



Website:
<http://beaumontca.gov/>

Address:
550 E. 6th Street
Beaumont, CA 92223

Phone:
951.769.8520

REQUEST FOR BID FOR: CIP F-03 CITY HALL ADA RAMPS

CRITICAL BID DATES, TIMES, & LOCATIONS

Bid Published:	February 14, 2024
Mandatory Pre-Bid Meeting	February 28, 2024 @ 11:00 A.M. 550 E. Sixth Street (City Hall) Room 4
Bids Must Be Received By:	March 28, 2024 @ 11:00 A.M.
Place Of Bid Receipt:	550 E. Sixth Street (City Hall)
Questions In By:	March 7, 2024 @ 11:00 A.M.
Bid Opening Date:	March 28, 2024 @ 11:15 A.M.
Bid Opening Location:	550 E. Sixth Street (City Hall), Room 4

CONTACTS:

Robert Vestal
Director of Public Works
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Dustin Christensen
Principal Engineer
dchristensen@beaumontca.gov

RFB AVAILABLE:

WWW.PUBLICPURCHASE.COM
[HTTPS://WWW.BEAUMONTCA.GOV/949/BIDS-AND-RFPs](https://www.beaumontca.gov/949/BIDS-AND-RFPs)



**CITY OF BEAUMONT
CALIFORNIA
PUBLIC WORKS DEPARTMENT
CONTRACT DOCUMENTS & SPECIFICATIONS
FOR:
CIP F-03 City Hall ADA Ramps**

Prepared Under the Supervision of:

Robert Vestal, P.E., Public Works Director/City Engineer

Date



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NOTICE INVITING BIDS

The City of Beaumont, Public Works Department (“City”) is soliciting bids for:

CIP F-03 City Hall ADA Ramps

BID DATES, TIMES, & LOCATIONS:

Bid Published:	February 14, 2024
Mandatory Pre-Bid Meeting	February 28, 2024 @ 11:00 AM 550 E. Sixth Street (City Hall), Room 4
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Bid Opening Location:	550 E. Sixth Street (City Hall), Room 4 Beaumont, CA 92223

Bids received after this time will be discarded. Bids shall be valid for 60 calendar days after the bid opening date. Bids must be submitted on the City’s Bid Forms. Bids must be prepared on the approved Bid forms and in the manner prescribed in the Instructions to Bidders. Bids must be submitted with the following subject:

“CIP F-03 City Hall ADA Ramps”

LOCATION OF WORK:

The work to be completed is located in the City of Beaumont at 550 E 6th Street, at City Hall.

DESCRIPTION OF WORK:

The proposed work shall be performed in accordance with the Contract; General, Special, and technical Specifications and Drawings.

In general, the work includes removal and replacement of three ADA Access Ramps at City Hall.

CONTRACT LENGTH:

The work for this contract shall not exceed 90 calendar days. Contract time shall commence based on the contractor’s lead time of construction material. Appliances are excluded from contract time commencement negotiations.

AWARD OF CONTRACT:

The City shall award the Contract for the Project to the lowest responsive, responsible bidder as determined from the base bid. The City reserves the right to reject any or all bids or to waive any irregularities or informalities in any bids or in the bidding process.

NOTICE INVITING BIDS



FEDERAL FUNDING:

This Project is partially funded through an agreement with the County of Riverside for American Rescue Plan Act (ARPA) funds awarded to the County by the U.S. Department of Treasury. This Project is subject to federal provisions pursuant to 2 CFR 200 including, but not limited to, Davis-Bacon and Related Acts (DBRA) prevailing wages; Disadvantaged Business Enterprises (2 CFR 200.321); Domestic Preference for Procurement (2 CFR 200.322); and others. Information pertaining to these, and other Federal Special Provisions are included in the Bid Specifications. The successful Bidder shall be required to comply with all federal and state requirements subject to this Project.

CONTRACT DOCUMENTS AND SPECIFICATION:

Copies of the Contract Documents and Specification are available for inspection at no cost to the bidder at City Hall. The documents can also be downloaded from the City's Website (<https://www.beaumontca.gov>) and WWW.PUBLICPURCHASE.COM and reviewed at no cost.

BID & BIDDER:

Bids must be accompanied by cash, a certified or cashier's check, or a Bid Bond in favor of the City in an amount not less than ten percent (10%) of the submitted Total Bid Price.

Each bid shall be accompanied by the security referred to in the Contract Documents, the non-collusion affidavit, the list of proposed subcontractors, and all additional documentation required by the Instructions to Bidders.

The successful bidder will be required to furnish the City with a Performance Bond equal to 100% of the successful bid, and a Payment (Labor and Materials) Bond equal to 100% of the successful bid, prior to execution of the Contract. All bonds are to be secured from a surety that meets all of the State of California bonding requirements, as defined in Code of Civil Procedure Section 995.120, and is admitted by the State of California.

Each bidder shall be a licensed contractor pursuant to the Business and Professions Code and shall be licensed in the following appropriate classification(s) of contractor's license(s), for the work bid upon, and must maintain the license(s) throughout the duration of the Contract:

- California Class "B" license

FOR FURTHER INFORMATION CONTACT:

Public Works Department

Tel: (951) 769-8520

E-mail: dchristensen@beaumontca.gov

INSTRUCTIONS TO BIDDERS

AVAILABILITY OF CONTRACT DOCUMENTS:

Bids must be submitted to the City on the Bid Forms which are a part of the Bid Package for the Project. Prospective bidders may obtain one (1) complete set of Contract Documents at no cost. Contract Documents may be obtained from the City at the location(s) and at the time(s) indicated in the Notice Inviting Bids. Prospective bidders are encouraged to telephone in advance to determine the availability of Contract Documents. Any applicable charges for the Contract Documents are outlined in the Notice Inviting Bids. The City may also make the Contract Documents available for review at one or more plan rooms, as indicated in the Notice Inviting Bids. Please Note: Prospective bidders who choose to review the Contract Documents at a plan room must contact the City to obtain the required Contract Documents if they decide to submit a bid for the Project.

EXAMINATION OF CONTRACT DOCUMENTS:

The City has made copies of the Contract Documents available, as indicated above. Bidders shall be solely responsible for examining the Project Site and the Contract Documents, including any Addenda issued during the bidding period, and for informing itself with respect to local labor availability, means of transportation, necessity for security, laws and codes, local permit requirements, wage scales, local tax structure, contractors' licensing requirements, availability of required insurance, and other factors that could affect the Work. Bidders are responsible for consulting the standards referenced in the Contract. Failure of Bidder to so examine and inform itself shall be at its sole risk, and no relief for error or omission will be given except as required under State law.

INTERPRETATION OF CONTRACT DOCUMENTS

Discrepancies in, and/or omissions from the Plans, Specifications or other Contract Documents or questions as to their meaning shall be immediately brought to the attention of the City by submission of a written request for an interpretation or correction to the City. Such submission, if any, must be sent to the Project Manager by faxing (951)769-8520 or emailing to dchristensen@beaumontca.gov. Any interpretation of the Contract Documents will be made only by written addenda duly issued and mailed or delivered to each person or firm who has purchased a set of Contract Documents. The City will not be responsible for any explanations or interpretations provided in any other manner. No person is authorized to make any oral interpretation of any provision in the Contract Documents to any bidder, and no bidder should rely on any such oral interpretation. Bids shall include complete compensation for all items that are noted in the Contract Documents as the responsibility of the Contractor.

INSPECTION OF SITE:

Each prospective bidder is responsible for fully acquainting itself with the conditions of the Project Site (which may include more than one site), as well as those relating to the



construction and labor of the Project, to fully understand the facilities, difficulties and restrictions which may impact the cost or effort required to complete the Project.

