. Drilling Ports: Holes for injection ports shall be drilled to the depth needed for proper distribution of the injected material. Care shall be taken to not damage any reinforcing steel.
 4. Port Penetration: Holes for injection ports shall be cleaned of all debris and fitted with an injection fitting as provided by the manufacturer of the injected material, or equal. The injection fitting shall be installed as per manufacturer's instructions and will remain in place until injection work has been completed at that area. Caps or valves will be installed at the injection ports to prevent back flow of the uncured injected material after it has been injected.
 5. Injection Produces:
 - a. The Contractor shall follow the instructions of the manufacturer and their representatives for all mixing and injection procedures.
 - b. All cracks shall be sealed at the surface where needed to provide for complete penetration of the injected material and prevent loss of material.
 - c. Prior to sealing material injection, water shall be injected into the ports in order to flush the crack clean and to verify continuity between adjacent ports. Water shall be injected into each of the ports until it begins to flow from an adjacent or nearby port.
 - d. If the water injection procedure indicates the potential presence of voids within members or behind members resting against soil, the County shall be notified immediately.
 - e. Beginning at the lowest injection port, inject the sealing material until it begins to flow from an adjacent or nearby port. Repeat the process until the crack is completely filled. In general, the port to port travel of the injection will be from low to high in a continuous operation.
 - f. If port to port continuity does not occur at locations where continuity was verified through water injection, mark location and notify the County.
 - g. Avoid sudden application of high pressures during the injection process.
 - h. After completion of the injection operation, all ports and surface sealing materials shall be removed so as to leave an undamaged surface.
- B. Finishing Concrete Crack Repair Type 2
1. Grind all exposed surfaces smooth and flush with adjacent concrete.

END OF SECTION

SHEET METAL FLASHING

SECTION 07 62 00

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes: Provide galvanized steel flashing and sheet metal including accessories as required for complete weather tight installation.
 - 1. Flashing and sheet metal, reglets, and similar fabricated components.
 - 2. Provide concealed sealants used in conjunction with installation of metal flashing and sheet metal.
 - 3. Counterflashings at roof mounted mechanical equipment and vent stacks.
 - 4. Provide miscellaneous sheet metal flashing and reglets not provided by other trades or suppliers.
 - a. Where reglets are to be installed in conjunction with other work, provide in adequate time for installation.

1.2 SYSTEM DESCRIPTION

- A. Design Requirements: Allow for movement of components without causing buckling, failure of joint seals, undue stress on fasteners or other detrimental effects, when subject to 100 year seasonal temperature ranges.

1.3 REFERENCES

- A. Sheet Metal and Air Conditioning Contractors National Association (SMACNA): Architectural Sheet Metal Manual, Fifth Edition.
- B. ANSI/ASTM B32 - Solder Metal.
- C. ASTM A525 - Steel Sheet, Zinc Coated, Galvanized by the Hot-Dip Process.
- D. FS O-F-506 - Flux, Soldering, Paste and Liquid.
- E. FS QQ-S-571 - Solder, Tin Alloy.
- F. FS SS-C-153 - Cement, Bituminous, Plastic.
- G. NAAMM - Metal Finishes Handbook.
- H. NRCA (National Roofing Contractors Association) - Roofing Manual.

1.4 QUALITY ASSURANCE

- A. Applicator: Company specializing in sheet metal flashing work with 5 years minimum experience.

1.5 SUBMITTALS

A. Shop Drawings

- 1. Clearly indicate dimensioning, layout, general construction details including closures, flashings, locations and types of sealants, anchorages, and method of anchorage.

B. Product Data

- 1. Submit product data for each specified item.
- 2. Describe material profile, jointing pattern, jointing details, fastening methods, and installation details.

WARRANTY

- A. Special Warranty: Provide for correcting failure of metal flashing system to resist penetration of water and damage from wind.

- 1. Special Warranty Period: Five years.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Galvanized Steel: ASTM A525, G90; core steel. 24 gage unless noted otherwise on Drawings.

- B. Aluminum: ASTM B209 minimum thickness .0603".

2.2 ACCESSORIES

A. Flashing and Sheet Metal:

- 1. Provide heavier gage metal where recommended by SMACNA Manual for size of component.
- 2. Mill phosphatized where indicated to be field painted.

- B. Manufactured Reglets: Snap-on type, for two piece flashing; metal to match flashing and sheet metal.

- 1. Manufacturers:

- a. Fry Reglet Corp./Springlok System.
- b. MM Systems Corp./Snap-Tite System.
- c. W.P. Heckman Co./The Leading Edge Drive Lock System.
- d. Substitutions: Refer to Section 01 25 13.

- C. Solder and Fasteners: As recommended by SMACNA and complying with applicable codes and regulations; hot dipped galvanized minimum coating comparable to G90.

- D. Reglets: 24 ga. G.I., Type MA W 1-1/2" wide top flange; manufactured by Fry or equal.

- E. Concealed Sealant: Butyl type for use in conjunction with sheet metal; non-staining; non-corrosive; non-shrinking and non-sagging; ultra-violet and ozone resistant for exterior concealed applications.
- F. Bituminous Paint: Acid and alkali resistant type; black color; asbestos free.
- G. Plastic Cement: Cutback asphaltic type; asbestos free.
- H. Sealing Compound: Type recommended by roofing manufacturer; asbestos free.

2.3 FABRICATION

- A. Fabricate sheet metal in accordance with SMACNA Architectural Sheet Metal Manual.
- B. Form sections square, true and accurate to size, free from distortion and other defects detrimental to appearance or performance.
 - 1. Fabricate corners and intersections in shop with solder joints; watertight fabrication.
- C. Form sections in longest practical lengths; make allowance for expansion at joints.
- D. Hem exposed edges on underside 1/2"; miter and seam corners.
- E. Backpaint flashings with heavy bodied bituminous paint to a minimum dry film thickness of 15 mil. where in contact with cementitious materials or dissimilar metals.
- F. Form pitch pans watertight, with minimum 4" upstand and 4" flanges; form pans minimum 6" wider than item passing through roof membrane.
- G. Form umbrella flashings with minimum 2" overhang, to shed water away from pitch pans.
- H. Form material with standing seam. Solder and seal metal joints. After soldering, remove flux. Wipe and wash solder joints clean.
- I. Fabricate vertical faces with bottom edge formed outward 1/4 inch and hemmed to form drip.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install metal flashing and sheet metal in accordance with SMACNA Architectural Sheet Metal Manual.
 - 1. Install tight in place, with corners square, surfaces true and straight in planes, and lines accurate to profiles as indicated on Drawings.
 - 2. Install starter and edge strips, and cleats before starting installation.
 - 3. Install surface mounted reglets true to lines and levels. Seal top of reglets with sealant.
 - 4. Lap joints in direction of water flow.
 - 5. Hold downspouts in position, clear of wall, by hangers spaced not more than 10'-0" on center; securely fasten hangers to wall without exposed damage to wall surface.

- B. Exercise care when cutting materials on site, to ensure cuttings do not remain on finished surfaces.
- C. Provide expansion joints concealed within system.
- D. Solder metal joints watertight for full metal surface contact. After soldering, wash metal clean with neutralizing solution and rinse with water.
- E. Use concealed fasteners, continuous cleat type, except where specifically approved by Architect.
 - 1. Exposed fasteners may be used, where clearly indicated on shop drawings and approved by Architect, at areas not exposed at exterior walls nor in sight of interior spaces.
- F. Apply sealing compound at junction of metal flashing and felt flashing.
- G. Lock seams and end joints; fit flashing tight in place; make corners square, surfaces true and straight in planes, and lines accurate to profiles.
- H. Counter-flash mechanical and electrical items projecting through roof membrane.
- I. Install sealants where required to prevent direct weather penetration.
- J. Completed installation shall be free of rattles, noise due to thermal and air movement, and wind whistles.

END OF SECTION

JOINT PROTECTION

SECTION 07 90 00

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes: Provide joint sealers, for interior and exterior joints not specified elsewhere, with backing rods and accessories as required for complete installation.
 - 1. Joint sealers include sealants and caulking as indicated.

1.2 SYSTEM DESCRIPTION

- A. Performance Requirements:
 - 1. Select materials for compatibility with joint surfaces and indicated exposures.
 - 2. Where not indicated, select modulus of elasticity and hardness or grade recommended by manufacturer for each application indicated.
 - 3. Comply with applicable limitations on volatile organic compound (VOC) emissions.

1.3 SUBMITTALS

All submittals shall be made under the provisions of Section 01 33 00.

A. Product Data

- 1. Submit product data for all specified products.
- 2. Submit product data indicating sealant chemical characteristics, performance criteria, limitations, and color availability.

B. Installation Instructions

- 1. Submit manufacturer's installation instructions
- 2. Submit manufacturer's certificate under provisions of Section 01 33 00 that products meet or exceed specified requirements.
- 3. Furnish certification indicating installers are trained in proper use of specified products, qualified, and familiar with proper installation techniques.

C. Samples for Verification

- 1. Submit samples of specified products.

1.4 QUALITY ASSURANCE

- A. Installer Qualifications: Firm with minimum five years successful experience on projects of similar type and size, using specified products.

1. Installers shall be familiar with proper application procedures to ensure maximum joint sealer expansion and contraction capabilities.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to site in original unopened containers or bundles with labels indicating manufacturer, product name and designation, color, expiration period for use, cure time, and mixing instructions.

1.6 SITE CONDITIONS

- A. Do not proceed with installation of joint sealers under unfavorable weather conditions.
- B. Install elastomeric sealants when temperature is in lower third of temperature range recommended by manufacturer.
- C. Do not install solvent curing sealants in enclosed building spaces.

1.7 WARRANTY

- A. Special Warranty: Repair or replace joint sealers that fail to perform as intended, because of leaking, crumbling, hardening, shrinkage, bleeding, sagging, staining and loss of adhesion.
 1. Special Warranty Period: Three years.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Elastomeric Sealants:

1. Single Component Low Modulus Silicone Sealant: ASTM C920 Type S, Class 25, Grade NS; minimum 50% expansion and compaction capability.
 - a. Provide at exterior locations not exposed to traffic.
 - b. Manufacturers:
 - 1) General Electric Co./Silpruf, Silglaz or GESIL.
 - 2) Dow Corning Corp./790 or 795.
 - 3) Pecora Corp./864 Architectural Silicone.
 - 4) Tremco/Spectrum 3.
 - 5) Substitutions: Refer to Section 01 25 13.
2. Multi-Component Polyurethane Sealant: ASTM C920, Type M, Grade P, Class 25, self-leveling; minimum 25% expansion and compaction capability.
 - a. Provide at traffic bearing locations.
 - b. Manufacturers:
 - 1) Pecora Corp./NR-200 Urexpan.
 - 2) Tremco/Vulkem 245.
 - 3) Sonneborn Division of ChemRex /SL 2
 - 4) Substitutions: Refer to Section 01 25 13.

3. Mildew-Resistant Silicone Rubber Sealant: ASTM C920, Type S, Grade NS, Class 25, compounded with fungicide, specifically for mildew resistance and recommended for interior joints in wet areas.
 - a. Provide at interior joints in wet areas.
 - b. Manufacturers:
 - 1) General Electric Co./SCS 1702 Sanitary Sealant.
 - 2) Dow Corning Corp./786 Bathtub Caulk.
 - 3) Pecora Corp./863 #345 White.
 - 4) Tremco/Tremsil 200.
 - 5) Substitutions: Refer to Section 01 25 13.
- B. Non-Elastomeric Sealants:
 1. Acrylic-Emulsion Sealant: ASTM C834 acrylic or latex-rubber-modified acrylic sealant, permanently flexible, non-staining and non-bleeding; recommended for general interior exposure; compatible with paints specified in Section 09 91 90.
 - a. Provide at general interior applications.
 - b. Manufacturers:
 - 1) Pecora Corp./AC-20.
 - 2) Sonneborn Division of ChemRex/Sonolac.
 - 3) Tremco/Ultrem 1500
 - 4) Substitutions: Refer to Section 01 25 13.
- C. Miscellaneous Materials:
 1. Primers/Sealers: Non-staining types recommended by joint sealer manufacturer for joint surfaces to be primed or sealed.
 2. Joint Cleaners: Non-corrosive types recommended by joint sealer manufacturer; compatible with joint forming materials.
 3. Bond Breaker Tape: Polyethylene tape as recommended by joint sealer manufacturer where bond to substrate or joint filler must be avoided for proper performance of joint sealer.
 4. Sealant Backer Rod: Compressible polyethylene foam rod or other flexible, permanent, durable non-absorptive material as recommended by joint sealer manufacturer for compatibility with joint sealer.
 - a. Oversize backer rod minimum 30% to 50% of joint opening.
- D. Colors: Provide colors indicated or as selected by Architect from manufacturer's full range of colors.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Prepare joint surfaces in accordance with ASTM C1193 and as recommended by joint sealer manufacturer.
- B. Clean joint surfaces immediately before installation of joint sealer; remove dirt, insecure materials, moisture and other substances that could interfere with bond of joint sealer.
- C. Prime or seal joint surfaces where recommended by joint sealer manufacturer; do not allow primer/sealer to spill or migrate onto adjoining surfaces.
- D. Ensure protective coatings on surfaces in contact with joint sealers have been completely stripped.

3.2 INSTALLATION

- A. Comply with manufacturer's printed instructions and ASTM C1193, except where more stringent requirements are shown or specified.
- B. Set sealant backer rods at proper depth or position in joint to coordinate with other work, including installation of bond breakers and sealant; do not leave voids or gaps between ends of backer rods.
 - 1. Do not stretch, twist, puncture or tear backer rods.
- C. Install bond breaker tape where required by manufacturer's recommendations to ensure joint sealers will perform properly.
- D. Size materials to achieve required width/depth ratios.
- E. Employ installation techniques that will ensure joint sealers are deposited in uniform, continuous ribbons without gaps or air pockets, with complete "wetting" of bond surfaces equally on opposite sides.
- F. Joint Configuration: Fill sealant joint to a slightly concave surface, slightly below adjoining surfaces, unless otherwise indicated.
- G. Where horizontal joints are between a horizontal surface and vertical surface, fill joint to form a slight cove, so that joint will not trap moisture or dirt.
- H. Install joint sealers to depths recommended by joint sealer manufacturer but within the following general limitations, measured at center (thin) section of bead.
 - 1. Horizontal Joints: 75% width with minimum depth of 3/8".
 - 2. Elastomeric Joints: 50% width with minimum depth of 1/4".
 - 3. Non-Elastomeric Joints: 75% to 125% of joint width.
- I. Spillage: Do not allow sealants or compounds to overflow or spill onto adjoining surfaces, or to migrate into voids of adjoining surfaces.
 - 1. Clean adjoining surfaces by whatever means may be necessary to eliminate evidence of spillage.

- J. Cure joint sealers in compliance with manufacturer's instructions and recommendations to obtain high early bond strength, internal cohesive strength and surface durability.
- K. Maintain finished joints free of embedded matter, ridges and sags.

3.3 CLEANING AND REPAIRING

- A. Clean all work and adjacent soiled surfaces.
- B. Repair or replace defaced or disfigured finishes caused by work of this Section.

3.4 PROTECTION OF FINISHED WORK

- A. Protect sealants until cured.

END OF SECTION

HOLLOW METAL FRAMES

SECTION 08 11 00

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes: Provide steel frames, including anchors and silencers.

1. Pressed steel frames include both door and window framing.

1.2 REFERENCES

- A. Steel Door Institute (SDI): SDI-100 (ANSI/SDI A250.8) - Recommended Specifications - Standard Steel Doors and Frames.
- B. National Association of Architectural Metal Manuf. (NAAMM): Hollow Metal Manual.
- C. ASTM E152: Methods of Fire Test of Door Assemblies.
- D. NFPA 105: Smoke Control Guide
- E. ANSI 117.1: Handicap Code
- F. Underwriters Laboratories: Standards as applicable to fire rated doors and frames.
 1. Materials tested, labeled and inspected by Warnock Hersey International are acceptable upon approval of authorities.
- G. All fire rated doors, frames, and windows shall conform to and be in compliance with the California Building Code as adopted. They shall bear an appropriate UL or WH label.