ADDENDA:

The City reserves the right to revise the Contract Documents prior to the bid opening date. Revisions, if any, shall be made by written Addenda. All addenda issued by the City shall be included in the bid and made part of the Contract Documents. Pursuant to Public Contract Code Section 4104.5, if the City issues an Addendum which includes material changes to the Project less than 72 hours prior to the deadline for submission of bids, the City will extend the deadline for submission of bids. The City may determine, in its sole discretion, whether an Addendum warrants postponement of the bid submission date. Each prospective bidder shall provide City a name, address and facsimile number to which Addenda may be sent, as well as a telephone number by which the City can contact the bidder. Copies of Addenda will be furnished by facsimile, first class mail, express mail or other proper means of delivery without charge to all parties who have obtained a copy of the Contract Documents and provided such current information. Please Note: Bidders are responsible for ensuring that they have received any and all Addenda. To this end, each bidder should contact the Public Works Department to verify that he has received all Addenda issued, if any, prior to the bid opening.

ALTERNATE BIDS

If alternate bid items are called for in the Contract Documents, the lowest bid will be determined on the basis of the base bid only. However, the City may choose to award the contract on the basis of the base bid alone or the base bid and any alternate or combination of alternates. The time required for completion of the alternate bid items has been factored into the Contract duration and no additional Contract time will be awarded for any of the alternate bid items. The City may elect to include one or more of the alternate bid items, or to otherwise remove certain work from the Project scope of work, accordingly each Bidder must ensure that each bid item contains a proportionate share of profit, overhead and other costs or expenses which will be incurred by the Bidder.

COMPLETION OF BID FORMS

Bids shall only be prepared using copies of the Bid Forms which are included in the Contract Documents. The use of substitute bid forms other than clear and correct photocopies of those provided by the City will not be permitted. Bids shall be executed by an authorized signatory as described in these Instructions to Bidders. In addition, Bidders shall fill in all blank spaces (including inserting "N/A" where applicable) and initial all interlineations, alterations, or erasures to the Bid Forms. Bidders shall neither delete, modify, nor supplement the printed matter on the Bid Forms nor make substitutions thereon. **USE OF BLACK OR BLUE INK, INDELIBLE PENCIL, COMPUTER OR A TYPEWRITER IS REQUIRED.** Deviations in the bid form may result in the bid being deemed non-responsive.



MODIFICATIONS OF BIDS:

Each Bidder shall submit its Bid in strict conformity with the requirements of the Contract Documents. Unauthorized additions, modifications, revisions, conditions, limitations, exclusions or provisions attached to a Bid may render it non-responsive and may cause its rejection. Bidders shall neither delete, modify, nor supplement the printed matter on the Bid Forms, nor make substitutions thereon. Oral, telephonic and electronic modifications will not be considered, unless the Notice Inviting Bids authorizes the submission of electronic bids and modifications thereto and such modifications are made in accordance with the Notice Inviting Bids.

DESIGNATION OF SUBCONTRACTORS:

Pursuant to the funding regulation, the Bidders must designate the name and location of each subcontractor who will perform work or render services in an amount in excess of one-half of 1 percent of the prime contractor's total bid as well as the portion of work each such subcontractor will perform on the form provided herein by the City. No additional time will be provided to bidders to submit any of the requested information in the Designation of Subcontractor form.

LICENSING REQUIREMENTS:

Pursuant to Section 7028.15 of the Business and Professions Code and Section 3300 of the Public Contract Code, all bidders must possess proper licenses for performance of this Contract. Subcontractors must possess the appropriate licenses for each specialty subcontracted. Pursuant to Section 7028.5 of the Business and Professions Code, the City shall consider any bid submitted by a contractor not currently licensed in accordance with state law and pursuant to the requirements found in the Contract Documents to be nonresponsive, and the City shall reject the Bid. The City shall have the right to request, and Bidders shall provide within five (5) calendar days, evidence satisfactory to the City of all valid license(s) currently held by that Bidder and each of the Bidder's subcontractors, before awarding the Contract. Please also note that, pursuant to Public Contract Code Section 20676, sellers of "mined material" must be on an approved list of sellers published pursuant to Public Resources Code Section 2717(b) in order to supply mined material for this Contract.

SIGNING OF BIDS:

All Bids submitted shall be executed by the Bidder or its authorized representative. Bidders may be asked to provide evidence in the form of an authenticated resolution of its Board of Directors or a Power of Attorney evidencing the capacity of the person signing the Bid to bind the Bidder to each Bid and to any Contract arising therefrom. If a Bidder is a joint venture or partnership, it may be asked to submit an authenticated Power of Attorney executed by each joint venturer or partner appointing and designating one of the joint venturers or partners as a management sponsor to execute the Bid on behalf of Bidder. Only that joint venturer or partner shall execute the Bid. The Power of Attorney shall also: (1) authorize that particular joint venturer or partner to act for and bind Bidder in all matters relating to the Bid; and (2) provide that each venturer or partner shall be



jointly and severally liable for any and all of the duties and obligations of Bidder assumed under the Bid and under any Contract arising therefrom. The Bid shall be executed by the designated joint venturer or partner on behalf of the joint venture or partnership in its legal name.

BID GUARANTEE (BOND):

Each bid shall be accompanied by: (a) cash; (b) a certified check made payable to the City; (c) a cashier's check made payable to the City; or (d) a bid bond payable to the City executed by the bidder as principal and surety as obligor in an amount not less than 10% of the maximum amount of the bid. Personal sureties and unregistered surety companies are unacceptable. The surety insurer shall be California admitted surety insurer, as defined in Code of Civil Procedure Section 995.120. The cash, check or bid bond shall be given as a guarantee that the bidder shall execute the Contract if it be awarded to the bidder, shall provide the payment and performance bonds and insurance certificates and endorsements as required herein within ten (10) calendar days after notification of the award of the Contract to the bidder. Failure to provide the required documents may result in forfeiture of the bidder's bid deposit or bond to the City and the City may award the Contract to the next lowest responsive, responsible bidder, or may call for new bids.

SUBMISSION OF BIDS:

Once the Bid and supporting documents have been completed and signed as set forth herein, they shall be mailed or hand delivered to the City at the place and to the attention of the person indicated in the Notice Inviting Bids. No oral or telephonic bids will be considered. No forms transmitted via facsimile, or any other electronic means will be considered unless specifically authorized by City as provided herein.

Only where expressly permitted in the Notice Inviting Bids, may Bidders submit their bids via electronic transmission pursuant to Public Contract Code Sections 1600 and 1601. The acceptable method(s) of electronic transmission shall be stated in the Notice Inviting Bids. City reserves the right to not accept electronically transmitted bids where not specifically authorized in the Notice Inviting Bids, and may reject any bid not strictly complying with City's designated methods for delivery.

DELIVERY AND OPENING OF BIDS

Bids will be received by the City at the address shown in the Notice Inviting Bids up to the date and time shown therein. It is the Bidder's sole responsibility to ensure that its Bid is received as specified. Bids may be submitted earlier than the dates(s) and time(s) indicated.

Bids will be opened at the date and time stated in the Notice Inviting Bids, and the amount of each Bid will be read aloud and recorded. All Bidders may, if they desire, attend the opening of Bids at the address specified in the NIB. The City may in its sole discretion, elect to postpone the opening of the submitted Bids. City reserves the right to reject any or all Bids and to waive any informality or irregularity in any Bid. In the event of a discrepancy between the written amount of the Bid Price and the numerical amount of the

INSTRUCTIONS TO BIDDERS



Bid Price, the written amount shall govern.

WITHDRAWAL OF BID:

Prior to bid opening, a Bid may be withdrawn by the Bidder only by means of a written request signed by the Bidder or its properly authorized representative.

BASIS OF AWARD; BALANCED BIDS:

The City shall award the Contract to the lowest responsive, responsible Bidder submitting a responsive Bid. The City may reject any Bid which, in its opinion when compared to other bids received or to the City's internal estimates, does not accurately reflect the cost to perform the Work. The City may reject as non-responsive any bid which unevenly weights or allocates costs, including but not limited to overhead and profit to one or more particular bid items.

DISQUALIFICATION OF BIDDERS; INTEREST IN MORE THAN ONE BID:

No bidder shall be allowed to make, submit or be interested in more than one bid. However, a person, firm, corporation or other entity that has submitted a subproposal to a bidder, or that has quoted prices of materials to a bidder, is not thereby disqualified from submitting a subproposal or quoting prices to other bidders submitting a bid to the City. No person, firm, corporation, or other entity may submit subproposal to a bidder, or quote prices of materials to a bidder, when also submitting a prime bid on the same Project.