1.3 SUBMITTALS

All submittals shall be made under the provisions of Section 01 33 00.

A. Shop Drawings

1. Submit complete shop drawings listing openings numerically by architect's opening numbers showing product construction, sizes, anchors, reinforcing, cutouts, elevations, and finish.
2. Submit notes with shop drawings indicating items that vary from plans and specifications, have conflicts for label compliance, are not in compliance with standards referenced above, have door, frame, hardware or function conflicts, or require review and clarification by architect.

B. Installation Instructions

1. Submit installation instructions or field delivery receipt.
2. Instructions for installation, maintenance, and preparation for field painting supplied with delivery of material to jobsite.

C. Schedule: Prepared by supplier, using same reference numbers for details and openings as those on Drawings.

1.4 DELIVERY, STORAGE AND PRODUCT PROTECTION

- A. Doors and Frames will be delivered to the job site undamaged with the doors properly protected by cardboard and plastic covering and shall be stored in upright positions, 4 inches off the floor or ground with proper separation for air circulation and shall be stored inside or under complete weather protection. Damage not acknowledged at delivery shall be considered job site damage and the responsibility of the contractor.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturers:
 - 1. Curries
 - 2. Steelcraft
 - 3. The Ceco Corporation

- B. Or accepted equal.

2.2 MATERIALS

- A. Frames:

- 1. Welded (pre-assembled) type; minimum 14 gage, galvanized.

- a. Frames shall be full face welded, square, accurately sized and have a welded spreader bar at the base for field removal. Acceptable tolerances per SDI 117.

- 2. Door Silencers: Manufacturer's standard resilient type; removable for replacement.

- B. Glazing Stops: Full flush type with glass centered in opening, unsecured side integral with unit, secured side fastened with flush, countersunk Allen type fasteners; minimum 16 gage.

- C. Jamb Anchors:

- 1. Stud-Wall Type: Designed to engage stud, welded to back of frames; not less than 0.042 inch thick.

- a. Locate anchors not more than 18 inches from top and bottom of frame. Space anchors not more than 32 inches o.c. and as follows:

- 1) Three anchors per jamb up to 60 inches high

- 2) Four anchors per jamb from 60 to 90 inches high

- 3) Five anchors per jamb from 90 to 96 inches high

- 4) Five anchors per jamb plus 1 additional anchor per jamb for each 24 inches or fraction thereof above 96 inches high

- 5) Two anchors per head for frames more than 42 inches wide and mounted in metal-stud partitions.

- D. Floor Anchors: Formed from same material as frames, not less than 0.042 inch thick, and as follows:

1. Monolithic Concrete Slabs: Clip-type anchors, with two holes to receive fasteners.
 2. Separate Topping Concrete Slabs: Adjustable-type anchors with extension clips, allowing not less than 2-inch height adjustment. Terminate bottom of frames at finish floor surface.
- E. Door Louvers: Weatherproof Z-shaped blades with U-shaped frames; 1-3/8" thick; blades 1-1/2" on center; 16 gage welded construction.
1. Provide removable bird screens on interior faces, 1/2" x 1/2" bronze wire mesh.

2.3 FABRICATION

- A. Conform to requirements of SDI (ANSI A250 Series) or NAAMM.
- B. Reinforce and prepare frames to receive hardware.
1. Refer to Section 08 71 00 for hardware requirements.
 2. Locate hardware as indicated, or if not indicated, according to ANSI/SDI A250.8.
 3. Reinforce frames to receive nontemplated, mortised and surface-mounted door hardware.
 4. Comply with applicable requirements in ANSI/SDI A250.6 and ANSI/DHI A115 Series specifications for preparation of hollow metal work for hardware.
- C. Frames:
1. Welded Frames: Accurately form and cut mitered corners of welded type frames; weld on inside surfaces; grind welded joints to smooth uniform finish.
 2. Head Reinforcement: Reinforce frames wider than 4'-0" with minimum 12 gage formed steel channels welded in place, flush with top of frames.
 3. Doors at Glazed Panels: Reinforce jambs and heads of frames for doors which occur adjacent to glazed sidelights and partitions.
- D. Door Silencers:
1. Place minimum three single bumpers on single door frames; space equally along strike jambs.
 2. Place minimum of two single bumpers on double door frames; place on frame heads.
- E. Provide jamb anchors per SDI-100 (ANSI/SDI 250.8) and NAAMM; weld floor jamb anchors in place.
- F. Provide double doors tested and approved without astragals.
- G. Edge Clearances:
1. Between Doors and Frames: Maximum 1/8" at head and jambs.
 2. Door Sills (No Threshold): Maximum 3/8".
 3. Door Sills (Threshold): Maximum 3/4" above finished floor.
 4. Between Edges of Pairs of Doors: Maximum 1/8".
- H. Finish: Comply with requirements of Section 09 90 00 for primer including application and compatibility with specified finishes.

1. Interior Units: Prime paint.
2. Exterior Exposed Units: Apply minimum A60 non-spangle galvanized coating, ASTM A924 and A653.
 - a. Surface treat after galvanizing to remove oils and prepare for painting and apply one coat of primer; comply with requirements in Section 09 90 00 – Painting and Coating.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install frames in accordance with SDI-100 (ANSI/SDI A250.8) and ANSI/SDI A250.11 or NAAMM "Hollow Metal Manual" and with manufacturer's recommendations and installation instructions.
 1. Install fire rated units in conformance with fire label requirements and NFPA 80.
- B. Install frames plumb and square, and with maximum diagonal distortion of 1/16".
 1. Coordinate hardware installation with requirements of Section 08 71 00.
 2. Coordinate glass installation with requirements of Section 08 80 00.
- C. Remove and replace frames damaged during delivery, storage, installation and construction.
 1. Paste filler repair shall not be permitted.
- D. After installation, touch-up scratched paint surfaces.

END OF SECTION

SECTION 08 41 13

ALUMINUM-FRAMED ENTRANCES AND STOREFRONTS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Aluminum storefront system.
- B. Aluminum and glass doors.
- C. Vision glass.
- D. Perimeter sealant.
- E. Accessories.

1.2 REFERENCES

- A. The publications listed below form a part of this Section to the extent referenced. The publications are referred to in the text by the basic designation only. Refer to Section 01 42 00 "References" for definitions, acronyms, and abbreviations.
- B. Unless otherwise noted, standards, manuals, and codes refer to the latest edition of such standards, manuals, and codes as of the date of issue of this Project Manual.
- C. Referenced Standards:
 - 1. AA – Designation System for Aluminum Finishes.
 - 2. AAMA – Metal Curtain Wall, Window, Store Front and Entrance – Guide Specifications Manual, Current Edition.
 - 3. AAMA 611 – Voluntary Standards for Anodized Architectural Aluminum.
 - 4. AAMA SFM-1 – Aluminum Storefront and Entrance Manual.
 - 5. ANSI A117.1 – Standard for Accessible and Usable Buildings and Facilities.
 - 6. ASTM A36/A36M – Standard Specification for Carbon Structural Steel.
 - 7. ASTM B209/B209M – Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.

8. ASTM B221/B221M – Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
9. ASTM E283 – Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen.
10. NFRC 100 – Procedure for Determining Fenestration Product U-Factors.
11. NFRC 200 – Procedure for Determining Fenestration Product Solar Heat Gain Coefficient and Visible Transmittance at Normal Incidence.
12. NFRC 400 – Procedure for Determining Fenestration Product Air Leakage.

1.3 SUBMITTALS

- A. Shop Drawings: Indicate system dimensions, framed opening requirements and tolerances, affected related Work, expansion and contraction joint location and details.
- B. Product Data: Provide component dimensions, describe components within assembly, anchorage and fasteners and glass.
- C. Submit two samples, 12" x 12" minimum in size, illustrating pre-finished aluminum surface, EPDM or neoprene gasketing and glass and glazing materials.
- D. Provide windload and deadload charts to verify that the system meets all design loads and meets the minimum PSF required at the location of the project.

1.4 SYSTEM DESCRIPTION

- A. Aluminum storefront system includes shop fabricated, factory pre-finished tubular aluminum sections and doors, glass, related flashings, anchorage and attachment devices.

1.5 PERFORMANCE REQUIREMENTS

- A. Air leakage of window system shall not exceed 0.3 cubic feet per minute per square foot of window area at a pressure differential of 1.57 pounds per square foot when tested according to NFRC 400 or ASTM E283.
- B. Air leakage of each single entrance door shall not exceed 0.3 cubic feet per minute per square foot of door area at a pressure differential of 1.57 pounds per square foot when tested according to NFRC 400 or ASTM E283.

- C. Air leakage of each set of double entrance doors shall not exceed 1.0 cubic feet per minute per square foot of door area at a pressure differential of 1.57 pounds per square foot when tested according to NFRC 400 or ASTM E283.

1.6 REGULATORY REQUIREMENTS

- A. Window systems and exterior doors shall be certified under provisions of the 2013 California Energy Code, Section 116.
 - 1. A fenestration product's U-factor shall be rated in accordance with NFRC 100, using the specific glazing, window system, and door assemblies to be installed on the project.
 - a. If there is less than 10,000 square feet of site-built fenestration on the project, the default U-factor may be calculated as set forth in Reference Nonresidential Appendix NA6.
 - 2. A fenestration product's Solar Heat Gain Coefficient (SHGC) shall be rated in accordance with NFRC 200, using the specific glazing, window system, and door assemblies to be installed on the project.
 - a. If there is less than 10,000 square feet of site-built fenestration on the project, the default SHGC may be calculated as set forth in Reference Nonresidential Appendix NA6.
 - 3. Provide label certificate for each type of window and door product indicating compliance with the U-factors listed in Table 116-A, SHGC values listed in Table 116-B, and air leakage requirements specified in this Section. Field-fabricated fenestration and exterior doors may only be installed when documentation indicating compliance with the above has been provided.
 - 4. A Certificate of Acceptance shall be submitted to the enforcement agency that certifies that the fenestration product meets the acceptance requirements.

1.7 QUALITY ASSURANCE

- A. Perform Work in accordance with AAMA SFM-1.
- B. Conform to requirements of ANSI A117.1.
- C. These requirements establish standards of design and quality for material, construction and workmanship. When substitute products of equal quality are to be submitted, contractor shall submit for consideration supporting technical literature, samples, drawings and performance data so these items may be evaluated.
- D. The approved manufacturer's recommended installation procedures will become the basis for inspecting or rejecting actual installation procedures used on the work.

1.8 QUALIFICATIONS

- A. Manufacturer and Installer: Company specializing in manufacturing aluminum glazing systems.

1.9 DELIVERY, STORAGE AND HANDLING

- A. Protect pre-finished aluminum surfaces with strippable coating. Do not use adhesive papers or sprayed coatings that bond when exposed to sunlight or weather.

1.10 WARRANTIES

- A. Storefront System:
 - 1. Provide written warranty in form acceptable to Owner jointly signed by manufacturer, installer and Contractor warranting work to be watertight, free from defective materials, defective workmanship, glass breakage due to defective design, and agreeing to replace components which fail within one year from date of Project Completion.
 - 2. Warranty shall cover following:
 - a. Complete watertight and airtight system installation within specified tolerances.
 - b. System is structurally sound and free from distortion.
- B. Finish: Finished coating system specified in this Section, as applied over aluminum extrusions, shall be warrantied for a period of ten years from date of Project Completion.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Oldcastle Building Envelope, Product: Series 3000XT thermally broken storefront, center loaded, with Series 375 doors.
- B. Kawneer Company, Inc.
- C. United States Aluminum.
- D. Or accepted equal.

2.2 MATERIALS

- A. Extruded Aluminum: ASTM B221; 6063 alloy, T5 temper. Wall thickness shall provide structural strength to meet specified performance requirements.
- B. Sheet Aluminum: ASTM B209.

- C. Fasteners: Stainless steel.
- D. Perimeter Anchors: Stainless steel, or plated steel providing the steel is properly isolated from the aluminum.

2.3 DOORS

- A. Doors: Medium stile door. Vertical stile and top rail systems on all door frame systems shall be 4-1/4" wide, and bottom rail shall be 10" high. Corner construction shall consist of mechanical clip fastening, SIGMA deep penetration and minimum 1-1/8" long fillet welds. Glazing stops shall be snap-in type with EPDM flashing gaskets.
 - 1. Hardware: As specified in Section 08 71 00 "Door Hardware". Hardware shall be installed at the factory prior to shipment.
 - 2. Thresholds: Refer to Drawings for sizes. Thresholds shall be one piece thresholds in a new bed of non-shrink grout. Threshold shall set no higher than 1/2" from the lowest floor surface. When complete, threshold shall be accessible.
- B. Weather-strip: Door manufacturer's standard felt insert strip designed into door system along perimeter door edges.

2.4 ACCESSORIES

- A. Flashings and Closures: 0.050" thick aluminum, finish as selected to match mullion sections where exposed.

2.5 GLASS AND GLAZING MATERIALS

- A. Glass and Glazing Materials: As specified in Section 08 81 00 "Glass Glazing".
- B. Glazing gaskets and seals used for aluminum work shall be an integrated glazing system designed by the aluminum work manufacturer to produce a watertight assembly, and shall be physically and chemically compatible with each other and with adjacent materials.
 - 1. Neoprene and EPDM materials shall not come in contact with silicone sealant materials.
 - 2. Gaskets shall be designed, when in final compression form, to be compressed a minimum of 25% and a maximum of 40%, and to exert a pressure of between 4 lbs. and 10 lbs. pressure per linear inch.
 - 3. All side light and transom glass shall be set with the same type and size of glazing gasket material.
- C. Contractor shall provide and set lead blocking for all window systems installed. Each glass panel supplied shall display a factory mark certifying each glass panel is manufactured of tempered glass. Plate glass and laminated glass will not be acceptable.

2.6 SEALANT MATERIALS

- A. Sealant and Backing Materials: As specified in Section 07 92 00 "Joint Sealants".

2.7 FABRICATION

- A. Fabricate components with minimum clearances and shim spacing around perimeter of assembly, yet enabling installation and dynamic movement of perimeter seal.
- B. Accurately fit and secure joints and corners. Make joints flush, hairline, and weatherproof. Sealant will not be allowed at exposed joints.
- C. Prepare components to receive anchor devices. Fabricate anchors.
- D. Arrange fasteners and attachments to conceal from view.
- E. Prepare components with internal reinforcement of 1/4 inch thick galvanized steel mounting backing plates for door hardware and hinge hardware as per ASTM A36.
- F. Exposed work shall be carefully matched to produce continuity of line, design and finish. Joints in exposed work, unless otherwise shown or required for thermal movement, shall be accurately fitted, rigidly secured with hairline contacts and sealed watertight.
- G. Removable members such as glass stops shall be extruded and securely engaged into adjacent components as indicated by product manufacturer.
- H. Face clearances between glass and stop shall comply with code requirements and glass manufacturer's recommendations.
- I. All fasteners shall be of sufficient strength to support both horizontal wind load and vertical dead load, with a Factor of Safety of 1.5. They shall be spaced and be sized to develop the maximum strength of the members they secure or support. Washers, where required, shall be of the same material as the fastener. Unless otherwise shown or approved, fastening systems shall be concealed.
- J. Sealants, gaskets, setting blacks, tapes and separators, where used, shall be physically and chemically compatible with each other and with adjacent materials. Items shall be installed so that they will not become dislodged during or after assembly of units.

2.8 SPECIAL REQUIREMENTS

- A. Dissimilar Materials Protection: Use chromate gasketing to separate aluminum surfaces in contact with other metals, plaster or concrete, or heavy coat of alkali resistant bituminous paint. Aluminum need not be separated from stainless or galvanized steel.