INSURANCE REQUIREMENTS:

The successful bidder shall procure the insurance in the form and in the amount specified in the Contract Documents.

AWARD PROCESS:

Once all Bids are opened and reviewed to determine the lowest responsive and responsible Bidder, the City Council may award the contract. The apparent successful Bidder should begin to prepare the following documents: (1) the Performance Bond; (2) the Payment (Labor and Materials) Bond; and (3) the required insurance certificates and endorsements. Once the City notifies the Bidder of the award, the Bidder will have ten (10) consecutive calendar days from the date of this notification to execute the Contract and supply the City with all of the required documents and certifications. Regardless whether the Bidder supplies the required documents and certifications in a timely manner, the Contract time will begin to run ten (10) calendar days from the date of the notification. Once the City receives all of the properly drafted and executed documents and certifications from the Bidder, the City shall issue a Notice to Proceed to that Bidder.

FILING OF BID PROTESTS

Bidders may file a "protest" of a Bid with the City's City Engineer. In order for a Bidder's protest to be considered valid, the protest must:

- Be filed in writing within five (5) calendar days after the bid opening date;
- Clearly identify the specific irregularity or accusation;

INSTRUCTIONS TO BIDDERS



- Clearly identify the specific City staff determination or recommendation being protested;
- Specify, in detail, the grounds of the protest and the facts supporting the protest; and
- Include all relevant, supporting documentation with the protest at time of filing.

If the protest does not comply with each of these requirements, it will be rejected as invalid. If the protest is valid, the City's City Engineer, or other designated City staff member, shall review the basis of the protest and all relevant information. The City Engineer will provide a written decision to the protestor. The protestor may then appeal the decision of the City Engineer to the City Manager.

WORKERS COMPENSATION:

Each bidder shall submit the Contractor's Certificate Regarding Workers' Compensation form.

SUBSTITUTION OF SECURITY:

The Contract Documents call for monthly progress payments based upon the percentage of the work completed. The City will retain five percent (5%) of each progress payment as provided by the Contract Documents. At the request and expense of the successful Bidder, the City will substitute securities for the amount so retained in accordance with Public Contract Code Section 22300.

PREVAILING WAGES:

Pursuant to Section 1773 of the Labor Code, the general prevailing wage rates, including the per diem wages applicable to the work, and for holiday and overtime work, including employer payments for health and welfare, pension, vacation, and similar purposes, in the County of Riverside in which the work is to be done, have been determined by the Director of the Department of Industrial Relations, State of California. These wages are set forth in the General Prevailing Wage Rates for this project, available from the California Department of Industrial Relations' Internet web site at www.dir.ca.gov. Future effective prevailing wage rates which have been predetermined, and are on file with the California Department of Industrial Relations, are referenced but not printed in the general prevailing wage rates. Pursuant to SB 854, which amended the Prevailing Wage Laws, this Contract is subject to compliance monitoring and enforcement by the DIR. Beginning March 1, 2015, with very limited exceptions, no contractor or subcontractor may be listed on a bid proposal for this Contract unless registered with the DIR pursuant to Labor Code section 1725.5. Beginning April 1, 2015, no contractor or subcontractor may be awarded this Contract unless registered with the DIR pursuant to Labor Code section 1725.5. The DIR registration number for each contractor and subcontractor must be identified on the bid proposal - failure to identify this number could result in the bid being rejected as non-responsive. It is each bidder's responsibility to ensure that they have fully complied with SB 854. The City will report all necessary contracts to the DIR as required by the Prevailing Wage Laws.



DEBARMENT OF CONTRACTORS AND SUBCONTRACTORS:

In accordance with the provisions of the Labor Code, contractors or subcontractors may not perform work on a public works project with a subcontractor who is ineligible to perform work on a public project pursuant to Section 1777.1 or Section 1777.7 of the Labor Code. Any contract on a public works project entered into between a contractor and a debarred subcontractor is void as a matter of law. A debarred subcontractor may not receive any public money for performing work as a subcontractor on a public works contract. Any public money that is paid to a debarred subcontractor by the Contractor for the Project shall be returned to the City. The Contractor shall be responsible for the payment of wages to workers of a debarred subcontractor who has been allowed to work on the Project.

PERFORMANCE AND PAYMENT BOND REQUIREMENTS:

Within the time specified in the Contract Documents, the Bidder to whom a Contract is awarded shall deliver to the City four identical counterparts of the Performance Bond and Payment (Labor and Materials) Bond in the form supplied by the City and included in the Contract Documents. Failure to do so may, in the sole discretion of City, result in the forfeiture of the Bid Guarantee. The surety supplying the bond must be an admitted surety insurer, as defined in Code of Civil Procedure Section 995.120, authorized to do business as such in the State of California and satisfactory to the City. The Performance Bond and the Payment (Labor and Materials) Bond shall be for one hundred percent (100%) of the Total Bid Price.

REQUEST FOR SUBSTITUTIONS

The successful bidder shall comply with the substitution request provisions set forth in the Special Conditions, including any deadlines for substitution requests which may occur prior to the bid opening date.

SALES AND OTHER APPLICABLE TAXES, PERMITS, LICENSES AND FEES

Contractor and its subcontractors performing work under this Contract will be required to pay California sales tax and other applicable taxes, and to pay for permits, licenses and fees required by the agencies with authority in the jurisdiction in which the work will be located, unless otherwise expressly provided by the Contract Documents.

EXECUTION OF CONTRACT

As required herein the Bidder to whom an award is made shall execute the Contract in the amount determined by the Contract Documents. The City may require appropriate evidence that the persons executing the Contract are duly empowered to do so.

END OF INSTRUCTIONS TO BIDDERS

INSTRUCTIONS TO BIDDERS



BID FORM

NAME OF BIDDER: _____

The undersigned, hereby declare that we have carefully examined the location of the proposed Work, and have read and examined the Contract Documents, including all plans, specifications, and all addenda, if any, for the following Project:

CIP F-03 City Hall ADA Ramps

We hereby propose to furnish all labor, materials, equipment, tools, transportation, and services, and to discharge all duties and obligations necessary and required to perform and complete the Project for the following BASE BID TOTAL BID PRICE:

BASE BID	BASE BID PRICE (IN WRITTEN FORM)	BID PRICE (IN NUMBERS)
TOTAL BID PRICE		

In case of discrepancy between the written price and the numerical price, the written price shall prevail.



BASE BID
BID SCHEDULE
CIP F-03 City Hall ADA Ramps

ITEM NO.	DESCRIPTION OF ITEMS	EST. QUANTITY/UNIT		UNIT PRICE (FIGURES)	TOTAL COST (FIGURES)
1	Bond, Insurance, General Requirements, & Mobilization	1	LS		
2	Selective Demolition and Disposal including hazardous material abatement	1	LS		
3	Furnish and Install new ADA access ramps, including all form work, concrete, thermal and moisture protection, relocation of drainage and downspouts, metal fabrication of handrails and railings, and all associated work as provided in the contract drawings and these specifications, complete and in place.	1	LS		
PROJECT BASE BID SUBTOTAL:					

In case of discrepancy between the unit price and the item cost set forth for a unit basis item, the unit price shall prevail and, shall be utilized as the basis for determining the lowest responsive, responsible bidder. However, if the amount set forth as a unit price is ambiguous, unintelligible or uncertain for any cause, or is omitted, or is the same amount as the entry in the "Item Cost" column, then the amount set forth in the "Item Cost" column for the item shall prevail and shall be divided by the estimated quantity for the item and the price thus obtained shall be the unit price. Final payment shall be determined by the Engineer from measured quantities of work performed based upon the unit price.

In case of discrepancy between the written price and the numerical price, the written price shall prevail.



BID CERTIFICATION

Bidder certifies that it is licensed in accordance with the law providing for the registration of Contractors,

License No. _____

Expiration Date _____

Class of license _____

If the bidder is a joint venture, each member of the joint venture must include the above information.