2.9 FINISHES

- A. All aluminum extrusions shall have Anodized finish, to be selected from manufacturer's full range of standard colors.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify dimensions, tolerances and method of attachment with other work.
- B. Verify wall openings and adjoining air and vapor seal materials are ready to receive work of this Section.

3.2 INSTALLATION

- A. Install window wall system in accordance with manufacturer's instructions and AAMA – Metal Curtain Wall, Window, Storefront and Entrance – Guide Specifications Manual. Manufacturer shall provide installation instructions and installer shall comply with these instructions.
- B. Align assembly plumb and level, free of warp or twist. Maintain assembly dimensional tolerances, aligning with adjacent work.
- C. Attach to structure to permit sufficient adjustment to accommodate construction tolerances and other irregularities.
- D. Provide alignment attachments and shims to permanently fasten system to building structure.
- E. Frames shall be anchored to structure with concealed fasteners appropriate for use with type of adjacent construction. Fasteners shall securely fasten frames to wall construction involved. Fasteners shall provide stiffness and rigidity to keep frames square, in accurate position without twisting, buckling or warping. Fasteners to framing substrate shall be the following minimums; greater as required by the window wall manufacturer or as conditions warrant:
 - 1. Concrete/Masonry: Hilti KB3 wedge anchors or accepted equal at 12" on center.
- F. Install flashings and sealant.
- G. Set thresholds in bed of mastic and secure.
- H. Refer to Section 08 71 00 "Door Hardware" for hardware installation requirements.
- I. Install glass in accordance with Section 08 81 00 "Glass Glazing", to glazing method required to achieve performance criteria.
- J. Separate dissimilar materials at contact points, including metal in contact with masonry surfaces, with bituminous paint in conformance with ASTM D1187 or preformed separators to prevent contact or corrosion.

3.3 TOLERANCES

- A. Maximum Variation from Plumb: 0.06" every 3' non-cumulative or 0.06" per 10', whichever is less.
- B. Maximum Misalignment of Two Adjoining Members Abutting in Plane: 1/32".

3.4 CLEARANCES

- A. Top and sides of door shall have a minimum of 1/16" to a maximum of 1/8" clearance.
- B. Bottom of door and threshold shall have a minimum of 1/8" to a maximum of 1/4" clearance.
- C. All doorframes shall be measured with the minimum clearance of exact size or a maximum of 1/4" overall clearance to fit sides of opening to 1/8" at top of opening.
- D. All installation clearances for door frame and door in either newly constructed openings or as replacement units for existing openings will be strictly adhered to. No other minimum or maximum clearances will be acceptable and will prove cause for total replacement of the opening at the sole expense to the Contractor.
- E. Mortise hardware shall fit flush with finished trim moldings and applied directly to recessed sidewalls of the door and or frame system. Cutouts in door or frame moldings shall require separate screw applied tabs or straps on which to mount concealed hardware per manufacturer's templates as detailed on the drawings. Where shims and spaces are required for finished appearance, they shall provide full and solid bearing for the hardware.

3.5 ADJUSTING

- A. Adjust work under provisions of Section 01 70 00 "Execution and Closeout Requirements".
- B. Adjust operating hardware for smooth operation.

3.6 CLEANING

- A. Remove protective material from pre-finished aluminum surfaces.
- B. Wash down surfaces with a solution of mild detergent in warm water, applied with soft, clean wiping cloths. Take care to remove dirt from corners. Wipe surfaces clean.
- C. Remove excess sealant by method acceptable to sealant manufacturer.

END OF SECTION

DOOR HARDWARE

SECTION 08 71 00

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes: Provide hardware for hollow metal, aluminum and wood doors.

1.2 QUALITY ASSURANCE

- A. Access for Persons with Disabilities: Comply with California Code of Regulations, Title 24, and Americans with Disabilities Act Accessibility Guidelines (ADAAG).
- B. Supplier: Recognized builders hardware supplier with minimum five years successful experience in scheduling and furnishing hardware; factory-authorized to distribute specified hardware.
1. Provide services of architectural hardware consultant to supervise hardware supply, as directed.
 2. Coordinate work of this Section with others directly affected.
 3. Send templates within 10 days of hardware schedule approval.
- C. Products: Provide each type of hardware (hinges, pivots, locksets, latchsets, closers, trim) from single manufacturer unless otherwise indicated in Hardware Schedule.
- D. Existing hardware that is to be removed and re-used is to be maintained in the current condition. Any existing hardware that is damaged during construction is to be replaced.

1.3 REFERENCES

- A. ANSI A115 and A115W Series: Door and Frame Preparation Standards.
- B. ANSI A156.1 through A156.20: Standards for various hardware items.
- C. National Fire Protection Association: NFPA 80, 101,105.
- D. California Code of Regulations: Title 24, Part 2, California Building Code.
- E. Americans with Disabilities Act Accessibility Guidelines (ADAAG).

1.4 SUBMITTALS

- A. Hardware Schedule: Prepare a vertical schedule of hardware:
1. Door numbers must be in numerical sequence.
 2. List each opening, door size, door hand, door and frame material, description of to and from, manufacturer's numbers and finish.

3. Hardware supplier shall retype schedule when changes occur during the project and supply new schedules, at no additional expense.

B. Shop Drawings: Indicate locations and mounting heights of hardware.

1. Supply templates to door and frame manufacturers for proper and accurate sizing and locations of cut-outs for hardware.

C. Product Data: Submit catalog cuts for each type of hardware.

1. Keying Schedule: Coordinate with the Architect.

1.5 KEYING CONFERENCE

A. Upon receipt of approved Hardware Schedule, architectural hardware consultant shall attend keying conference with Owner and Architect.

1.6 WIRELESS ENTRY LICENSES

A. Provide (25) licenses and training to enroll (25) users to the ENGAGE cloud-based mobile and web application for NDE Series wireless locksets.

1.7 OPERATION AND MAINTENANCE DATA

A. Provide manufacturer's parts list and maintenance instructions for each type of hardware supplied and necessary wrenches and tools required for proper maintenance of hardware.

1.8 DELIVERY, STORAGE AND HANDLING

A. Deliver hardware in manufacturer's original packages, marked for intended opening and use.

B. Pack complete with necessary screws, bolts, keys, instructions, and installation template, if necessary, for spotting mortising tools.

C. Upon delivery, furnish complete list of hardware for checking, clearly marked to correspond with marking on each package.

1. Review list for completeness and accuracy.

1.9 WARRANTY

A. Provide 1-year warranty covering products and workmanship. Warranty period for closers shall be 10 years.

1.10 MAINTENANCE MATERIALS

A. Contractor will provide the owner with all wrenches and tools which were included with hardware including extra screws.

PART 2 - PRODUCTS

2.1 MATERIALS

A. General: Provide complete hardware with accessories as required for doors and applications indicated.

- B. Acceptable Manufacturers: Provide manufacturers specified and manufacturers listed in Hardware Schedule, with references to catalog numbers and designations.
- C. Templates: Furnish templates or physical hardware items to manufacturers concerned sufficiently in advance to avoid delay in Work.
- D. Reinforcing Units: Furnished by door manufacturer, coordinated by hardware manufacturer.
- E. Fasteners: Furnish as recommended by manufacturer and as required to install secure hardware.
 - 1. Finish: Match hardware.
 - 2. Furnish screws for items applied on gypsum board sufficiently long to provide solid connection to framing or backing
- F. Electrical and Mechanical: Make provisions and coordinate requirements for mechanical and electrical devices in connection with hardware.

2.2 HARDWARE ITEMS

- A. Review Drawings for hardware group locations and door types; where not fully covered in Hardware Schedule, comply with following general requirements; inform the owner where conflicts occur.
 - 1. Provide hardware items with accessories complete to function as intended.
- B. Hinges and Butts: ANSI A156.1; comply with following unless otherwise indicated.
 - 1. Acceptable Manufacturers:
 - a. Ives.
 - b. Stanley Hardware Division of Stanley Works. (Hardware Schedule symbol: "ST").
 - c. C. McKinney
 - d. Or accepted equal.
 - 2. Provide minimum 3 hinges to 90" high, 4 hinges to 120" high for each door leaf, unless otherwise indicated.
 - 3. Provide nonferrous butts with non-removable pins at exterior and locked outswinging doors, non-rising at interior doors; stainless steel where labeled; steel butts at labeled interior doors.
 - 4. Provide ball bearing or oilite bearing hinges at doors with closers.
 - 5. Tips: Flat button tips with matching plug.
- C. Locking Devices: Provide of metal matching specified finish; interior parts of steel and zinc-dichromate plating, to resist rusting and corrosion; do not supply plastic, die-cast or aluminum mechanisms.
 - 1. Acceptable Manufacturers:
 - a. Sargent
 - b. Schlage Lock Co.
 - c. Or accepted equal.
 - 2. Type:

- a. Mortise Locksets: ANSI A156.13, Series 1000, Grade 1, Mortise Type with 6 pin tumbler cylinders, except where otherwise indicated in Hardware Schedule.
- b. Cylindrical Locksets: ANSI A156.2, Series 4000, Grade 1, Bored Type (cylindrical) with 6 pin tumbler cylinders, except where otherwise indicated in Hardware Schedule.
- 3. Lockset and Latchset Design: Solid lever with escutcheon, as selected by Architect.
- 4. Backset: 2-3/4".
- 5. Strikes: Furnish standard strikes with extended lips where required to protect trim from being marred by latch bolt; verify type of cutouts provided in metal frames.
- D. Cylinders, Keys, and Keying: Hardware manufacturers shall provide for grand master, master key alike or key different keying as directed by the owner.
 - 1. Provide cylinders of extruded brass bar material.
 - 2. Provide construction cylinders for doors requiring locking during construction; construction cylinders shall be removed and replaced just prior to owner occupancy.
 - 3. Submit keys for final use to owner; provide not less than two keys for each lockset, five of each type and level of masterkey, five grand master keys, all stamped "DO NOT DUPLICATE"; and 5% extra blanks.
 - 4. Hardware manufacturers shall key and register lock cylinders.
 - 5. Key Control System: Provide complete key control system with identification and storage capacity suitable for Project.
- E. Other Hardware: Provide as indicated, as specified, as included in Hardware Schedule, and as required for complete installation.
 - 1. Acceptable Manufacturers:

PRODUCT	MANUFACTURER	APPROVED SUBSTITUTIONS
HINGES	STANLEY	McKINNEY, HAGER
LOCKS & LATCHES	SARGENT	NONE
CYNLINDERS	SCHLAGE "C" (VERIFY)	
PANICS	SARGENT	NONE
CLOSERS	SARGENT	LCN 4040XP
OVERHEAD STOPS	RIXSON	GLYNN JOHNSON, SARGENT
WALLSTOPS	IVES	ROCKWOOD, TRIMCO
FLOORSTOPS	TRIMCO	ROCKWOOD, IVES
KICKPLATES	TRIMCO	ROCKWOOD, IVES
AUTO DOOR BOTTOMS	PEMKO	NGP, ZERO
SEALS	PEMKO	NGP, ZERO

- 2. Weatherstripping: Provide continuous weatherstripping at top and sides of exterior doors.
- 3. Sound Gasketting: Continuous at top and sides of doors, where indicated.

2.3 FINISHES

- A. Finishes are identified in the Hardware Schedule included in this Section, but generally brushed chrome unless otherwise noted.

PART 3- EXECUTION

3.1 INSTALLATION

- A. Install finish hardware specified under this Section; coordinate with manufacture and installation of doors and frames.
- B. Fit hardware prior to painting, then remove for painting of doors and frames before final installation of hardware.
- C. Install hardware in accordance with manufacturer's instructions and DHI installation guide for doors and hardware.
- D. Fasteners: Use only manufacturers supplied fasteners. Drill and tap at metal and pilot holes at wood. No tek type screws are acceptable.
- E. Installers qualifications
 - 1. Approved by supplier.
- F. Install finish hardware before painting for accurate fit and then remove for painting and reinstall after final painting.
- G. Adjust closers to conform with ADA and California Title 24.
- H. Hardware supplier shall visit jobsite prior to ordering hardware to verify compatibility of new hardware specified on existing doors and frames.
- I. No extra cost will be allowed because of changes or corrections necessary to facilitate installation of hardware.

3.2 MOUNTING POSITIONS

- A. Heights given are center line heights from finished floor.
 - 1. Locks and Latches: 38" to center of lever.
 - 2. Door Pulls: 42" to center of grip.
 - 3. Push Plate: 42"; coordinate with pull location.
 - 4. Push-Pull Bar: 42" to center of bar.
 - 5. Top Hinge: To jamb manufacturer's standard, but not greater than 10" from head of frame to center line of hinge.
 - 6. Bottom Hinge: To jamb manufacturer's standard, but not greater than 12-1/2" from floor to center line of hinge.
 - 7. Intermediate Hinges: Equally spaced between top and bottom hinges and from each other.

- 8. Hinge Mortise on Door Leaf: 1/4" to 5/16" from stop side of door.
- 9. Dead Bolt: Not more than 44" from floor to operating lever.

- B. Comply with recommendations of Builders Hardware Manufacturers Association, subject to approval, for heights of items not indicated.

3.3 ADJUSTMENT

- A. After air supply is turned on, qualified hardware supplier's or manufacturer's representatives shall inspect installation and make adjustments.
 - 1. Adjust closers, locks, and critical operational hardware.
 - 2. Deliver instructions for maintenance and future adjustments to the owner's representative.

3.4 CERTIFICATION

- A. At the completion of the Project and prior to final closeout, the hardware consultant shall visit the project and inspect all hardware installed. Consultant shall advise the owner by letter that all hardware is per specification, properly installed and correctly adjusted, or note matters that require correction. Failure to perform these obligations after notification shall result in the hiring of an outside consultant, at Contractor's expense.