The undersigned acknowledges receipt, understanding and full consideration of the following addenda to the Contract Documents:

1. Addenda No. _____ thru _____
2. Attached is the required bid security in the amount of not less than 10% of the Total Bid Price.
3. Attached is the fully executed Non-Collusion Affidavit form.
4. Attached is the completed Designation of Subcontractors form.
5. Attached is the completed Bidder Information Form.
6. Attached is the completed Contractor's Certificate Regarding Workers' Compensation form.

Bidder acknowledges and understands that, pursuant to Public Contract Code Section 20676, sellers of "mined material" must be on an approved list of sellers published pursuant to Public Resources Code Section 2717(b) in order to supply mined material for this Contract.

I hereby certify under penalty of perjury under the laws of the State of California, that all of the information submitted in connection with this Bid and all of the representations made herein are true and correct.

Name of Bidder _____

Signature _____

Name and Title _____

Dated _____



**CONTRACTOR'S CERTIFICATE REGARDING
WORKERS' COMPENSATION**
CIP F-03 City Hall ADA Ramps

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

Name of Bidder _____

Signature _____

Name and Title _____

Dated _____



BID BOND
CIP F-03 City Hall ADA Ramps

The makers of this bond are,

as Principal, and

, as Surety

and are held and firmly bound unto the City of Beaumont, hereinafter called the City, in the penal sum of TEN PERCENT (10%) OF THE TOTAL BID PRICE of the Principal submitted to CITY for the work described below, for the payment of which sum in lawful money of the United States, well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH that whereas the Principal has submitted the accompanying bid dated _____, 2024, for

CIP F-03 Ramp Replacement.

If the Principal does not withdraw its bid within the time specified in the Contract Documents; and if the Principal is awarded the Contract and provides all documents to the City as required by the Contract Documents; then this obligation shall be null and void. Otherwise, this bond will remain in full force and effect.

Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract Documents shall in affect its obligation under this bond, and Surety does hereby waive notice of any such changes.

In the event a lawsuit is brought upon this bond by the City and judgment is recovered, the Surety shall pay all litigation expenses incurred by the City in such suit, including reasonable attorneys' fees, court costs, expert witness fees and expenses.



IN WITNESS WHEREOF, the above-bound parties have executed this instrument under their several seals this _____ day of _____, 2024, the name and corporate seal of each corporation.

(Corporate Seal)

Principal

By

Title

(Corporate Seal)

Surety

By

Attorney-in-Fact

(Attach Attorney-in-Fact Certificate)

Title



DESIGNATION OF SUBCONTRACTORS

CIP F-03 City Hall ADA Ramps

In compliance with the Subletting and Subcontracting Fair Practices Act of the Public Contract Code of the State of California, each bidder shall set forth below: the name, the location of the place of business, the California contractor license number, and public works contractor registration number issued of each subcontractor who will perform work or labor or render service to the prime contractor in or about the construction of the work or improvement, or a subcontractor licensed by the State of California who, under subcontract to the prime contractor, specially fabricates and installs a portion of the work or improvement according to detailed drawings contained in the plans and specifications, in an amount in excess of one-half of 1 percent of the prime contractor's total bid.

Portion of the Work	Subcontractor	Location of Business	License Number.	Public Works Contractor Registration Number	% of Work



Portion of the Work	Subcontractor	Location of Business	License Number.	Public Works Contractor Registration Number	% of Work

Name of Bidder _____

Signature _____

Name and Title _____

Dated _____

DESIGNATION OF SUBCONTRACTORS



INFORMATION REQUIRED OF BIDDERS

CIP F-03 City Hall ADA Ramps

A. INFORMATION ABOUT BIDDER

[**Indicate not applicable (“N/A”) where appropriate.**]

NOTE: Where Bidder is a joint venture, pages shall be duplicated and information provided for all parties to the joint venture.

1.0 Name of Bidder: _____

2.0 Type, if Entity: _____

3.0 Bidder Address: _____

Facsimile Number Telephone Number

4.0 License Information:

License No. Class of License Expiration Date

DIR Registration No.

5.0 How many years has Bidder’s organization been in business as a Contractor?

6.0 How many years has Bidder’s organization been in business under its present name? _____

5.1 Under what other or former names has Bidder’s organization operated?



7.0 If Bidder's organization is a corporation, answer the following:

7.1 Date of Incorporation: _____

7.2 State of Incorporation: _____

7.3 President's Name: _____

7.4 Vice-President's Name(s): _____

7.5 Secretary's Name: _____

7.6 Treasurer's Name: _____

8.0 If an individual or a partnership, answer the following:

8.1 Date of Organization:

8.2 Name and address of all partners (state whether general or limited partnership):

9.0 If other than a corporation or partnership, describe organization and name principals: _____

10.0 List other states in which Bidder's organization is legally qualified to do business.



11.0 What type of work does the Bidder normally perform with its own forces?

12.0 Has Bidder ever failed to complete any work awarded to it? If so, note when, where, and why:

13.0 Within the last five years, has any officer or partner of Bidder's organization ever been an officer or partner of another organization when it failed to complete a contract? If so, attach a separate sheet of explanation:

14.0 List Trade References:

15.0 List Bank References (Bank and Branch Address):



16.0 Name of Bonding Company and Name and Address of Agent:



D. EXPERIENCE AND TECHNICAL QUALIFICATIONS QUESTIONNAIRE

Personnel:

The Bidder shall identify the key personnel to be assigned to this project in a management, construction supervision or engineering capacity.

1. List each person's job title, name and percent of time to be allocated to this project:

2. Summarize each person's specialized education:

3. List each person's years of construction experience relevant to the project:

4. Summarize such experience:

Bidder agrees that personnel named in this Bid will remain on this Project until completion of all relevant Work, unless substituted by personnel of equivalent experience and qualifications approved in advance by the City.



Additional Bidder's Statements:

If the Bidder feels that there is additional information which has not been included in the questionnaire above, and which would contribute to the qualification review, it may add that information in a statement here or on an attached sheet, appropriately marked:

E. VERIFICATION AND EXECUTION

These Bid Forms shall be executed only by a duly authorized official of the Bidder:
I declare under penalty of perjury under the laws of the State of California that the foregoing information is true and correct:

Name of Bidder _____

Signature _____

Name and Title _____

Dated _____



NON-COLLUSION AFFIDAVIT

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I, _____, being first duly sworn, deposes and says that he is of _____ the party making the attached bid; that the bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the bid is genuine and not collusive or sham; that the bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; that the bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or 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 his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid.

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

Name of Bidder _____

Signature _____

Name and Title _____

Dated _____



PERFORMANCE BOND

KNOW ALL PERSONS BY THESE PRESENTS:

THAT WHEREAS, _____ (hereinafter referred to as "City") has awarded to _____, (hereinafter referred to as the "Contractor") _____ an agreement for _____ (hereinafter referred to as the "Project").

WHEREAS, the work to be performed by the Contractor is more particularly set forth in the Contract Documents for the Project dated _____, (hereinafter referred to as "Contract Documents"), the terms and conditions of which are expressly incorporated herein by reference; and

WHEREAS, the Contractor is required by said Contract Documents to perform the terms thereof and to furnish a bond for the faithful performance of said Contract Documents.

NOW, THEREFORE, we, _____, the undersigned Contractor and _____ as Surety, a corporation organized and duly authorized to transact business under the laws of the State of California, are held and firmly bound unto the City in the sum of _____ DOLLARS, (\$ _____), said sum being not less than one hundred percent (100%) of the total amount of the Contract, for which amount well and truly to be made, we bind ourselves, our heirs, executors and administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that, if the Contractor, his or its heirs, executors, administrators, successors or assigns, shall in all things stand to and abide by, and well and truly keep and perform the covenants, conditions and agreements in the Contract Documents and any alteration thereof made as therein provided, on its part, to be kept and performed at the time and in the manner therein specified, and in all respects according to their intent and meaning; and shall faithfully fulfill all obligations including the one-year guarantee of all materials and workmanship; and shall indemnify and save harmless the City, its officers and agents, as stipulated in said Contract Documents, then this obligation shall become null and void; otherwise it shall be and remain in full force and effect.

As a part of the obligation secured hereby and in addition to the face amount specified therefore, there shall be included costs and reasonable expenses and fees including reasonable attorney's fees, incurred by City in enforcing such obligation.

As a condition precedent to the satisfactory completion of the Contract Documents, unless otherwise provided for in the Contract Documents, the above obligation shall hold good for a period of one (1) year after the acceptance of the work by City, during which

time if Contractor shall fail to make full, complete, and satisfactory repair and replacements and totally protect the City from loss or damage resulting from or caused by defective materials or faulty workmanship. The obligations of Surety hereunder shall continue so long as any obligation of Contractor remains. Nothing herein shall limit the City's rights or the Contractor or Surety's obligations under the Contract, law or equity, including, but not limited to, California Code of Civil Procedure section 337.15.

Whenever Contractor shall be, and is declared by the City to be, in default under the Contract Documents, the Surety shall remedy the default pursuant to the Contract Documents, or shall promptly, at the City's option:

- (1) Take over and complete the Project in accordance with all terms and conditions in the Contract Documents; or
- (2) Obtain a bid or bids for completing the Project in accordance with all terms and conditions in the Contract Documents and upon determination by Surety of the lowest responsive and responsible bidder, arrange for a Contract between such bidder, the Surety and the City, and make available as work progresses sufficient funds to pay the cost of completion of the Project, less the balance of the contract price, including other costs and damages for which Surety may be liable. The term "balance of the contract price" as used in this paragraph shall mean the total amount payable to Contractor by the City under the Contract and any modification thereto, less any amount previously paid by the City to the Contractor and any other set offs pursuant to the Contract Documents.
- (3) Permit the City to complete the Project in any manner consistent with California law and make available as work progresses sufficient funds to pay the cost of completion of the Project, less the balance of the contract price, including other costs and damages for which Surety may be liable. The term "balance of the contract price" as used in this paragraph shall mean the total amount payable to Contractor by the City under the Contract and any modification thereto, less any amount previously paid by the City to the Contractor and any other set offs pursuant to the Contract Documents.

Surety expressly agrees that the City may reject any contractor or subcontractor which may be proposed by Surety in fulfillment of its obligations in the event of default by the Contractor.

Surety shall not utilize Contractor in completing the Project nor shall Surety accept a bid from Contractor for completion of the Project if the CITY, when declaring the Contractor in default, notifies Surety of the City's objection to Contractor's further participation in the completion of the Project.



The Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract Documents or to the Project to be performed thereunder shall in any way affect its obligations on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Contract Documents or to the Project.

[Remainder of Page Left Intentionally Blank.]



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

CONTRACTOR/PRINCIPAL

Name

By _____

SURETY:

By: _____
Attorney-In-Fact

The rate of premium on this bond is _____ per thousand. The total amount of
premium charges, \$_____.
(The above must be filled in by corporate attorney.)

THIS IS A REQUIRED FORM

Any claims under this bond may be addressed to:

(Name and Address of Surety) _____

(Name and Address of Agent or
Representative for service of
process in California, if different
from above) _____

(Telephone number of Surety and
Agent or Representative for service
of process in California) _____



PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS That

WHEREAS, the City of Beaumont (hereinafter designated as the "City"), by action taken or a resolution passed _____, 2024 has awarded to _____ hereinafter designated as the "Principal," a contract for the work described as follows:

_____ (the "Project"); and

WHEREAS, said Principal is required to furnish a bond in connection with said contract; providing that if said Principal or any of its Subcontractors shall fail to pay for any materials, provisions, provender, equipment, or other supplies used in, upon, for or about the performance of the work contracted to be done, or for any work or labor done thereon of any kind, or for amounts due under the Unemployment Insurance Code or for any amounts required to be deducted, withheld, and paid over to the Employment Development Department from the wages of employees of said Principal and its Subcontractors with respect to such work or labor the Surety on this bond will pay for the same to the extent hereinafter set forth.

NOW THEREFORE, we, the Principal and _____ as Surety, are held and firmly bound unto the City 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 if said Principal, his or its subcontractors, heirs, executors, administrators, successors or assigns, shall fail to pay any of the persons named in Section 3181 of the Civil Code, fail to pay for any materials, provisions or other supplies, used in, upon, for or about the performance of the work contracted to be done, or for any work or labor thereon of any kind, or amounts due under the Unemployment Insurance Code with respect to work or labor performed under the contract, or for any amounts required to be deducted, withheld, and paid over to the Employment Development Department or Franchise Tax Board from the wages of employees of the contractor and his subcontractors pursuant to Section 18663 of the Revenue and Taxation Code, with respect to such work and labor the Surety or Sureties will pay for the same, in an amount not exceeding the sum herein above specified, and also, in case suit is brought upon this bond, all litigation expenses incurred by the City in such suit, including reasonable attorneys' fees, court costs, expert witness fees and investigation expenses.

This bond shall inure to the benefit of any of the persons named in Section 3181 of the Civil Code so as to give a right of action to such persons or their assigns in any suit brought upon this bond.



It is further stipulated and agreed that the Surety on this bond shall not be exonerated or released from the obligation of this bond by any change, extension of time for performance, addition, alteration or modification in, to, or of any contract, plans, specifications, or agreement pertaining or relating to any scheme or work of improvement herein above described, or pertaining or relating to the furnishing of labor, materials, or equipment therefore, nor by any change or modification of any terms of payment or extension of the time for any payment pertaining or relating to any scheme or work of improvement herein above described, nor by any rescission or attempted rescission or attempted rescission of the contract, agreement or bond, nor by any conditions precedent or subsequent in the bond attempting to limit the right of recovery of claimants otherwise entitled to recover under any such contract or agreement or under the bond, nor by any fraud practiced by any person other than the claimant seeking to recover on the bond and that this bond be construed most strongly against the Surety and in favor of all persons for whose benefit such bond is given, and under no circumstances shall Surety be released from liability to those for whose benefit such bond has been given, by reason of any breach of contract between the owner or City and original contractor or on the part of any obligee named in such bond, but the sole conditions of recovery shall be that claimant is a person described in Section 3110 or 3112 of the Civil Code, and has not been paid the full amount of his claim and that Surety does hereby waive notice of any such change, extension of time, addition, alteration or modification herein mentioned.

IN WITNESS WHEREOF, two (2) identical counterparts of this instrument, each of which shall for all purposes be deemed unoriginal thereof, have been duly executed by the Principal and Surety above named, on the ____ day of _____ 20____ the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative pursuant to authority of its governing body.

(Corporate Seal of Principal,
if corporation)

Principal (Property Name of Contractor)

By _____
(Signature of Contractor)

(Seal of Surety)

Surety

By _____
Attorney in Fact

(Attached Attorney-In-Fact Certificate and Required Acknowledgements)

*Note: Appropriate Notarial Acknowledgments of Execution by Contractor and +surety and a power of Attorney MUST BE ATTACHED.



02 PUBLIC WORKS AGREEMENT

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03 GENERAL CONDITIONS

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04 SPECIAL CONDITIONS

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05 SPECIAL FEDERAL PROVISIONS

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06 TECHNICAL SPECIFICATIONS

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07 CONTRACT DRAWINGS

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08 APPENDICES

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**CITY OF BEAUMONT
PUBLIC WORKS AGREEMENT**

This PUBLIC WORKS AGREEMENT (“Agreement”) is made and effective April [REDACTED], 2024, by and between the City of Beaumont, a municipal corporation (“CITY”), and [REDACTED] (“CONTRACTOR”), a California Corporation. In consideration of the mutual covenants and conditions set forth herein, the parties agree as follows:

I. SCOPE OF WORK

The CONTRACTOR shall perform within the time set forth in Article 2 of this Agreement and shall furnish all labor, materials, equipment, tools, utility services, and transportation and perform and complete all work required in connection with the [REDACTED] (hereinafter “Project”). CONTRACTOR’s Bid, dated [REDACTED], 2024, is attached hereto as Exhibit A and incorporated herein by this reference. The Scope of Work for the Project is set forth in the Invitation. In the event that any terms of the Bid are different from the Invitation for Bids, the Invitation for Bids shall control. Any additional terms in the Bid that purport to bind the City to any additional terms not contained in this Agreement and related attachments shall not be binding on the City.