3.5 HARDWARE SCHEDULE

- A. The Hardware Schedule establishes a type and standard of quality.
- B. Examine Drawings and Specifications and furnish proper hardware for door openings, whether listed or not.
- C. Bring omissions to attention of the Architect prior to bid opening for instructions; otherwise, list will be considered complete; no extras will be allowed.
- D. Hardware Schedule by Groups:

GROUP 1 DOOR 502A.1

3	EA	HINGES FBB168 4.5 X 4.5 NRP	652	STANLEY
		CLASSROOM SECURITY LOCK SC-8238 LNJ		
1	EA	(VERIFY KWY)	626	SARGENT
1	EA	CLOSER 281 P10 WDXMS	EN	SARGENT
1	EA	FLOOR STOP 1214H	626	TRIMCO
1	EA	KICKPLATE K0050 10 X 34 CSK	630	TRIMCO
1	SET	SEALS S44D	DUR	PEMKO

GROUP 2 DOOR 502B.1

3	EA	HINGES FBB168 4.5 X 4.5	652	STANLEY
		CLASSROOM SECURITY LOCK SC-8238 LNJ		
1	EA	(VERIFY KWY)	626	SARGENT
1	EA	CLOSER 281 P10 WDXMS	EN	SARGENT
1	EA	WALLSTOP WS407CVX	630	IVES
1	EA	KICKPLATE K0050 10 X 2LDW CSK	630	TRIMCO

1 SET SEALS S44D DUR PEMKO

GROUP 3 DOOR 502D.1, 502U.2, 502X.1

3 EA HINGES FBB179 4.5 X 4.5 652 STANLEY
1 EA PASSAGE 8215 LNJ 626 SARGENT
1 EA WALLSTOP WS407CVX 630 IVES
1 EA KICKPLATE K0050 10 X 2LDW CSK 630 TRIMCO
1 SET SEALS S44D DUR PEMKO

GROUP 4 DOOR 502E.1

3 EA HINGES FBB179 4.5 X 4.5 652 STANLEY
1 EA STOREROOM LOCK SC-8204 LNJ (VERIFY KWY) 626 SARGENT
1 EA CONC. OVERHEAD STOP 1-X36 @ 90DEG 630 RIXSON
1 EA KICKPLATE L0050 10 X 2LDW CSK 630 TRIMCO
3 EA SILENCERS SR64 GRAY IVES

GROUP 5 DOOR 502F.1

3 EA HINGES FBB179 4.5 X 4.5 652 STANLEY
1 EA CLASSROOM LOCK SC-8237 LNJ (VERIFY KWY) 626 SARGENT
1 EA CONC. OVERHEAD STOP & HOLD 1-X26 @ 90DEG 630 RIXSON
1 EA KICKPLATE K0050 10 X 2LDW CSK 630 TRIMCO
3 EA SILENCERS SR64 GRAY IVES

GROUP 6 DOOR 502G.1, 502H.1, 502J.1, 502K.1, 502M.1,
502N.1, 502Q.1, 502R.1, 502Y.1

3 EA HINGES FBB179 4.5 X 4.5 652 STANLEY
1 EA OFFICE LOCK SC-8205 LNJ (VERIFY KWY) 626 SARGENT
1 EA WALLSTOP WS407CVX 630 IVES
1 EA KICKPLATE K0050 10 X 2LDW CSK 630 TRIMCO
1 SET SEALS S44D DUR PEMKO

GROUP 7 DOOR 502T.1

3	EA	HINGES FBB179 4.5 X 4.5	652	STANLEY
1	EA	CLASSROOM LOCK SC-8237 LNJ (VERIFY KWY)	626	SARGENT
1	EA	CLOSER 281 O WDXMS	EN	SARGENT
1	EA	KICKPLATE K0050 10 X 2LDW CSK	630	TRIMCO
1	EA	AUTO DOOR BOTTOM 434ARL	ALUM	PEMKO
1	SET	GASKET S44D	DUR	PEMKO

GROUP 8 DOOR 502U.1

3	EA	HINGES FBB179 4.5 X 4.5	652	STANLEY
1	EA	DOUBLE LOCKING SC-8259 LNJ (VERIFY KWY)	626	SARGENT
1	EA	WALLSTOP WS407VCX	630	IVES
1	EA	KICKPLATE K0050 10 X 2LDW CSK	630	TRIMCO
1	EA	AUTO DOOR BOTTOM 434ARL	ALUM	PEMKO
1	SET	SEALS S44D	DUR	PEMKO

GROUP 9 DOOR 502V.1

3	EA	HINGES FBB179 4.5 X 4.5	652	STANLEY
1	EA	CLASSROOM LOCK SC-8237 LNJ (VERIFY KWY)	626	SARGENT
1	EA	CLOSER 281 P10 WDXMS	EN	SARGENT
1	EA	WALLSTOP WS407CVX	630	IVES
1	EA	KICKPLATE K0050 10 X 2LDW CSK	630	TRIMCO
1	EA	AUTO DOOR BOTTOM 434ARL	ALUM	PEMKO
1	SET	GASKET S44D	DUR	PEMKO

GROUP 10 DOOR 502Z.1

3	EA	HINGES FBB168 4.5 X 4.5 NRP	652	STANLEY
1	EA	CLASSROOM SECURITY LOCK SC-8238 LNJ (VERIFY KWY)	626	SARGENT
1	EA	CLOSER 281 P10 WDXMS	EN	SARGENT
1	EA	WALLSTOP WS407CVX	630	IVES

1	EA	KICKPLATE K0050 10 X 34 CSK	630	TRIMCO
1	SET	SEALS S44D	DUR	PEMKO

GROUP 11 DOOR 502Z.2

3	EA	HINGES FBB168 4.5 X 4.5 NRP	652	STANLEY
1	EA	PANIC SC-8813F ETJ (VERIFY KWY)	630	SARGENT
1	EA	CLOSER 281 P10 WDXMS	EN	SARGENT
1	EA	WALLSTOP WS407CVX	630	IVES
1	EA	KICKPLATE K0050 10 X 34 CSK	630	TRIMCO
1	SET	SEALS S44D	DUR	PEMKO

GROUP 12 DOOR 502Z.3

3	EA	HINGES FBB168 4.5 X 4.5	652	STANLEY
		CLASSROOM SECURITY LOCK SC-8238 LNJ		
1	EA	(VERIFY KWY)	626	SARGENT
1	EA	CLOSER 281 O WDXMS	EN	SARGENT
1	EA	WALLSTOP WS407CVX	630	IVES
1	EA	KICKPLATE K0050 10 X 34 CSK	630	TRIMCO
1	SET	SEALS S44D	DUR	PEMKO

END OF SECTION

GLAZING
SECTION 08 80 00

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Provide miscellaneous glass and glazing for hollow metal work, windows and doors not provided elsewhere including accessories as required for complete installation.

1.2 REFERENCES

- A. Glass Association of North America (GANA): Glazing Manual and Sealant Manual.

1.3 SYSTEM DESCRIPTION

- A. Safety Glass Standard: CPSC 16 CFR 1201, ANSI Z97.1, and California Building Code Chapter 24.

1.4 SUBMITTALS

- A. All submittals shall be submitted under the provisions of Section 01 33 00.
- B. Product Data: Furnish for each type of glass, and each type of exposed glazing material.
- C. Samples: Furnish two 12 x 12 samples for each glazing type.

1.5 WARRANTY

A. Special Warranties

1. Special Warranty Period: Two years.

PART 2 – PRODUCTS

2.1 GLAZING MATERIALS

- A. Tempered Safety Glass: Select glazing quality, clear float glass, fully tempered, ASTM C1048, Kind FT; nominal thickness 1/4"; safety glass.

1. Manufacturers:

- a. Ford Glass Division.
- b. PPG Industries, Inc.
- c. Substitutions: Refer to Section 01 25 13

2. Locations: Provide at doors and at window openings where indicated on drawings and required by applicable codes and federal requirements.

- B. Glazing Sealant: ASTM C920, Type S, Grade NS, elastomeric one-component silicone glazing sealants as recommended by sealant manufacturer for application involved.
 - 1. Manufacturers:
 - a. Dow Corning Corp.
 - b. General Electric Co.
 - c. Pecora Corp.
 - d. Substitutions: Refer to Section 01 25 13.
 - 2. Color: As selected by Architect from manufacturer's full range of available colors.
- C. Setting Blocks: 70-90 durometer hardness; 4" long by 3/8" thick by 1/4" high standard setting blocks.
- D. Spacer Shims: Silicone compatible, 50 durometer hardness; 3" long by 3/32" thick by 1/4" high.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Clean glazing channels and framing members to receive glass immediately before glazing; remove coatings not firmly bonded to substrate.
- B. Apply primer to joint surfaces where recommended by sealant manufacturer.

3.2 INSTALLATION

- A. Comply with GANA Glazing Manual and Sealant Manual and glazing manufacturer instructions.
 - 1. Do not allow glass to touch metal surfaces.
 - 2. Comply with NFPA 80 for glass in fire rated openings.
- B. Place setting blocks at quarter points in thin course of sealant.
- C. Install removable stops with glass centered in space with spacer shims at 2'-0" intervals on both sides of glass, 1/4" below sightline.
- D. Sealant at Glazing: Fill gap between glass and stops with sealant to depth equal to bite of frame on glass but not more than 3/8" below sightline.
 - 1. Apply sealant to uniform and level line, flush with sightline; tool or wipe sealant surface for smooth appearance; at exterior locations tool sealant so water is carried away from glass.

3.3 CLEANING

- A. Mark glass after installation by crossed streamers attached to framing and held away from glass; do not apply markers to surface of glass.
- B. Remove nonpermanent labels immediately after sealant cures; cure sealants for high early strength and durability.
- C. Remove and replace glass that is broken, chipped, cracked, abraded or damaged during construction period, including natural causes, accidents and vandalism.

END OF SECTION

SECTION 09 65 00

RESILIENT TILE FLOORING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes: Provide resilient tile flooring and accessories as required for complete finished installation.

2. Luxury Vinyl Tile (LVT)

1.2 SYSTEM DESCRIPTION / PERFORMANCE REQUIREMENTS

- A. Resilient Tile Flammability: Provide materials tested under ASTM E648, Flooring Radiant Panel Test, with results of 0.45 watts/cm² or higher.

- B. Resilient Tile Slip Resistance: Provide materials tested under ASTM D2047, James Slip Test with minimum 0.6 rating for floors.

1.3 SUBMITTAL ITEMS

- A. Product Data: Furnish manufacturer's product literature and installation instructions **including the manufacturer's maximum acceptable relative humidity (RH) percentage(s) and maximum pH level for each type and style of resilient flooring to be installed.**

- B. Samples: Furnish samples of each type of flooring color and pattern.

1.4 PROJECT CONDITIONS

- A. Ensure floor surfaces are smooth and flat with maximum variation of 1/8" in 10'-0".

- B. Maintain minimum 70 degree F air temperature at flooring installation area for three days prior to, during, and for 24 hours after installation.

1. Store flooring materials in area of application; allow three days for material to reach same temperature as area.

- C. Perform Vapor emission and pH testing prior to installation of flooring.

PART 2 - PRODUCTS

2.1 MATERIALS (FLOORING)

- A. Luxury Vinyl Tile (LVT):

1. Manufacturers:
a. Mannington Mills Inc.
b. Armstrong World Industries, Inc.

- c. Or accepted equal.
- 2. Color and Pattern: As selected by Architect from manufacturer's full range of available colors based on Mannington –Amtico Collection
- D. Edge Strips: Homogeneous vinyl or rubber, tapered or bullnose edge, color as selected by Architect.
- E. Sub-Floor Leveling Filler: Portland base cement Web-Crete 95 (as manufactured by Bostik or equal) designed for providing thin solid surface for leveling and minor ramping of subsurface to adjacent floor finishes.
 - a. Use material capable of being applied and feathered out to adjacent floor without spalling.
- F. Primer: As recommended by flooring manufacturer for specified material application.
- G. Sealer and Wax: Type recommended by flooring manufacturer for material type and location.
- H. Adhesives: Waterproof nontoxic types as recommended by flooring manufacturer for specified material and application.

PART 3 – EXECUTION

3.1 PREPARATION

- A. Conform to manufacturer's recommendations for preparation and to ASTM F710. Remove ALL defective materials, and foreign matter such as dust, adhesives, leveling compounds, paint, dirt, floor hardeners, bond breakers, oil, grease, curing agents, form release agents, efflorescence, laitance, etc.
- B. Remove sub-floor ridges and bumps; Repair all cracks, expansion joint, control Joints, and open surface honeycombs and fill in accordance with Manufacturers recommendations.
- C. Clean floor and apply, trowel and float filler to leave a smooth, flat hard surface; prohibit traffic until filler is cured.

3.2 INSTALLATION – FLOORING

- A. Flooring Installation: Conform to manufacturer's recommendations and installation instructions.
- B. Open floor tile cartons, enough to cover each area, and mix tile to ensure shade variations do not occur within any one area.
- C. Spread cement evenly in quantity recommended by manufacturer to ensure adhesion over entire area of installation; spread only enough adhesive to permit installation of flooring before initial set.
- D. Set flooring in place and press with heavy roller to ensure full adhesion.
- E. Lay flooring with joints parallel to building lines to produce symmetrical pattern.
- F. Install minimum 1/2 tile at room and area perimeter.
- G. Terminate resilient flooring at centerline of door openings where adjacent floor finish is dissimilar.
- H. Install edge strips at unprotected and exposed edges where flooring terminates.

- I. Scribe flooring to walls, columns, floor outlets and other appurtenances, to produce tight joints.
- J. Consult with Architect for floor pattern desired in each area.
- K. Edge Strips: Install where edge of tile would otherwise be exposed; butt to flooring without gaps; set in adhesive.

3.3 CLEAN-UP AND PROTECTION

- A. Remove excess adhesive from floor, base and wall surfaces without causing damage.
- B. Clean, seal and wax floor surfaces in accordance with manufacturer's recommendations.
 - a. Prohibit traffic from floor for 48 hours after installation.

END OF SECTION

RESILIENT BASE

09 65 13

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes: Provide contoured resilient base, and accessories as required for complete installation.

1.2 SYSTEM DESCRIPTION

- A. Performance Requirements: Provide materials tested under ASTM E648, Flooring Radiant Panel Test, with results of 0.45 watts/cm² or higher.

1.3 SUBMITTALS

- A. Product Data: Furnish manufacturer's product literature.
- B. Samples: Furnish samples of each base color and type.

1.4 PROJECT CONDITIONS

- A. Maintain minimum 70 degree F air temperature at installation area for 3 days prior to, during, and for 24 hours after installation.
- B. Store materials in area of application; allow three days for material to reach same temperature as area.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Resilient Base: Meeting performance requirements of ASTM F 1861 Standard Specification for Resilient Wall Base, Type TP Group 1.
 - 1. Type: Extruded rubber.
 - 2. Manufacturers:
 - a. Johnsonite, Inc.
 - b. Burke
 - c. Or accepted equal.
 - 3. Base:
 - a. Johnsonite "Millwork Contoured Wall Base" profile: Outline – 5/16" thick x 3 1/2" tall wall base.
 - b. Provide base in 8 pieces.
 - c. Pre-formed corners.
 - 4. Colors: As selected by Architect from manufacturer's full range of available colors.

- B. Primers and Adhesives: Water-resistant nontoxic types recommended by base manufacturer for specified material and application.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Apply to walls, columns, pilasters, casework, and other permanent fixtures in rooms and areas where base is required.
 - 1. Fit joints tight and vertical; maintain minimum measurement of 18" between joints.
- B. Miter internal corners; use molded sections for external corners and exposed ends.
- C. Install base on solid backing, adhere tightly to wall and floor surfaces; fill voids along top edge of base with manufacturer's recommended adhesive filler.
- D. Scribe and fit to door frames and other obstructions.
- E. Install straight and level to variation of plus or minus 1/8" over 10'-0".

3.2 CLEAN-UP

- A. Remove excess adhesive from floor, base and wall surfaces without causing damage.
- B. Clean surfaces in accordance with manufacturer's recommendations.

END OF SECTION

PAINTING AND COATING

SECTION 09 91 00

PART 1 GENERAL

1.1 WORK INCLUDED

- A. Provide painting and finishing of exposed items and surfaces.
 - a. Specified surface preparation, priming and coats of paint are in addition to shop-priming and surface treatment specified under other sections of work.
 - b. Painting and finishing includes field finishing of all exterior and interior items not listed as "Surfaces not to be Painted" unless clearly indicated otherwise.
 - c. Painting and finishing includes field finishing of select shop finished items where indicated as required to match adjacent surfaces, such as mechanical grilles and registers.
 - d. Field paint exposed bare and covered pipes, ducts, and hangers, exposed steel and iron work, and primed metal surfaces of equipment installed under mechanical and electrical work in occupied spaces.

1.2 SURFACES NOT TO BE PAINTED

- A. Gaskets and Hardware at doors.
- B. Prefinished items including finished metal surfaces, unless noted otherwise.
- C. Walls and ceiling in concealed areas and generally inaccessible areas.
- D. Moving parts of operating mechanical and electrical units
- E. Code-required Labels: Keep equipment identification and fire rating labels free of paint.
- F. Plastic smoke stops and weather stripping at doors.

1.3 SUBMITTALS

- A. Product Data: Submit product data on all finishing products.
- B. Safety Data Sheets: Submit Safety Data Sheets for all painting materials.
- C. Samples for Verification:
 - 1. Submit two samples 8-1/2 x 11 inch in size illustrating range of colors, textures and level of gloss finish for each surface-finishing product scheduled.
 - 2. Submit manufacturer's application instructions.
 - 3. Submit color charts in duplicate for all paints, stains and special coatings.

1.4 QUALITY ASSURANCE

- A. Regulatory Requirements: Furnish materials approved for use by applicable air quality management district for limitations of volatile organic compounds for architectural or special coatings as applicable.
- B. Products shall meet or exceed the following Federal Specifications:
 - 1. Alkyd Enamel – TT-E-489 QPL
 - 2. Zinc Oxide Primer – TT-P-641
- C. Provide manufacturers 5 year written performance guarantee for elastomeric paint and application error (materials and labor).

1.5 REGULATORY REQUIREMENTS

- 1. Conform to code for flame/fuel/smoke rating requirements for finishes.
- 2. Conform to requirements of the Environmental Protection Agency.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to job site in original, new and unopened packages and containers bearing manufacturer's name and label, with:
 - 1. Name of material, color and sheen.
 - 2. Manufacturer's name, stock number and date of manufacture.
 - 3. Contents by volume, for major pigment and vehicle constituents.
 - 4. Thinning and application instructions.

1.7 SITE CONDITIONS

- A. Apply water-base paints when temperature of surfaces and surrounding air are between 50 and 90 degrees F.
- B. Apply solvent-thinned paints when temperature of surfaces and surrounding air are between 45 and 95 degrees F.
- C. Do not apply paint in rain, fog or mist; or when relative humidity exceeds 85 percent; or to damp or wet surfaces.
- D. Painting may be continued during inclement weather if areas to be painted are enclosed and heated within temperature limits specified.
- E. Provide additional temporary ventilation during interior application of paints to eliminate volatile organic compound (VOC) emissions from interior spaces as quickly as possible.

1.8 EXTRA STOCK

- A. Provide a one gallon container of each color and surface texture to the Owner.
- B. Label each container with color, texture, and room locations, in addition to the manufacturer's label.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

- A. Kelly-Moore.

- B. Fuller-O'Brien Corp.
- C. Sherwin-Williams Co.
- D. Dunn-Edwards Corp.
- E. Or Accepted Equal

2.2 MATERIALS

- A. Definition: "Paint" as used herein means coating systems including primers, emulsions, enamels, stains, sealers and fillers, whether used as prime, intermediate or finish coats.
 - 1. Provide top line quality commercial grade paints.
- B. Colors and Finishes:
 - 1. Prior to commencement of painting work, Architect will furnish color numbers or chips for surfaces to be painted.
 - a. Multiple brush-out samples will be required for each paint finish.
 - 2. Final acceptance of colors will be on wall samples applied on site.
 - 3. Color pigments: Pure, non-fading, applicable types to suit substrates and service indicated; no lead content permitted.
 - 1. Finish Coat Coordination: Provide finish coats which are compatible with prime paints used.
 - a. Review other Specification sections in which prime paints are provided; ensure compatibility of total coatings systems.
 - b. Upon request from other trades furnish information on characteristics of finish materials proposed for use.
 - c. Provide barrier coats over incompatible primers or remove and re-prime as required.
 - d. Notify Architect in writing of any anticipated problems in use of specified coating systems with substrates primed by others.
- C. Material Quality: Materials not bearing manufacturer's identification as a best-grade product shall not be acceptable.
 - 1. Use of proprietary names in color selection is not intended to imply exclusion of equivalent products of other manufacturers.
 - 2. Provide undercoat paints produced by same manufacturer as finish coats; use only thinners approved by paint manufacturer, and use only within recommended limits.
 - 3. Provide finish coats capable of being washed with mild detergent without loss of color, sheen, or pigments.

- D. Volatile Organic Compound (VOC) Emissions: Select materials that generate least amount of pollution; consider pollution and volatile organic compound (VOC) emissions generated during manufacturing, transport, installation, use, and disposal.
 - 1. Avoid materials that contain ozone depleting chemicals and that emit potentially harmful volatile organic compound (VOC) emissions.
 - 2. Avoid materials that can leach harmful chemicals into ground water; do not allow potentially harmful chemicals to enter sewers nor storm drains.
 - 3. Select materials that can be reused or recycled and materials with significant percentage of recycled content; set specific recycled content percentages for individual materials; avoid materials difficult to recycle.

PART 3 – EXECUTION

3.1 PREPARATION

- A. Inspection: Examine areas and conditions under which painting work is to be applied.
 - 1. Start of painting work indicates acceptance of surfaces and conditions of surfaces and conditions within any particular area.
 - 2. Where exposed items or surfaces are not specifically mentioned in Schedules, paint same as adjacent similar materials or areas.
 - 3. Do not paint over dirt, rust, scale, grease, moisture, scuffed surfaces, or conditions detrimental to a durable paint film.
- B. Perform preparation and cleaning procedures in accordance with paint manufacturer's instructions and as specified for substrate condition.
- C. Correct minor defects and clean surfaces which affect work of this Section.
- D. Remove hardware, accessories, and items in place and not to be painted, or provide protection prior to surface preparation and painting; after painting reinstall removed items.
- E. Clean surfaces before applying paint; remove oil and grease prior to mechanical cleaning; program cleaning so contaminants from cleaning process do not fall onto wet, newly painted surfaces.
- F. Gypsum Board Surfaces: Latex fill minor defects. Spot prime defects after repair.
- G. Cementitious Materials: Prepare by removing efflorescence, chalk, dirt, grease, oils, and by roughening as required to remove glaze.
 - 1. Determine alkalinity and moisture content of surfaces to be painted.
 - 2. If surfaces are found to be sufficiently alkaline to cause blistering and burning of finish paint, neutralize before application of paint.
 - 3. Do not paint over surfaces where moisture content exceeds manufacturer's printed directions.
- H. Wood: Clean wood surfaces of dirt, oil, and other foreign substances; sandpaper smooth surfaces exposed to view, and dust off.

1. Scrape and clean seasoned knots and apply thin coat of recommended knot sealer, before application of priming coat.
 2. Prime, stain, or seal wood required to be job-painted immediately upon delivery to job; prime edges, ends, faces, undersides, and backsides of wood.
 3. After priming, fill holes and imperfections in finish surfaces with putty or plastic wood-filler; sandpaper smooth when dry.
- I. Ferrous Metals: Touch up shop-applied prime coats wherever damaged using same type of primer as applied in shop or barrier coat compatible with finish paint.
1. Bare Surfaces: Clean surfaces that are not galvanized or shop-coated, of oil, dirt, loose mill scale and other foreign substances by solvent or mechanical cleaning.
 2. Galvanized Surfaces: Clean free of oil and surface contaminants, using non-petroleum based solvent; primer and touch-up primer to be zinc-rich primer.
- J. Mix painting materials in accordance with manufacturer's directions.
- K. Store materials in tightly covered containers; maintain containers used in storage, mixing and application of paint in a clean condition, free of foreign materials and residue.
- L. Stir materials before application to produce mixture of uniform density, and stir as required during application; do not stir surface film into material, if necessary, strain material before using.

3.2 PROTECTION

- A. Protect elements surrounding the work of this Section from damage or disfiguration.
- B. Repair damage to other surfaces caused by work of this Section.
- C. Furnish drop cloths, shields, and protective methods to prevent spray or droppings from disfiguring other surfaces.

3.3 APPLICATION

- A. Apply paint in accordance with manufacturer's directions; use applicators and techniques best suited for substrate and type of material being applied.
 1. Apply additional coats when stains or blemishes show through final coat, until paint is a uniform finish, color and appearance.
 2. Provide extra attention to assure dry film thickness at corners and crevices is equivalent to that of flat surfaces.
 3. Paint surfaces behind movable equipment and furniture same as similar exposed surfaces; paint surfaces behind permanently-fixed equipment and furniture with prime coat only.
 4. Paint interior surfaces of ducts, where visible through registers or grilles, with a flat, non-specular black paint.
 5. Paint back sides of access panels and removable or hinged covers to match exposed surfaces.

6. Finish doors on tops, bottoms and side edges same as faces.
 7. Sand lightly between each succeeding enamel coat and each varnish coat.
- B. Scheduling Painting: Apply first coat to surfaces that have been cleaned, pretreated or prepared for painting as soon as practicable after preparation.
1. Allow time between successive coatings to permit proper drying.
 2. Do not recoat until paint feels firm and does not deform or feel sticky under moderate thumb pressure.
- C. Minimum Coating Thickness: Apply materials at not less than manufacturer's recommended spreading rate, to establish a total dry film thickness as recommended by coating manufacturer.
- D. Prime Coats: Apply to items not previously primed; recoat primed and sealed surfaces where there is evidence of suction spots or unsealed areas in first coat.
- E. Finish Coats: Provide even texture; leave no laps, irregularity in texture, skid marks, or other surface imperfections.
- F. Completed Work: Match approved samples for color, texture and coverage; remove, refinish or repaint work not accepted.

3.4 PAINTING SYSTEMS

- A. Interior Work: Provide the following paint systems:
1. Gypsum Board – Eggshell sheen.
 - a. One Coat "Hamilton Prep-Coat Plus" prior to application of gypsum board texture.
 - b. One coat PVA primer
 - c. Two coats acrylic latex.
 2. Steel - Unprimed: Semigloss sheen.
 - a. One coat rust inhibitive primer.
 - b. Two coats acrylic latex enamel, semi-gloss.
 3. Steel - Primed: Semigloss sheen.
 - a. One additional coat of rust inhibitive primer.
 - b. Two coats acrylic latex enamel, semi-gloss.
 4. Steel - Galvanized: Semigloss sheen.
 - a. One coat galvanized metal primer.
 - b. Two coats acrylic latex enamel, semi-gloss.
- B. Sheens: Comply with ASTM D523, reflectance of paint.
1. Flat: 1-10.
 2. Satin: 15-30.
 3. Eggshell: 30-45.
 4. Semigloss: 45-75.
 5. Gloss: 75-100.

APPLICATION	TYPE	MPI Gloss	Dunn Edwards	Glidden Professio	Sherwin Williams	Kelly Moore
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		Level		nal/Devoe		
PRIMERS						
Interior Gypsum Board	PVA	G1	W101	1030	B28W40 0	971
Interior Ferrous Metal	Alkyd	G1	BRPR00	4160	B66-310	1711
Interior Galvanized Metal	Acrylic	G1	UGPR00 or W8	4020	B66W1	1722
FINISHES						
Interior Gypsum Board, Ferrous Metal, and Galvanized Metal	Latex Enamel	G5	SPMA50	1406	B31W25 1	1650
Interior Gypsum Board	Latex Enamel	G3	SPMA30	1402	B20W25 1	1686

3.5 CLEAN-UP, PROTECTION AND REPAIR

Clean-Up: During progress of work, remove discarded paint materials, rubbish, cans and rags from site at end of each work day.

1. Clean glass and paint-spattered surfaces immediately by proper methods of washing and scraping, using care not to scratch or damage finished surfaces.
- B. Protection: Protect work of other trades, whether to be painted or not; correct damage by cleaning, repairing or replacing, and repainting, as acceptable to the County.
 1. Provide "Wet Paint" signs to protect newly-painted finishes.
 2. Remove temporary protective wrappings provided by others for protection of their work, after completion of painting operations.
- C. Repair: At completion of work of other trades, touch-up and restore damaged surfaces or defaced painted surfaces.

3.6 FIELD QUALITY CONTROL

- A. Owner reserves right to invoke material testing procedure at any time during field painting.
- B. If test results show material being used does not comply with specified requirement, Contractor may be directed to remove non-complying work, pay for testing, and repaint surfaces.

END OF SECTION

SECTION 31 05 16

AGGREGATES FOR EARTHWORK

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
1. Coarse aggregate materials.
 2. Fine aggregate materials.

1.2 REFERENCES

- A. California Department of Transportation Standard Specifications – Section 19. (2010 edition)
- B. American Association of State Highway and Transportation Officials:
1. M147: Standard Specification for Materials for Aggregate and Soil- Aggregate Subbase, Base, and Surface Courses.
- C. ASTM:
1. C136: Standard Test Method for Sieve Analysis of Fine and Coarse Grained Aggregates.
 2. D1557: Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft³)
 3. D2487: Standard Classification of Soils for Engineering Purposes (Unified Soil Classification System).
 4. D4318 - Standard Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils
 5. D6938: Standard Test Method for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods. (Shallow Depth)

1.3 SUBMITTALS

- A. Samples: In air-tight containers, 10 lb. samples of each type of fill material to testing laboratory.
- B. Materials Source: Name of imported materials suppliers.
- C. Manufacturer's Certificate: Stating that materials meet or exceed specified requirements
- D. Copies of all compaction reports.

1.4 QUALITY ASSURANCE

- A. Furnish each aggregate material from single source throughout Work.
- B. Perform Work according to State of California Department of Transportation standards.

PART 2 PRODUCTS

2.1 COARSE AGGREGATE MATERIALS

- A. Coarse Aggregate Type A1: Conforming to State of California Department of Transportation standards.
- B. Coarse Aggregate Type A2 (Gravel): AASHTO M147, Grade; passing No. 4 sieve with liquid limit of not more than 25; plasticity index of not more than 5 according to ASTM D4318.
- C. Coarse Aggregate Type A3 (Gravel): Coarse Stone or Crushed Gravel: Pit run, Angular crushed, or natural washed stone; free of shale, clay, friable material and debris; graded according to ASTM C136; within following limits:

US Standard Sieve Size	Percent Passing
2 inches	100
1 inch	95
3/4 inch	95 to 100
5/8 inches	75 to 100
3/8 inches	55 to 85
No. 4	35 to 60
No. 16	15 to 35
No. 40	10 to 25
No. 200	5 to 10

- D. Aggregate Type A4 (Pea Gravel): Natural stone; washed, free of clay, shale, organic matter; graded according to ASTM C136 to following limits:
 - 1. Minimum Size: [1/4] inch.
 - 2. Maximum Size: [5/8] inch.

2.2 FINE AGGREGATE MATERIALS

- A. Fine Aggregate Type A5: Conforming to State of California Department of Transportation standards.
- B. Fine Aggregate Type A6 (Sand): Natural river or bank sand; free of silt, clay, loam, friable or soluble materials, and organic matter; graded according to ASTM C136; within following limits:

US Standard Sieve Size	Percent Passing
No. 4	100
No. 14	10 to 100
No. 50	5 to 90
No. 100	4 to 30
No. 200	0

2.3 SOURCE QUALITY CONTROL

- A. Coarse Aggregate Material - Testing and Analysis: Perform according to ASTM D1557
- B. Fine Aggregate Material - Testing and Analysis: Perform according to ASTM D1557.
- C. When tests indicate materials do not meet specified requirements, change material and retest.

PART 3 EXECUTION

3.1 EXCAVATION

- A. Excavate aggregate materials from on-Site locations indicated as specified in Section 31 22 13.
- B. Stockpile excavated material meeting requirements for coarse aggregate materials and fine aggregate materials.
- C. Remove excess excavated materials not intended for reuse, from Site.
- D. Remove excavated materials not meeting requirements for coarse aggregate materials and fine aggregate materials from Site.

3.2 STOCKPILING

- A. Stockpile materials on Site at locations designated by Engineer.
- B. Stockpile in sufficient quantities to meet Project schedule and requirements.
- C. Separate differing materials with dividers or stockpile apart to prevent mixing.
- D. Direct surface water away from stockpile site to prevent erosion or deterioration of materials.
- E. Stockpile unsuitable or hazardous materials on impervious material and cover to prevent erosion and leaching, until disposed of.

3.3 STOCKPILE CLEANUP

- A. Remove stockpile, leave area in clean and neat condition. Grade Site surface to prevent free-standing surface water.