By entering into this Agreement, CONTRACTOR acknowledges that there may be other contractors on the site whose work will be coordinated with that of its own. CONTRACTOR expressly warrants and agrees that it will cooperate with other contractors and will do nothing to delay, hinder, or interfere with the work of other separate contractors, the CITY, the Construction Manager, the Engineer, or utilities. CONTRACTOR also expressly agrees that, in the event its work is hindered, delayed, interfered with, or otherwise affected by a separate contractor, its sole remedy will be a direct action against the separate contractor. To the extent allowed by law, the CONTRACTOR will have no remedy, and hereby expressly waives any remedy against the CITY, the Construction Manager (if any), and the Engineer on account of delay, hindrance, interference, or other events.

II. TIME FOR PROJECT COMPLETION

All of CONTRACTOR’s work on the Project shall be completed within durations established for the individual activities. All work shall commence ten (10) calendar days after receiving a written Notice of Award from the CITY or Construction Manager, if a Construction Manager is employed by CITY on the Project. CONTRACTOR shall refer to the invitations for bids, and Project Plans and Specifications, all of which, as set forth below, are incorporated herein by reference, for contractual obligations regarding individual activity durations.

III. THE CONTRACT SUM

The CITY shall pay to the CONTRACTOR for the performance of this Agreement, subject to any additions and deductions provided in the Project documents, the sum of [REDACTED] Dollars and [REDACTED] Cents (\$ [REDACTED]).

IV. PROGRESS PAYMENTS

Based upon Applications for Payment submitted to the Engineer by the CONTRACTOR and Certificates for Payment issued by the Engineer, the CITY shall make progress payments on account of the Contract Sum to the CONTRACTOR as provided in the General Conditions, which are fully incorporated into this Agreement by this reference.

This Agreement is subject to the provisions of Article 1.7 (commencing at Section 20104.50) of Division 2, Part 3 of the Public Contract Code regarding prompt payment of contractors by local governments. Article 1.7 mandates certain procedures for the payment of undisputed and properly submitted payment requests within 30 days after receipt, for the review of payment requests, for notice to Contractor of improper payment requests, and provides for the payment of interest on progress payment requests which are not timely made in accordance with that Article. This Agreement hereby incorporates the provisions of Article 1.7 as though fully set forth herein.

V. INDEMNITY, DEFENSE AND HOLD HARMLESS AGREEMENT

CONTRACTOR shall indemnify, defend with legal counsel approved by CITY, and hold harmless CITY, its officers, officials, employees and volunteers from and against all liability, loss, damage, expense, cost (including without limitation reasonable legal counsel fees, expert fees and all other costs and fees of litigation) of every nature arising out of or in connection with CONTRACTOR's negligence, recklessness or willful misconduct in the performance of work hereunder or its failure to comply with any of its obligations contained in this Agreement, except such loss or damage which is caused by the sole or active negligence or willful misconduct of the CITY. Should conflict of interest principles preclude a single legal counsel from representing both CITY and CONTRACTOR, or should CITY otherwise find CONTRACTOR's legal counsel unacceptable, then CONTRACTOR shall reimburse the CITY its costs of defense, including without limitation reasonable legal counsels fees, expert fees and all other costs and fees of litigation. The CONTRACTOR shall promptly pay any final judgment rendered against the CITY (and its officers, officials, employees and volunteers) with respect to claims determined by a trier of fact to have been the result of the CONTRACTOR's negligent, reckless or wrongful performance. It is expressly understood and agreed that the foregoing provisions

are intended to be as broad and inclusive as is permitted by the law of the State of California and will survive termination of this Agreement.

CONTRACTOR obligations under this section apply regardless of whether or not such claim, charge, damage, demand, action, proceeding, loss, stop notice, cost, expense, judgment, civil fine or penalty, or liability was caused in part or contributed to by an Indemnitee. However, without affecting the rights of CITY under any provision of this agreement, CONTRACTOR shall not be required to indemnify and hold harmless CITY for liability attributable to the active negligence of CITY, provided such active negligence is determined by agreement between the parties or by the findings of a court of competent jurisdiction. In instances where CITY is shown to have been actively negligent and where CITY active negligence accounts for only a percentage of the liability involved, the obligation of CONTRACTOR will be for that entire portion or percentage of liability not attributable to the active negligence of CITY.

VI. PREVAILING WAGES

- A. Contractor shall comply with all applicable laws and regulations relating to prevailing wages. Wage rates for this Project shall be in accordance with the “General Wage Determination Made By the Director of Industrial Relations Pursuant To California Labor Code, Part 7, Chapter 1, Article 2, Sections 1770, 1773 and 1773.1”, for Riverside County. Wage rates shall conform with those posted at Beaumont City Hall and the Project site.
- B. The following Labor Code sections are hereby referenced and made a part of this Agreement:
 - 1. Section 1775 - Penalty for Failure to Comply with Prevailing Wage Rates.
 - 2. Section 1777.4 - Apprenticeship Requirements.
 - 3. Section 1777.5 - Apprenticeship Requirements.
 - 4. Section 1813 - Penalty for Failure to Pay Overtime.
 - 5. Sections 1810 and 1811 - Working Hour Restrictions.
 - 6. Section 1775 - Payroll Records.
 - 7. Section 1773.8 - Travel and Subsistence Pay.

VII. RECORD AUDIT

In accordance with Government Code, Section 8546.7, records of both the CITY and the CONTRACTOR shall be subject to examination and audit by the Auditor General for a period of three (3) years after final payment.

VIII. FINAL PAYMENT

Final payment, constituting the entire unpaid balance of the Agreement Sum, shall be paid by the CITY to the CONTRACTOR no sooner than thirty-five (35) days after a Notice of Completion has been recorded, unless otherwise stipulated in the Notice of Completion, provided the work has then been completed, the Agreement fully performed, and a final Certificate for Payment has been issued by the Engineer.

IX. CONTRACTOR'S FAILURE TO PROCURE COMPLETION OF PROJECT

In the event CONTRACTOR fails to furnish tools, equipment, or labor in the necessary quantity or quality, or fails to prosecute the work or any part thereof contemplated by this Agreement in a diligent and workmanlike manner, and if the CONTRACTOR for a period of three (3) calendar days after receipt of written demand from CITY or its designated representative to do so, fails to furnish tools, equipment, or labor in the necessary quantity or quality, and to prosecute its work and all parts thereof in a diligent and workmanlike manner, or after commencing to do so within said three (3) calendar days, fails to continue to do so; then the CITY may exclude the CONTRACTOR from the premises, or any portion thereof, and take possession of said premises or any portion thereof, together with all material and equipment thereon, and may complete the work contemplated by this Agreement or any portion of said work, either by furnishing the tools, equipment, labor or material necessary, or by letting the unfinished portion of said work, or the portion taken over by the CITY to another contractor or by a combination of such methods. In any event, the procuring of the completion of said work, or the portion thereof taken over by the CITY, shall be a charge against the CONTRACTOR, and may be deducted from any money due or becoming due to CONTRACTOR from the CITY, or the CONTRACTOR shall pay the CITY the amount of said charge, or the portion thereof unsatisfied. The sureties, provided for under this Agreement shall become liable for payment should CONTRACTOR fail to pay in full any said cost incurred by the CITY.

X. INSURANCE

Prior to the beginning of and throughout the duration of the Project, CONTRACTOR and its subcontractors shall maintain insurance in conformance with the requirements set forth below. Attached hereto as Exhibit C are copies of Certificates of Insurance and the waiver of subrogation endorsement as required by Section 6.B.1. CONTRACTOR will use existing coverage to comply with these requirements. If that existing coverage does not meet the requirements set forth herein, CONTRACTOR agrees to amend, supplement or endorse the existing coverage to do so.

CONTRACTOR acknowledges that the insurance coverage and policy limits set forth in this section constitute the minimum amount of coverage required. Any insurance proceeds available to CONTRACTOR or its subcontractors in excess

of the limits and coverage identified in this Agreement and which is applicable to a given loss, claim or demand, will be equally available to CITY.