END OF SECTION

SECTION 32 05 23

CEMENT AND CONCRETE FOR EXTERIOR IMPROVEMENTS

PART 1 GENERAL

1.1 SUMMARY

- A. Includes But Not Limited To
 - 1. Furnish and install following cast-in-place concrete site elements as described in Contract Documents -
 - a. Light pole bases
 - b. Flat drainage structures
 - c. Stairs
 - d. Exterior slabs, non-traffic areas.
 - 2. Quality and common requirements of other exterior concrete items furnished under other Sections.
- B. Products Installed But Not Supplied Under This Section
 - 1. Inserts, bolts, boxes, templates, and fastening devices for other work, including those for bases for Mechanical and Electrical and Railings.
 - 2. Concrete accessories.
- C. Related Sections
 - 1. Subdivision 32 13 Concrete Paving and Walks
 - 2. Subdivision 32 16 Curbs and Gutters
 - 3. Subdivision 32 32 Retaining Walls

1.2 REFERENCES

- A. American Society For Testing And Materials
 - 1. ASTM C 33, "Specification for Concrete Aggregates"
 - 2. ASTM C 94, "Specification for Ready-Mixed Concrete"
 - 3. ASTM C 150, "Specification for Portland Cement"
 - 4. ASTM C 260, "Specification for Air-Entraining Admixtures for Concrete"
 - 5. ASTM C 494, "Standard Specification for Chemical Admixtures for Concrete"
 - 6. ASTM C 618, "Standard Specification for Fly Ash and Raw or Calcined Natural Pozzolan for Use as a Mineral Admixture in Portland Cement Concrete"

1.3 SYSTEM DESCRIPTION

- A. Design Requirements
 - 1. Concrete elements of Project are designed to a value of 3,500 psi.
- B. Performance Requirements
 - 1. For testing purposes, following concrete strengths at 28 days are required -
 - a. 3500 psi - Exterior, above or on grade concrete exposed to weather
 - b. 3000 psi - Concrete not specified elsewhere

1.4 SUBMITTALS

- A. Lab Reports of Cylinder Breaks (Compressive Strength) verifying 1.03 B, Performance Requirements for each mix design.

- B. Shop Drawings
 - 1. Show dimensioned locations of anchor bolts for hold-down anchors and columns.
 - 2. Concrete mix design.

- C. Quality Control Submittals
 - 1. Delivery Tickets - Require mix plant to furnish delivery ticket for each batch of concrete. Keep delivery tickets at job-site for use of Owner or his representatives. Tickets shall show following -
 - a. Name of ready-mix batch plant
 - b. Serial number of ticket
 - c. Date and truck number
 - d. Name of Contractor
 - e. Name and location of Project
 - f. Specific class or designation of concrete in conformance with that employed in Project specification
 - g. Amount of concrete
 - h. Time loaded
 - i. Type, name, and amount of admixtures used
 - j. Amount and type of cement
 - k. Total water content
 - l. Sizes and weights of sand and aggregate

1.5 QUALITY ASSURANCE

- A. Pre-Installation Meeting
 - 1. Per Section 1 General Requirements.
 - 2. Schedule meeting after placing of footings, installation of forms, installation of reinforcing steel, and installation of anchors, inserts, and block outs but prior to placing of concrete.
 - 3. In addition to General Requirements items, review following -
 - a. Approved mix design and use of admixtures
 - b. Sleeves and conduits in place where required prior to pour
 - b. Installation scheduling, coordination, and placement of items installed in and under slabs
 - c. Placement, finishing, and curing of concrete

1.6 PROJECT/SITE CONDITIONS

- A. Environmental Requirements
 - 1. Cold weather concreting procedures -
 - a. No frozen materials shall be used.
 - b. Forms, reinforcement, and fillers shall be free from frost. Place no concrete on frozen ground.
 - c. For temperatures below 40 deg F, maintain concrete at between 60 and 80 deg F when placing, and 50 deg F minimum for five days if regular concrete, or at 50 deg F for three days if high early strength concrete, or longer if determined necessary by Architect.
 - d. Housing, covering, or other protection shall remain in place for 24 hours after heat is discontinued.
 - 2. Hot weather concreting procedures -
 - a. Maximum concrete temperature allowed is 90 deg F in hot weather.
 - b. Cool aggregate and subgrades by sprinkling.
 - c. Avoid cement over 140 deg F.
 - d. Use cold mixing water or ice.
 - e. Use fog spray to lessen rapid evaporation from concrete surface.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Portland Cement - Meet requirements of ASTM C 150, Type II
- B. Aggregates
 - 1. Coarse-
 - a. Meet requirements of ASTM C 33 or nonconforming aggregate which by test or actual service produces concrete of required strength and conforms to local governing codes.
 - b. Aggregate shall be uniformly graded as follows -
 - 1) Flat Work - Size #67 (3/4 inch to #4 or 3/4 maximum to 1/4 inch minimum).
 - 2) All Other - Size #57 (One inch maximum to 1/4 inch minimum).
 - 2. Fine - Meet requirements of ASTM C 33.
- C. Water - Clear, apparently clean, and potable.
- D. Admixtures -
 - 1. Mineral -
 - a. Fly Ash Pozzolan - Meet requirements of ASTM C 618, Class F or C and with loss on ignition (LOI) of 3 percent maximum.
 - 2. Chemical -
 - a. No admixture shall contain calcium chloride nor shall calcium chloride be used as an admixture. All chemical admixtures used shall be from same manufacturer.
 - b. Air Entraining Agents - Meet requirements of ASTM C 260.
 - 1) Quality Standard - Daravair or Darex II AEA by W R Grace.
 - c. Water Reducer - Meet requirements of C 494, Type A.
 - 1) Quality Standard - Daracem 50/55 , WRDA-64, or WRDA-82 by W R Grace.
 - d. Water Reducer, Set Retarder - Meet requirements of ASTM C 494, Type D.
 - 1) Quality Standard - Daratard-17 or Daratard-40 by W R Grace.
 - e. High Range Water Reducer - Meet requirements of ASTM C 494, Type F or G.
 - 1) Quality Standard - Darachem-100 or WRDA-19 by W R Grace.
 - f. Non-Chloride Accelerator - Meet requirements of ASTM C 494, Type C.
 - 1) Quality Standard - Daraset or Polarset by W R Grace.
 - g. Approved Manufacturers -
 - 1) Master Builders Company, Cleveland, OH (216) 831-5500
 - 2) Sika Corporation, Lyndhurst, NJ (800) 933-7452
 - 3) W R Grace Construction Products, Cambridge, MA (800) 521-2737

2.2 MIXES

- A. Submit mix designs to meet following requirements -
 - 1. Proportions
 - a. Exterior, above or on grade concrete exposed to weather -
 - 1) Minimum weight cement per cu yd concrete - 564 lbs
 - 2) Air Entrainment (plus or minus 1-1/2 percent) - 6 percent
 - 3) Water/Cement Ratio - 0.45 maximum by weight
 - b. Concrete not specified elsewhere -
 - 1) Minimum weight cement per cu yd concrete - 517 lbs
 - 2) Air Entrainment (plus or minus 1-1/2 percent) - 3 percent
 - 3) Water/Cement Ratio - 0.50 maximum by weight
 - c. No water shall be added any time during mixing cycle above amount required to meet specified water/cement ratio. No reduction in the amount of cement is allowed.
 - 2. Admixtures -
 - a. Mix design shall show proposed admixture, amount, usage instructions, and justification for proposed use. Do not use any admixture without Architect's written approval.

- b. Mineral - An amount equal to 15 percent of weight of cement may be added. If added, fly ash shall be considered with the cement in determining the amount of water necessary to provide the specified water/cement ratio.
- c. Chemical -
 - 1) 4 inch slump maximum prior to use of high range water reducer.
 - 2) 8 inch slump maximum with use of high range water reducer.
 - 3) Use accelerator or retarder if necessary to meet environmental conditions.

PART 3 EXECUTION

3.1 PREPARATION

- A. Inserts, bolts, boxes, templates, pipes, conduits, and other accessories required by Divisions 15 & 16 shall be installed and inspected prior to placing concrete.
- B. Install inserts, bolts, boxes, templates, pipes, conduits, and other accessories furnished under other Sections to be installed as part of work of this Section. Tie anchor bolts for hold-down anchors and columns securely to reinforcing steel.
- C. Remove water and debris from space to be placed.

3.2 INSTALLATION

- A. Site Tolerances
 - 1. ACI Standards shall govern concrete work except where specified differently. ADA Standards shall control in all pedestrian path of travel areas (Cross-slope less than 2% in all cases; slope in direction of travel not to exceed 5% unless otherwise called for on Drawings).
 - 2. Variation from plumb - 1/4" maximum
 - 3. Variation in thickness - 1/4" to 1/2" standard, 5% for footings
 - 4. Variation in grade - (non ADA areas)
 - a. 0 to 10 feet - 1/4" standard, 1/8" for floor slabs
 - b. 10 to 20 feet - 3/8" standard, 1/4" for floor slabs
 - c. 40 feet or more - 3/4" standard, 3/8" for floor slabs
 - 5. Variation in plan - (non ADA areas)
 - a. 0 to 20 feet - 1/2"
 - b. 40 feet or more - 3/4" standard, plus 1/2" for footings.
 - 6. Variation in eccentricity - 2% for footings
 - 7. Variation in openings -
 - a. Size - plus 1/8"
 - b. Location - 1/4"
 - 8. Variation in stairs & landings -
 - a. Consecutive steps -
 - 1) Treads - 1/8"
 - 2) Risers - 1/16"
 - b. Flight of stairs -
 - 1) Treads - 1/4"
 - 2) Risers - 1/8"
- C. Placing
 - 1. Place as soon after mixing as possible. Deposit as nearly as possible in final position. Placing of concrete shall be continuous until a panel or section is complete.
 - 2. Placing Rate - In order to avoid overloading of forms and ties, observe following rate of filling per hour for various air temperatures -

<u>Temperature</u>	<u>Rate of Fill/Hour</u>
40 deg F	2'
50 deg F	3'

60 deg F 4'
70 deg F 5'

3. Compact concrete in forms by vibrating and other means where required. Thoroughly work in concrete around reinforcing bars.
4. Do not embed aluminum in concrete.
5. Do not use contaminated, deteriorated, or re-tempered concrete.
6. Avoid accumulation of hardened concrete.
7. Locate construction joints where shown on Drawings to least impair strength of completed structure. Construction joints in walls shall not occur within 6 feet of corner and be keyed.

D. Bonding Fresh & Hardened Concrete

1. Retighten forms.
2. Roughen surfaces.
3. Clean off foreign matter and laitance.
4. Wet but do not saturate.
5. Slush with neat cement grout.
6. Proceed with placing new concrete.

E. Special Requirements

1. Footings -
 - a. Bear 12 inches minimum into undisturbed earth or on mechanically compacted engineered fill.
 - b. Level top of finish footing and leave rough.
 - c. Where joints are required, bulkhead, key horizontally, and dowel with two #5 rebars, 4 feet long.
2. Foundations for Walls - Leave steel projecting where required for tie.
3. Exterior Slabs -
 - a. Dusting with cement not permitted.
 - b. For continuous placing and where shown on Drawings, saw cut one inch deep control joints before shrinkage occurs.
4. Equipment Pads - Coordinate with appropriate Sections for locations and dimensions.
5. Anchor Bolts - Place anchor bolts not tied to reinforcing steel immediately following leveling of concrete. Reconsolidate concrete around bolt immediately after placing bolt. Do not disturb bolts during finishing process.

F. Finishing

1. Rubbed Finish, Exposed Vertical Surfaces -
 - a. Immediately after removing forms, remove joints, marks, bellies, projections, loose materials, and cut back metal ties from surfaces to be exposed.
 - b. Point up voids with cement mortar, 1:2 mix, and rub exposed surface with carborundum to smooth, even surface.
2. Broom Finishes, Exterior Flatwork, Stairs, & Ramps -
 - a. Broom finish exterior slabs.
 - b. Round edges including edges formed by expansion joints.
 - c. Remove edger marks.

G. Curing

1. Keep concrete moist seven days minimum for regular concrete and three days for high early strength. Do not use concrete curing compounds without Architect's written approval. Curing compounds shall not be used to replace moist curing unless accepted by Architect.

3.3 FIELD QUALITY CONTROL

A. Inspection

1. To allow Architect's verification of grades, notify Architect five days minimum prior to each concrete pour.

3.4 PROTECTION

- A. Protect concrete which has not received its initial set from precipitation to avoid excess water in mix and unsatisfactory surface finish.

END OF SECTION

SECTION 32 05 24

CONCRETE REINFORCING STEEL FOR SITE WORK

PART 1 GENERAL

1.1 SUMMARY

- A. Includes But Not Limited To
 - 1. Furnishing and installing reinforcing as described in Contract Documents.

1.2 REFERENCES

- A. American Society for Testing and Materials
ASTM A 615-90, "Standard Specification for Deformed & Plain Billet-Steel Bars for Concrete Reinforcement"
- B. Caltrans Standard Specifications Section 52: Reinforcement

1.3 SUBMITTALS

- A. Certificate of Compliance per CSS Section 6-1.07
- B. Quality Assurance/Control
 - 1. Provide reinforcing placement drawings.
 - 2. If requested by Architect, provide mill certificate.

1.4 DELIVERY, STORAGE, & HANDLING

- A. Reinforcing steel shall be free of rust, scale, or other coating at time of delivery and placing. Properly protect rebar on site after delivery.
- B. Deliver bars separated by size and tagged with manufacturer's heat or test identification number.

PART 2 PRODUCTS

2.1 MATERIAL

- A. Reinforcing Steel
 - 1. Rebars shall have grade identification marks and conform to ASTM A 615.
 - a. Grade 40 minimum
 - b. Bars shall be deformed type.
 - c. Bars shall be free of rust, scale, or other bond-reducing coatings.
- B. Rebar Spacing Blocks
 - 1. Approved Manufactured Types -
 - a. Single cover block with wire by Frank Co, Humbolt, TX
 - b. Equals as approved by Architect before bidding.
 - 2. Other Approved Types -
 - a. Plain concrete blocks.

2.2 FABRICATION

- A. Fabricate reinforcing steel according to "ACI Detailing Manual," 1988 edition, and details on Drawings.

PART 3 EXECUTION

3.1 INSTALLATION

- A. Site Tolerances
 - 1. Provide following minimum concrete cover for reinforcement (ACI 318-89) -
 - a. Concrete cast against and permanently exposed to earth -
 - 1) Exterior Slabs on Grade (where shown) - 2 inches
 - 2) Interior Slabs on Grade - 2 inches
 - 3) Sections other than Slabs - 3 inches
 - b. Concrete Exposed to Earth or Weather -
 - 1) #6 & Larger Bars - 2 inches
 - 2) #5 & Smaller Bars - 1-1/2 inches
 - c. Concrete not exposed to weather or in contact with ground -
 - 1) Slabs, Walls & Joists - 3/4 inches
 - 2) Beams & Columns - Primary Reinforcement, Ties, Stirrups, & Spirals - 1-1/2 inches
- B. Bend bars cold.
- C. Accurately place and support with chairs, bar supports, spacers, or hangers as recommended by "ACI Detailing Manual", except slab on grade work. Support bars in slabs on grade and footings with specified rebar spacing blocks to maintain specified concrete cover.
- D. Dowel vertical reinforcement for columns or walls out of footing or structure below with rebar of same size and spacing required above.
- E. Securely anchor and tie reinforcing bars and dowels prior to placing concrete.
- F. Avoid splices of reinforcing bars at points of maximum stress. Lap bars 40 bar diameters minimum unless dimensioned otherwise on the Drawings.
- G. Run steel reinforcing bars continuous through cold joints.

END OF SECTION

SECTION 32 12 16

ASPHALT PAVING

PART 1 GENERAL

1.1 DESCRIPTION

- A. Section Includes:
1. Asphalt materials.
 2. Aggregate materials.
 3. Asphalt paving base course, binder course, and wearing course.
 4. Surface slurry.

1.2 REFERENCES

- A. California Department of Transportation Standard Specification Section 39 Hot Mix Asphalt.
- B. ASTM
1. D692: Standard Specification for Coarse Aggregate for Bituminous Paving Mixtures.
 2. D1073: Standard Specification for Fine Aggregate for Bituminous Paving Mixtures.
 3. D2940: Standard Specification for Graded Aggregate Material for Bases and Subbases for Highways and Airports.
 4. D2950: Standard Test Method for Density of Bituminous Concrete in Place by Nuclear Methods.
- C. City of Eureka Engineering Standard Details
1. R-10 Typical Pavement Section
 2. R-11 Alley Paving Section

1.3 SUBMITTALS

- A. Product Data:
1. Submit product information for asphalt and aggregate materials.
 2. Submit mix design with laboratory test results supporting design.

1.4 QUALITY ASSURANCE

- A. Mixing Plant: Conform State of California Department of Transportation requirements.
- B. Obtain materials from same source throughout.
- C. Perform Work in accordance with State of California Department of Transportation Standard Specification Section 39 Hot Mix Asphalt.

- D. Perform work according to the City of Eureka Engineering Standard Details when that work fall within the boundaries of the City of Eureka's jurisdiction.

1.5 AMBIENT CONDITIONS

- A. Do not place asphalt when ambient air or base surface temperature is less than 45 degrees F, or surface is wet or frozen.

PART 2 PRODUCTS

2.1 ASPHALT PAVING

- A. Asphalt Materials:
 - 1. Asphalt Cement: ASTM D946; PG 64-10.
 - 2. Tack Coat: ASTM D977; diluted emulsified asphalt.
- B. Aggregate Materials:
 - 1. Coarse Aggregate: ASTM D692; crushed stone, gravel, or blast furnace slag.
 - 2. Fine Aggregate: ASTM D1073; natural sand or sand manufactured from stone, gravel, or blast furnace slag.

2.2 MIXES

- A. Asphalt Paving Mixtures: Designed in accordance State of California Standard Specifications

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify gradients and elevations of base.
- B. Verify compacted base is dry and ready to support paving and imposed loads.
- C. Verify utility structure frames and lids are installed in correct position and elevation.

3.2 INSTALLATION

- A. Primer
 - 1. Apply primer on aggregate base at uniform rate of 1/2 gal/sq yd
 - 2. Apply primer to contact surfaces of curbs and gutters.
 - 3. Use clean sand to blot excess primer.
- B. Tack Coat
 - 1. Apply tack coat on asphalt and concrete surfaces over subgrade surface at uniform rate.
 - a. New Surfaces: 0.06 gal/sq yd
 - b. Existing Surfaces: 0.06 gal/sq yd
 - 2. Apply tack coat to contact surfaces of curbs, gutters and existing pavements.

3. Coat surfaces of frames with oil to prevent bond with asphalt paving. Do not tack-coat these surfaces.

C. Single Course Asphalt Paving

1. Install Work in accordance with State of California Department of Transportation requirements.
2. Place asphalt within 24 hours of applying primer or tack coat.
3. Place asphalt wearing course to thickness indicated on Drawings.
4. Compact paving by rolling to specified density. Do not displace or extrude paving from position. Hand compact in areas inaccessible to rolling equipment.
5. Perform rolling with consecutive passes to achieve even and smooth finish without roller marks.

D. Surface Slurry

1. Install uniform thickness surface slurry over existing paving in accordance with ASTM D3910.
2. Allow slurry to cure.
3. Roll paving to achieve uniform surface.

3.3 TOLERANCES

- A. Flatness: Maximum variation of 0.02 foot measured with 10 foot straight edge.
- B. Scheduled Compacted Thickness: Within 0.02 foot.
- C. Variation from Indicated Elevation: Within 0.02 foot.

3.4 FIELD QUALITY CONTROL

- A. Asphalt Paving Mix Temperature: Measure temperature at time of placement.
- B. Asphalt Paving Thickness: ASTM D3549; test one core sample from every 500 square yards compacted paving.
- C. Asphalt Paving Density: ASTM D2950 nuclear method; test one location for every 500 square yards compacted paving.
- D. When tests indicate Work does not meet specified requirements, remove Work, replace, and retest.
- E. Submit test results to Engineer for acceptance.

3.5 PROTECTION OF FINISHED WORK

- A. Immediately after placement, protect pavement from mechanical injury for seven days or until surface temperature is less than 140 degrees F.

END OF SECTION

SECTION 32 16 13

CONCRETE CURB, GUTTER AND SIDEWALK

PART 1 GENERAL

1.1 DESCRIPTION

- A. Section Includes:
1. Construction of curbing
 2. Construction of gutters
 3. Construction of sidewalks
 4. Concrete driveways

1.2 REFERENCES

- A. California Department of Transportation Standard Specifications – Division VI, VII, & VIII. (2010 edition)
- B. ACI: American Concrete Institute
1. ACI 117 - Standard Specification for Tolerances for Concrete Construction Materials
 2. ACI 301 - Standard Specifications for Structural Concrete
 3. ACI 304R - Guide for Measuring, Mixing, Transporting, and Placing Concrete
 4. ACI 308 - Standard Practice for Curing Concrete
 5. ACI 318 - Building Code Requirements for Reinforced Concrete
- C. ASTM: American Society for Testing and Materials
1. ASTM A185 - Steel Welded Wire Fabric, Plain, for Concrete Reinforcement
 2. ASTM A615 - Deformed and Plain Billet-Steel for Concrete Reinforcement
 3. ASTM C31 - Standard Practice for Making and Curing Concrete Test Specimens in the Field
 4. ASTM C33 - Concrete Aggregates
 5. ASTM C143 - Standard Test Method for Slump of Hydraulic-Cement Concrete
 6. ASTM C150 - Portland Cement
ASTM C172 - Standard Practice for Sampling Freshly Mixed Concrete
 7. ASTM C260 - Specification for Air-Entraining Admixtures for Concrete
 8. ASTM C309 - Liquid Membrane-Forming Compounds for Curing Concrete
 9. ASTM D994 - Preformed Expansion Joint Filler for Concrete (Bituminous)
 10. ASTM D1190 - Concrete Joint Sealer, Hot Poured, Elastic Type
 11. ASTM D1751 - Performed Expansion Joint Fillers for Concrete Paving and Structural Construction (Non-extruding and Resilient Bituminous Types)
 12. ASTM D2628 - Preformed Polychloroprene Elastomeric Joint Seals for Concrete Pavements
- D. City of Eureka Engineering Standard Details:

1. R-12 Concrete Ribbon Gutter
2. R-20 Concrete Curb & Sidewalk
3. R-23 Detectable Warning Surface Installation
4. R-30 Residential Driveway
5. R-31 Commercial Driveway
6. R-90 Curb Face Address Numbers

1.3 SUBMITTALS

- A. Product Data: Submit the respective manufacturer's product data for manufactured products.
- B. Shop Drawings:
 1. Submit drawings that indicate the section profile of curb and gutter, and the locations of joints in concrete, including construction joints, expansion joints, isolation joints, and contraction joints.
 2. Submit drawings of extruded curbs and gutters, if proposed, and any modification of the indicated section profile required by the extrusion process.
 3. Submit drawings of reinforcing steel, tie bars, and connecting dowels.

1.4 QUALITY ASSURANCE

- A. Perform Work according to California Department of Transportation standards.
- B. Perform Work according to American Concrete Institute standards.
- C. Perform Work to the City of Eureka Engineering Standard Details.
- D. Check surface areas at intervals necessary to eliminate ponding areas. Remove and replace unacceptable work as directed by the Engineer.

PART 2 PRODUCTS

2.1 FORMS

- 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. Use flexible spring steel forms or laminated boards to form radius bends as required. Forms shall be of depth equal to depth of curbing or sidewalk, and so designed as to permit secure fastening together at tops. Coat forms with non-staining type of coating that will not discolor or deface surface of concrete.

2.2 REINFORCING

- A. Welded Wire Mesh: Welded plain cold-drawn steel wire fabric, ASTM A185. Furnish in flat sheets.

- B. Reinforcing Steel: Deformed steel bars, ASTM A615, Grade 60.
- C. Dowel Bars: Shall conform to ASTM A615, grade 60, and plain steel bars.

2.3 CONCRETE

- A. Portland Cement: Shall conform to ASTM C150, Type II.
- B. Aggregate: Shall conform to ASTM C33.
- C. Water: Shall be clean and potable.
- D. Air Entraining Mixture: Shall conform to ASTM C260.
- E. Curbing: Curbing shall conform to the requirements of City of Eureka Engineering Standard Details R-20, R-23, and R-90.
- F. Gutters: Gutters shall conform to the requirements of City of Eureka Engineering Standard Detail R-12.
- G. Driveways: Driveways shall conform to the requirements of City of Eureka Engineering Standard Details R-31.

2.4 EXPANSION MATERIAL

- A. Joint Fillers: Resilient pre-molded bituminous impregnated fiberboard units complying with ASTM D994, D1751, D2628.

2.5 ADHESIVE EXTRUDED CURB

- A. Joint Sealants: Conforming to ASTM D1190, non-priming, pourable, self-leveling polyurethane.

2.6 CURING COMPOUND

- A. Curing Compound: Shall conform to ASTM C309.

PART 3 EXECUTION

3.1 PREPARATION

- A. Cast In Place Concrete: Compact subgrade to the requirements of Section 31 23 00, Trenching, Backfilling, and Compacting. Immediately prior to placing the concrete, wet the subgrade thoroughly to prevent moisture loss from the concrete mix to the subgrade.
- B. Extruded Concrete: Prior to placing curbing, clean the existing surface and apply bonding agent to the entire contact surface.

3.2 JOINTS

- A. Cast In Place Concrete: Construct contraction joints of the weakened plane type between expansion joints at intervals of no more than 10 feet unless otherwise shown on the drawings. Form the contraction joints by grooving and inserting a preformed bituminous filler, or by other approved means. The top width of the joints shall not be less than 1/8 inch or greater than 1/4 inch. The joints shall penetrate 2 inches into the face and top surface of the curb.
- B. Extruded Concrete: Construct saw joints every 20 feet.
- C. Driveways: Construct in accordance with the drawings.

3.3 PLACEMENT AND FINISHING

- A. The concrete forms, if of wood, shall be sprayed, oiled, or otherwise covered with an impermeable membrane before use.
- B. Remove forms after the concrete has taken its initial set and while the concrete is still green. Repair minor defects with mortar containing one part portland cement and two parts sand. Plastering will not be permitted on the faces and exposed surfaces. Honeycombed and other structurally defective concrete shall be removed and replaced at no added cost to the Owner. While the concrete is still green, the exposed surfaces shall be finished by rubbing down high spots and form marks, by rubbing the moistened surfaces with a suitable device to provide a uniform texture and smooth surface, or by applying and rubbing a thin cement grout to produce a uniform color.
- C. Broom-finish driveways with strokes at right angles to length. Smoothly finish edges with an edging tool, and be free of broom marks.
- D. Cast in place curb top and the 10 inches of curb face shall be steel trowelled and "broom" finished with a fine haired broom parallel to the direction of the curb.
- E. After finishing has been completed, cover the concrete with an impermeable membrane, or keep continuously wet, until the concrete has reached a compressive strength of at least 2500 psi.
- F. Protect and cure surfaces from which forms are removed before the curing period has elapsed as specified for surfaces not covered by forms.

3.4 CURING AND PROTECTION DRIVEWAYS

- A. Apply curing compound to exposed surfaces immediately after finishing.
- B. Apply in sufficient quantity to obscure natural color of the concrete.

3.5 CONSTRUCTION ADJACENT TO CURB

- A. No base rock shall be placed above the bottom of the curb until the concrete has reached a compressive strength of at least 2500 psi. Curbs shall be properly backfilled before base aggregate is placed and compacted.
- B. After completion of the paving, repair chips and gouges in the exposed portion of the curb. For patching, use cement mortar containing one part portland cement and two parts sand.

3.6 TOLERANCES

- A. The finished surfaces shall be within 1/4 inch, plus or minus, of finish grade and alignment.
- B. Slab tolerances shall be "straightedge tolerance" as specified in ACI 117 and deviate not more than 1/8 inch from a 10-foot straightedge placed anywhere on the surface.
- C. The exposed surfaces shall be brush finished and free of spalls, holes, rock pockets or honeycomb and shall present a smooth, clean and neat appearance.

END OF SECTION

SECTION 32 17 23

PAVEMENT MARKINGS

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
1. Traffic lines and markings.
 2. Legends.
 3. Paint.
 4. Glass beads.

1.2 REFERENCES

- A. ASTM:
1. ASTM D34 - Standard Guide for Chemical Analysis of White Pigments
 2. ASTM D126 - Standard Test Methods for Analysis of Yellow, Orange, and Green Pigments Containing Lead Chromate and Chromium Oxide Green
 3. ASTM D562 - Standard Test Method for Consistency of Paints Measuring Krebs Unit (KU) Viscosity Using a Stormer-Type Viscometer
 4. ASTM D711 - Standard Test Method for No-Pick-Up Time of Traffic Paint
 5. ASTM D713 - Standard Practice for Conducting Road Service Tests on Fluid Traffic Marking Materials
 6. ASTM D969 - Standard Guide for Selection of Tests for Traffic Paints
 7. ASTM D1394 - Standard Test Methods for Chemical Analysis of White Titanium Pigments
 8. ASTM D1475 - Standard Test Method For Density of Liquid Coatings, Inks, and Related Products
 9. ASTM D2202 - Standard Test Method for Slump of Sealants
 10. ASTM D2371 - Standard Test Method for Pigment Content of Solvent-Reducible Paints
 11. ASTM D2621 - Standard Test Method for Infrared Identification of Vehicle Solids From Solvent-Reducible Paints
 12. ASTM D2743 - Standard Practices for Uniformity of Traffic Paint Vehicle Solids by Spectroscopy and Gas Chromatography
- B. AASHTO:
1. M247 - Standard Specification for Glass Beads Used in Pavement Markings.
- C. California Department of Transportation Standard Specifications – Division IX & X. (2010 edition)
- D. City of Eureka Engineering Standard Details:
1. R-40 Pavement Markings
 2. R-41 Pavement Striping
 3. R-43 Typical Crosswalk

1.3 SUBMITTALS

- A. Product Data: Paint formulation for each type of paint.
- B. Samples:
 - 1. Eight sample plates of each color of material. Prepare four plates without glass beads and four with glass beads for each different batch of material. After approval, Owner will retain these plates for field comparisons of applied paint.
 - 2. Two gallons and four one-quart paint samples accompanied by properly executed test reports.
 - 3. Glass bead in compliance with AASHTO M247.
- C. Manufacturer's Certificate: Products meet or exceed the specified requirements.
- D. Test and Evaluation Reports: Submit source and acceptance test results according to AASHTO M247.
- E. Manufacturer's Instructions: Application temperatures, eradication requirements, application rate, line thickness, type of glass beads, bead embedment and bead application rate, and any other data on proper installation.

1.4 QUALITY ASSURANCE

- A. Perform Work according to City of Eureka Engineering Standard Details and California Department of Transportation standard.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Invert containers several days prior to use when paint has been stored more than two months. Minimize exposure to air when transferring paint. Seal drums and tanks when not in use.
- B. Glass Beads. Store glass beads in cool, dry place. Protect from contamination by foreign substances.

1.6 AMBIENT CONDITIONS

- A. Do not apply materials when surface and ambient temperatures are outside temperature ranges required by paint product manufacturer.
- B. Do not apply exterior coatings during rain or snow when relative humidity is outside humidity ranges, or moisture content of surfaces exceed those required by paint product manufacturer.
- C. Do not apply paint when temperatures are expected to fall below 50 degrees F for 24 hours after application.
- D. Volatile Organic Content (VOC). Do not exceed State or U.S. EPA maximum VOC on traffic paint.

1.7 WARRANTY

- A. Furnish three year manufacturer's warranty for traffic paints.