A. Types of Insurance

Without limiting CONTRACTOR's indemnification of CITY, and prior to commencement of Work, CONTRACTOR shall obtain, provide and maintain at its own expense during the term of this Agreement, policies of insurance of the type and amounts described below and in a form satisfactory to CITY:

- 1. General liability insurance.** CONTRACTOR shall maintain commercial general liability insurance with coverage at least as broad as Insurance Services Office form CG 00 01, in an amount not less than \$1,000,000 per occurrence, \$2,000,000 general aggregate, for bodily injury, personal injury, and property damage, and a \$2,000,000 completed operations aggregate. The policy must include contractual liability that has not been amended. Any endorsement restricting standard ISO "insured contract" language will not be accepted.
- 2. Automobile liability insurance.** CONTRACTOR shall maintain automobile insurance at least as broad as Insurance Services Office form CA 00 01 covering bodily injury and property damage for all activities of the CONTRACTOR arising out of or in connection with Work to be performed under this Agreement, including coverage for any owned, hired, non-owned or rented vehicles, in an amount not less than \$1,000,000 combined single limit for each accident.
- 3. Umbrella or excess liability insurance.** If CONTRACTOR is using umbrella coverage to meet part of its liability insurance requirements under Paragraph 1 of this Section, CONTRACTOR shall obtain and maintain an umbrella or excess liability insurance that will provide bodily injury, personal injury, completed operations and property damage liability coverage at least as broad as the primary coverages set forth above, including commercial general liability and employer's liability. Such policy or policies shall include the following terms and conditions:
 - A drop down feature requiring the policy to respond in the event that any primary insurance that would otherwise have applied proves to be uncollectable in whole or in part for any reason;
 - Pay on behalf of wording as opposed to reimbursement;
 - Concurrence of effective dates with primary policies;
 - Policies shall "follow form" to the underlying primary policies; and
 - Insureds under primary policies shall also be insureds under the umbrella or excess policies.

- 4. Workers' compensation insurance.** CONTRACTOR shall maintain Workers' Compensation Insurance (Statutory Limits) and Employer's Liability Insurance (with limits of at least \$1,000,000) for CONTRACTOR's employees in accordance with the laws of the State of California, Section 3700 of the Labor Code. In addition, CONTRACTOR shall require each subcontractor to similarly maintain Workers' Compensation Insurance and Employer's Liability Insurance in accordance with the laws of the State of California, Section 3700 for all of the subcontractor's employees.

CONTRACTOR shall submit to CITY, along with the certificate of insurance, a Waiver of Subrogation endorsement in favor of CITY, its officers, agents, employees and volunteers.

- 5. Pollution liability insurance.** Environmental Impairment Liability Insurance shall be written on a CONTRACTOR's Pollution Liability form or other form acceptable to CITY providing coverage for liability arising out of sudden, accidental and gradual pollution and remediation. The policy limit shall be no less than \$1,000,000 dollars per claim and in the aggregate. All activities contemplated in this Agreement shall be specifically scheduled on the policy as "covered operations." The policy shall provide coverage for the hauling of waste from the project site to the final disposal location, including non-owned disposal sites.

Products/completed operations coverage shall extend a minimum of three (3) years after project completion. Coverage shall be included on behalf of the insured for covered claims arising out of the actions of independent contractors. If the insured is using subcontractors, the Policy must include work performed "by or on behalf" of the insured. Policy shall contain no language that would invalidate or remove the insurer's duty to defend or indemnify for claims or suits expressly excluded from coverage. Policy shall specifically provide for a duty to defend on the part of the insurer. The CITY, its officials, officers, agents, and employees, shall be included as insureds under the policy.

- 6. Builder's risk insurance.** Upon commencement of construction and with approval of CITY, CONTRACTOR shall obtain and maintain builder's risk insurance for the entire duration of the Project until only the CITY has an insurable interest. The Builder's Risk coverage shall include the coverages as specified below.

The named insureds shall be CONTRACTOR and CITY, including its officers, officials, employees, and agents. All Subcontractors (excluding those solely responsible for design Work) of any tier and suppliers shall be included as additional insureds as their interests may

appear. CONTRACTOR shall not be required to maintain property insurance for any portion of the Project following transfer of control thereof to CITY. The policy shall contain a provision that all proceeds from the builder's risk policy shall be made payable to the CITY. The CITY will act as a fiduciary for all other interests in the Project.

Policy shall be provided for replacement value on an "all risk" basis for the completed value of the project. There shall be no coinsurance penalty or provisional limit provision in any such policy. Policy must include: (1) coverage for any ensuing loss from faulty workmanship, Nonconforming Work, omission or deficiency in design or specifications; (2) coverage against machinery accidents and operational testing; (3) coverage for removal of debris, and insuring the buildings, structures, machinery, equipment, materials, facilities, fixtures and all other properties constituting a part of the Project; (4) Ordinance or law coverage for contingent rebuilding, demolition, and increased costs of construction; (5) transit coverage (unless insured by the supplier or receiving contractor), with sub-limits sufficient to insure the full replacement value of any key equipment item; (6) Ocean marine cargo coverage insuring any Project materials or supplies, if applicable; (7) coverage with sub-limits sufficient to insure the full replacement value of any property or equipment stored either on or off the Site or any staging area. Such insurance shall be on a form acceptable to CITY to ensure adequacy of terms and sublimits and shall be submitted to the CITY prior to commencement of construction.

B. Other provisions or requirements

- 1. Proof of insurance.** CONTRACTOR shall provide certificates of insurance to CITY as evidence of the insurance coverage required herein, along with a waiver of subrogation endorsement for workers' compensation. Insurance certificates and endorsements must be approved by CITY's risk manager prior to commencement of performance. Current certification of insurance shall be kept on file with CITY at all times during the term of this contract. CITY reserves the right to require complete, certified copies of all required insurance policies, at any time.
- 2. Duration of coverage.** CONTRACTOR shall procure and maintain for the duration of the contract insurance against claims for injuries to persons or damages to property, which may arise from or in connection with the performance of the Work hereunder by CONTRACTOR, his agents, representatives, employees or subcontractors. CONTRACTOR must maintain general liability and umbrella or excess liability insurance for as long as there is a statutory exposure to completed operations claims. CITY and its officers,

officials, employees, and agents shall continue as additional insureds under such policies.

- 3. Primary/noncontributing.** Coverage provided by CONTRACTOR shall be primary and any insurance or self-insurance procured or maintained by CITY shall not be required to contribute with it. The limits of insurance required herein may be satisfied by a combination of primary and umbrella or excess insurance. Any umbrella or excess insurance shall contain or be endorsed to contain a provision that such coverage shall also apply on a primary and non-contributory basis for the benefit of CITY before the CITY's own insurance or self-insurance shall be called upon to protect it as a named insured.
- 4. CITY's rights of enforcement.** In the event any policy of insurance required under this Agreement does not comply with these requirements or is canceled and not replaced, CITY has the right but not the duty to obtain the insurance it deems necessary and any premium paid by CITY will be promptly reimbursed by CONTRACTOR or CITY will withhold amounts sufficient to pay premium from CONTRACTOR payments. In the alternative, CITY may cancel this Agreement.
- 5. Acceptable insurers.** All insurance policies shall be issued by an insurance company currently authorized by the Insurance Commissioner to transact business of insurance or is on the List of Approved Surplus Line Insurers in the State of California, with an assigned policyholders' Rating of A- (or higher) and Financial Size Category Class VII (or larger) in accordance with the latest edition of Best's Key Rating Guide, unless otherwise approved by the CITY's risk manager.
- 6. Waiver of subrogation.** All insurance coverage maintained or procured pursuant to this agreement shall be endorsed to waive subrogation against CITY, its elected or appointed officers, agents, officials, employees and volunteers or shall specifically allow CONTRACTOR or others providing insurance evidence in compliance with these specifications to waive their right of recovery prior to a loss. CONTRACTOR hereby waives its own right of recovery against CITY, and shall require similar written express waivers and insurance clauses from each of its subconsultants.
- 7. Enforcement of contract provisions (non estoppel).** CONTRACTOR acknowledges and agrees that any actual or alleged failure on the part of the CITY to inform CONTRACTOR of non-compliance with any requirement imposes no additional obligations on the CITY nor does it waive any rights hereunder.