PART 2 PRODUCTS

2.1 PAINTED PAVEMENT MARKINGS

- A. Furnish materials according to City of Eureka Engineering Standard Details and California Department of Transportation standards.
- B. Performance / Design Criteria:
 - 1. Paint Adhesion: Adhere to road surface forming smooth continuous film one minute after application.
 - 2. Paint Drying: Tack free by touch so as not to require coning or other traffic control devices to prevent transfer by vehicle tires within ten minutes after application.
- C. Paint: Ready mixed, conventional and fast dry waterborne traffic paints, lead-free, non-toxic, AASHTO Test Deck, minimum retroreflectance of 100 mcDs, durability rating of 6 or more after in place for nine months; within following limits:
 - 1. Pigment, percent by weight: 60 plus or minus 2.
 - 2. Vehicle, percent by weight: 40 plus or minus 2.
 - 3. Non-Volatile, percent by weight of paint: 76.0.
 - 4. Weight per gallon, pounds minimum 13.0.
 - 5. Viscosity: 80 to 95 Krieb Units at 77 degrees F.
 - 6. Grind (Hegeman Gauge), minimum Field Tested no tracking time under ambient conditions: 20 to 90 seconds.
 - 7. Dry-through Time, 15 mils wet at 90 percent relative humidity, 72 degrees F, ASTM D1640: 125 minutes maximum.
 - 8. VOC (Volatile Organic Content): 1 lb/gal maximum.
- D. Glass Beads: AASHTO M247, Type 1, coated to enhance embedment and adherence with paint.

2.2 EQUIPMENT

- A. Continuous Longitudinal Line Application Machine:
 - 1. Dual-nozzle paint gun to simultaneously apply parallel lines of indicated width in solid or broken patterns or various combinations of those patterns.
 - 2. Pressurized bead gun to automatically dispense glass beads onto painted surface, at required application rate.
 - 3. Measuring device to automatically and continuously measure length of each line placed, to nearest foot.
 - 4. Device to heat paint to manufacturers temperature recommendations for fast dry applications.
- B. Machine Calibration: Calibrate machines to meet specified tolerances.
- C. Other Equipment:
 - 1. For application of crosswalks, intersections, stop lines, legends and other miscellaneous items by walk behind stripers, hand spray or stencil trucks, apply with

equipment meeting requirements of this Section. Do not use hand brushes or rollers. Optionally apply glass beads by hand.

2.3 SOURCE QUALITY CONTROL

- A. Test and analyze traffic paints according to ASTM D34, ASTM D126, ASTM D562, ASTM D711, ASTM D713, ASTM D969, ASTM D1394, ASTM D1475, ASTM D2202, ASTM D2371, ASTM D2621, and ASTM D2743.
- B. Allow witnessing of factory inspections and test at manufacturer's test facility. Notify Engineer at least seven days before inspections and tests are scheduled.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Do not apply paint to concrete surfaces until concrete has cured for 28 days.

3.2 PREPARATION

- A. Maintenance and Protection of Traffic:
 - 1. Prevent interference with marking operations and prevent traffic on newly applied markings before markings dry.
 - 2. Maintain travel lanes between 7 AM to 9 AM, and between 4 PM and 6 PM.
 - 3. Maintain access to existing businesses and other properties requiring access.
- B. Surface Preparation.
 - 1. Clean and dry paved surface prior to painting.
 - 2. Blow or sweep surface free of dirt, debris, oil, grease or gasoline.
 - 3. Spot location of final pavement markings as specified and as indicated by applying pavement spots 25 feet on center
 - 4. Notify Engineer after placing pavement spots and minimum three days prior to applying traffic lines.

3.3 DEMOLITION

- A. Remove existing markings in an acceptable manner. Do not remove existing pavement markings by painting over with blank paint. Remove by methods that will cause least damage to pavement structure or pavement surface. Satisfactorily repair any pavement or surface damage caused by removal methods.
- B. Clean and repair existing remaining or reinstalled lines and legends.

3.4 APPLICATION

- A. Agitate paint for 1 to 15 minutes prior to application to ensure even distribution of paint pigment.
- B. Dispense paint at ambient temperature to wet film thickness of 15 mils, except dispense edge markings to wet-film thickness of 12 mils.

- C. Apply glass beads at rate of 6 lb per gal of paint.
- D. Unless material is track free at end of paint application convoy, use traffic cones to protect markings from traffic until track free. When vehicle crosses a marking and tracks it or when splattering or over spray occurs, eradicate affected marking and resultant tracking and apply new markings.
- E. Install Work according to City of Eureka Engineering Standard Details and California Department of Transportation standards.

3.5 TOLERANCES

- A. Maximum Variation from Wet Film Thickness: 1 mil.
- B. Maximum Variation from Wet Paint Line Width: Plus or minus 1/8 inch.
- C. Maintain cycle length for skip lines at tolerance of plus or minus 6 inches per 40 feet and line length of plus or minus 3 inches per 10 feet.
- D. Maximum Variation from Specified Application Temperature: Plus or minus 5 degrees F

3.6 FIELD QUALITY CONTROL

- A. Inspect for incorrect location, insufficient thickness, line width, coverage, retention, uncured or discolored material, and insufficient bonding.
- B. Repair lines and markings, which after application and curing do not meet following criteria:
 - 1. Incorrect Location: Remove and replace incorrectly placed patterns.
 - 2. Insufficient Thickness, Line Width, Paint Coverage, Glass Bead Coverage or Retention: Prepare defective material by acceptably grinding or blast cleaning to remove substantial amount of beads and to roughen marking surface. Remove loose particles and debris. Apply new markings on cleaned surface according to this Section.
 - 3. Uncured or Discolored Material, Insufficient Bonding: Remove defective markings according to this Section and clean pavement surface 1 foot beyond affected area. Apply new markings on cleaned surface according to this Section.
- C. Replace defective pavement markings as specified throughout warranted period. Replace markings damaged by anti-skid materials, studded tires, tire chains, chemical deicers, snow plowing or other loss of marking material regardless of cause. When markings are damaged by pavement failure or by Owner's painting, crack sealing, or pavement repair operations, Contractor is released from warranty requirements for damaged Work.
- D. Prepare list of defective areas and areas requiring additional inspection and evaluation to decide where material may need replaced. Provide traffic control as necessary if markings require more detailed evaluation.
- E. Replace failed or defective markings in entire section of defective markings within 30 days after notification when any of following exists during warranty period:

1. Average retroreflectivity within any 528 foot section is less than 1 225 mcd/m²/1x for white pavement markings and 100 mcd/m²/1x for yellow pavement markings.
 2. Marking is discolored or exhibits pigment loss, and is determined to be unacceptable by Owner.
 3. More than 15 percent of area of continuous line, or more than 15 percent of combined area of skip lines, within any 528 foot section of roadway is missing.
- F. Replace pavement marking material under warranty using original or better type material. Continue warranty to end of original warranty period even when replacement materials have been installed as specified.
- G. When eradication of existing paint lines is necessary, eradicate by shot blast or water blast method. Do not gouge or groove pavement more than 1/16 inch during removal. Limit area of removal to area of marking plus 1 inch on all sides. Prevent damage to transverse and longitudinal joint sealers, and repair any damage according to requirements in Section 32 13 13 or Section 32 12 16.
- H. Maintain daily log showing Work completed, results of above inspections or tests, pavement and air temperatures, relative humidity, presence of any moisture on pavement, and any material or equipment problems. Make legible entries in log in ink, sign and submit by end of each working day. Enter environmental data into log prior to starting Work each day and at two additional times during day.

3.7 PROTECTION

- A. Protect painted pavement markings from vehicular and pedestrian traffic until paint is dry and track-free. Follow manufacturer's recommendations or use minimum of 30 minutes. Consider barrier cones as satisfactory protection for materials requiring more than two minutes dry time.

3.8 MAINTENANCE

- A. Furnish service and maintenance of traffic paints for three years from date of Substantial Completion.

END OF SECTION

TACTILE WARNING SURFACING

SECTION 32 17 26

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Embedded tactile warning surface tile, with an inline dome pattern, for application on ramps and level walking surfaces.
- B. Tactile Tile Installation Method: As indicated on Drawings, and as follows:
 - 1. New Concrete: Installation in cast-in-place uncured (wet) concrete.

1.2 RELATED SECTIONS

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

1.3 REFERENCES

- A. The publications listed below form a part of this Section to the extent referenced. The publications are referred to in the text by the basic designation only. Refer to Section 01 42 00 “References” for definitions, acronyms, and abbreviations.
- B. Referenced Standards:
 - 1. AASHTO HB-17 – Standard Specifications for Highway Bridges.
 - 2. ASTM B117 – Standard Practice for Operating Salt Spray (Fog) Apparatus.
 - 3. ASTM C293 – Standard Test Method for Flexural Strength of Concrete (Using Simple Beam With Center-Point Loading).
 - 4. ASTM C1028 – Standard Test Method for Determining the Static Coefficient of Friction of Ceramic Tile and Other Like Surfaces by the Horizontal Dynamometer Pull-Meter Method.
 - 5. ASTM D543 – Standard Practices for Evaluating the Resistance of Plastics to Chemical Reagents.
 - 6. ASTM D570 – Standard Test Method for Water Absorption of Plastics.
 - 7. ASTM D638 – Standard Test Method for Tensile Properties of Plastics.
 - 8. ASTM D695 – Standard Test Method for Compressive Properties of Rigid Plastics.
 - 9. ASTM D1037 – Standard Test Methods for Evaluating Properties of Wood-Base Fiber and Particle Panel Materials.
 - 10. ASTM D2486 – Standard Test Methods for Scrub Resistance of Wall Paints.
 - 11. ASTM D5420 – Standard Test Method for Impact Resistance of Flat, Rigid Plastic Specimen by Means of a Striker Impacted by a Falling Weight (Gardner Impact).
 - 12. ASTM E84 – Standard Test Method for Surface Burning Characteristics of Building Materials.

13. ASTM G155 – Standard Practice for Operating Xenon Arc Light Apparatus for Exposure of Non-Metallic Materials.

1.4 SUBMITTALS

- A. Submit under provisions of Section 01 33 00 “Submittal Procedures”.
- B. Shop Drawings: Show detailed plans of tile profile, fastener locations, and installation methods.

1.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Firm specializing in manufacturing products specified in this Section with a minimum 5 years experience.

1.6 REGULATORY REQUIREMENTS

- A. General: Provide detectable (tactile) warning products in accordance with CCR. Title 24, Part 1, 2010 California Administrative Code, Chapter 5 “Access to Public Buildings by Persons with Disabilities.”
1. Article 3 “Acceptance of Detectable Warning and Directional Surface Products for Manufacturers and Design Professionals.”
 2. Article 4 “Application for Independent Entity Evaluation Approval (IEEA).”
- B. Definition of Detectable Warning: Conform to 2010 California Building Code, Chapter 2 “Definitions,” Section 202 “Definitions.”
1. Chapter 11B “Accessibility to Public Buildings, Public Accommodations, Commercial Buildings and Publicly Funded Housing,” Section 1102B “Definitions” for detectable warning.
- C. Detectable Warnings for Site Accessibility: Provide detectable warning system in accordance with 2010 California Building Code, Chapter 11B, “Accessibility to Public Buildings, Public Accommodations, Commercial Buildings and Publicly Funded Housing,” and ADAAG as applicable.
1. Detectable Warnings at Curb Ramps: Chapter 11B, Section 1127B “Exterior Routes of Travel,” Article 1127B.5.7 “Detectable Warnings.”
 2. Detectable Warnings at Hazardous Vehicular Areas: Chapter 11B, Section 1133B “General Accessibility for Entrances, Exits and Paths of Travel,” Article 1133B.8.5 “Detectable Warnings at Hazardous Vehicular Areas.”

1.7 DELIVERY, STORAGE AND HANDLING

- A. Deliver, store and handle packaged products in original containers with seals unbroken and labels intact until the time of installation.
- B. Store delivered products in a clean, safe, dry area.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Basis-of Design Product: Armor-tile by Engineered Plastics Inc., Williamsville, NY; 800-682-2525, <http://www.armor-tile.com>.

1. Provide Cast-In-Place Type Armor-Tile for embedding in cast-in-place uncured (wet) concrete.
 2. ADA Solutions, Inc., Cast-in-Place type.
 3. Or accepted equal
- B. Substitutions: Under provisions of Section 01 60 00, "Product Requirements".

2.2 MATERIALS

- A. Tactile Warning Tiles: An epoxy polymer composite with an ultraviolet stabilized coating containing aluminum oxide particles in the truncated domes.
1. Cast-In-Place Type Tile for Embedding in Cast-In-Place Uncured (Wet) Concrete:
 - a. Tile thickness to be 0.3875 inch at domes and 0.1875 inch in flat areas between domes. Total thickness at perimeter to be 1.375 inches; dome height to be 0.20 inch.
 - b. Tile underside to have embedment flanges with 0.625-inch diameter holes; long sides to have 0.1875-inch diameter vent holes.
 - c. Tile to have sound amplifying plastic plates attached between flanges, with an air space between tile bottom surface and sound amplifying plastic plates.
 - d. Tile face to have non-slip texture.
- B. Color and Size:
1. Safety Yellow, (Federal Color #33538) colorfast, UV stabilized coating. Color shall be uniform throughout the tile.
 2. Sizes: As indicated on Drawings.
- C. Performance Requirements: Tactile warning tiles shall meet or exceed the following criteria:
1. Water Absorption: 0.05 percent, maximum, when tested in accordance with ASTM D570.
 2. Slip Resistance: 0.80, minimum combined wet/dry static coefficient of friction on top of domes and field area, when tested in accordance with ASTM C1028.
 3. Compressive Strength: 28,000 psi, minimum, when tested in accordance with ASTM D695.
 4. Tensile Strength: 19,000 psi, minimum, when tested in accordance with ASTM D638.
 5. Flexural Strength: 25,000 psi, minimum, when tested in accordance with ASTM C293.
 6. Gardner Impact: 550 inch-pounds per inch minimum, when tested in accordance with ASTM D5420.
 7. Chemical Stain Resistance: No discoloration or staining when exposed to 10 percent hydrochloric acid, urine, saturated calcium chloride, black stamp pad ink, chewing gum, red aerosol paint, 10 percent ammonium hydroxide, 1 percent soap solution, turpentine, 5 percent Urea, diesel fuel, motor oil, and tested in accordance with ASTM D543.
 8. Wear Depth: 0.06 inch, maximum, after 1000 abrasion cycles of 40 grit Norton Metallite sandpaper, tested in accordance with ASTM D2486.
 9. Flame Spread: 15 maximum, when tested in accordance with ASTM E84.
 10. Accelerated Weathering: No deterioration, fading or chalking, when tested for 3,000 hours in accordance with ASTM G155.
 11. Accelerated Aging and Freeze Thaw Test of Tile and Adhesive System: No cracking, delamination, warping, checking, blistering, color change, loosening of tiles, or other detrimental defects, when tested in accordance with ASTM D1037.

12. Salt and Spray Performance: No evidence of deterioration or defects after 200 hours of exposure, when tested in accordance with ASTM B117.
13. AASHTO HB-17 Single Wheel HS20-44 Loading Test for Cast-In-Place Type Tile: Mounted on concrete platform with 1/2 inch air space at the underside of tile and subjected to a maximum load of 10,400 pounds, corresponding to 8000 pound individual wheel load and 30 percent impact factor; no visible damage at maximum loading.

PART 3 EXECUTION

3.1 INSTALLATION

- A. Install tactile warning surface tiles in accordance with manufacturer's printed instructions.
- B. Install Cast-In-Place Type tiles over cast-in-place, uncured (wet) concrete.
- C. Ensure that the surfaces being prepared and fabricated to receive the tiles are constructed correctly and adequately for tile installation.
- D. Installation in Cast-In-Place Uncured (Wet) Concrete: Maintain concrete in 4 inch to 7 inch slump range. Lay tactile warning surface tiles (without removing protective plastic wrap) in uncured (wet) concrete and tamp each tile in place. Place weights over tiles to prevent floating, as recommended by the manufacturer. After curing, remove protective plastic wrap, and clean tile surfaces.

END OF SECTION 32 17 26