- 8. Requirements not limiting.** Requirements of specific coverage features or limits contained in this Section are not intended as a limitation on coverage, limits or other requirements, or a waiver of any coverage normally provided by any insurance. Specific reference to a given coverage feature is for purposes of clarification only as it pertains to a given issue and is not intended by any party or insured to be all inclusive, or to the exclusion of other coverage, or a waiver of any type. If the CONTRACTOR maintains higher limits than the minimums shown above, the CITY requires and shall be entitled to coverage for the higher limits maintained by the CONTRACTOR. Any available insurance proceeds in excess of the specified minimum limits of insurance and coverage shall be available to the CITY.
- 9. Notice of cancellation.** CONTRACTOR agrees to oblige its insurance agent or broker and insurers to provide to CITY with a thirty (30) day notice of cancellation (except for nonpayment for which a ten (10) day notice is required) or nonrenewal of coverage for each required coverage.
- 10. Additional insured status.** General liability policies shall provide or be endorsed to provide that CITY and its officers, officials, employees, agents, and volunteers shall be additional insureds under such policies. This provision shall also apply to any excess/umbrella liability policies.
- 11. Prohibition of undisclosed coverage limitations.** None of the coverages required herein will be in compliance with these requirements if they include any limiting endorsement of any kind that has not been first submitted to CITY and approved of in writing.
- 12. Separation of insureds.** A severability of interests provision must apply for all additional insureds ensuring that CONTRACTOR's insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the insurer's limits of liability. The policy(ies) shall not contain any cross-liability exclusions.
- 13. Pass through clause.** CONTRACTOR agrees to ensure that its subconsultants, subcontractors, and any other party involved with the project who is brought onto or involved in the project by CONTRACTOR, provide the same minimum insurance coverage and endorsements required of CONTRACTOR. CONTRACTOR agrees to monitor and review all such coverage and assumes all responsibility for ensuring that such coverage is provided in conformity with the requirements of this section. CONTRACTOR agrees that upon

request, all agreements with consultants, subcontractors, and others engaged in the project will be submitted to CITY for review.

14. CITY's right to revise requirements. The CITY reserves the right at any time during the term of the contract to change the amounts and types of insurance required by giving the CONTRACTOR a ninety (90) day advance written notice of such change. If such change results in substantial additional cost to the CONTRACTOR, the CITY and CONTRACTOR may renegotiate CONTRACTOR's compensation.

15. Self-insured retentions. Any self-insured retentions must be declared to and approved by CITY. CITY reserves the right to require that self-insured retentions be eliminated, lowered, or replaced by a deductible. Self-insurance will not be considered to comply with these specifications unless approved by CITY.

16. Timely notice of claims. CONTRACTOR shall give CITY prompt and timely notice of claims made or suits instituted that arise out of or result from CONTRACTOR's performance under this Agreement, and that involve or may involve coverage under any of the required liability policies.

17. Additional insurance. CONTRACTOR shall also procure and maintain, at its own cost and expense, any additional kinds of insurance, which in its own judgment may be necessary for its proper protection and prosecution of the Work.

XI. CONTRACTOR'S LICENSE

CONTRACTOR must possess at the time of commencing work and throughout the Project duration, a Contractor's License, issued by the State of California, which is current and in good standing. CONTRACTOR shall ensure that any subcontractor working on the Project possesses at the time of commencing work and throughout the Project duration, a Contractor's License, issued by the State of California, which is current and in good standing.

XII. REGISTRATION REQUIREMENTS

A. Pursuant to Section 1771.1(a) of the 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 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.”

B. CONTRACTOR must be registered with the Department of Industrial Relations (DIR) of the State of California in order to be eligible to work on public works projects. CONTRACTOR must ensure registration with the DIR that is active and in good standing.

C. No contractor or subcontractor may be listed on a bid proposal for a public works project (submitted on or after March 1, 2015) unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5 [with limited exceptions from this requirement for bid purposes only under Labor Code section 1771.1(a)].

No contractor or subcontractor may be awarded a contract for public work on a public works project (awarded on or after April 1, 2015) unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5.

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

D. The CONTRACTOR is not subject to public works requirements (including registration with the DIR) if the public works project is under \$1,000, unless the CITY knows that the same CONTRACTOR will be awarded total project costs in excess of \$1,000 for a given year.

XIII. CORPORATION IN GOOD STANDING

If CONTRACTOR is a corporation, the undersigned hereby represents and warrants that the corporation is duly incorporated and in good standing in the State of California, and that David Van Dyke whose title is President is authorized to act for and bind the corporation.

XIV. PROVISIONS REQUIRED BY LAW

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

XV. SUBSURFACE HAZARDOUS MATERIALS

- A. In the event trenches or other excavations extend deeper than four (4) feet below the surface, the CONTRACTOR shall promptly, and before the following conditions are disturbed, notify the CITY in writing of any:
1. Material that the CONTRACTOR believes may be material that is hazardous waste, as defined in Section 25117 of the Health and Safety Code that is required to be removed to a Class I, Class II or Class III disposal site in accordance with the provisions of existing law.
 2. Subsurface or latent physical conditions at the site differing from those indicated.
 3. Unknown physical conditions at the site of any unusual nature, different materially from those ordinarily encountered and generally recognized as inherent in the Work or the character provided for in the CONTRACT.
- B. Upon receipt of said notification the CITY will investigate the conditions, and if it finds that the conditions do materially so differ, or do involve hazardous waste, and cause a decrease or increase in the CONTRACTOR's cost of or the time required for performance of any part of the work, the CITY will issue a change order under the procedures described in the General Conditions.
- C. In the event that a dispute arises between the CITY and the CONTRACTOR whether the conditions materially differ, or involve hazardous waste or cause a decrease or increase in the CONTRACTOR's cost of or time required for performance of any part of the work, the CONTRACTOR shall not be excused from any scheduled completion date provided for by the Agreement, but shall proceed with all work to be performed under the Agreement. The CONTRACTOR shall retain any and all rights provided either by Agreement or by law which pertain to the resolution of disputes and protests between the contracting parties.

XVI. COMPONENT PARTS OF THE CONTRACT

This Agreement entered into consists of the following CONTRACT DOCUMENTS, all of which are component parts of the Agreement as if herein set out in full or attached hereto:

- | | |
|--|--|
| <input type="checkbox"/> Notice Inviting Bids | <input type="checkbox"/> Labor and Materials Payment |
| <input type="checkbox"/> Scope of Work Summary | <input type="checkbox"/> Bond |
| <input type="checkbox"/> Information for Bidders | <input type="checkbox"/> General and Supplemental |
| <input type="checkbox"/> Bid Form | <input type="checkbox"/> Conditions |
| <input type="checkbox"/> Non-Collusion Affidavit | <input type="checkbox"/> Special Conditions |
| <input type="checkbox"/> Site Visit Certification | <input type="checkbox"/> Project Construction Schedule |
| <input type="checkbox"/> Faithful Performance Bond | <input type="checkbox"/> Proposed Subcontractors |

- | | |
|--|---|
| <input type="checkbox"/> Bid Bond | <input type="checkbox"/> Addenda |
| <input type="checkbox"/> Information Required of Bidder | <input type="checkbox"/> Drawings |
| <input type="checkbox"/> Construction Services Agreement | <input type="checkbox"/> Change Orders |
| <input type="checkbox"/> Certificate Regarding Worker's | <input type="checkbox"/> Shop Drawing Transmittals |
| <input type="checkbox"/> Compensation | <input type="checkbox"/> Contractor's Certificate Regarding |
| <input type="checkbox"/> Drug-free Workplace Certification | <input type="checkbox"/> Non-Asbestos Containing |
| <input type="checkbox"/> Plans and Specifications | Materials |

All of the above-named CONTRACT DOCUMENTS are intended to be complementary. Work required by one of the above-named CONTRACT DOCUMENTS and not by others shall be done as if required by all.

XVII. ENTIRE CONTRACT

This Agreement constitutes the entire contract of the parties. No other agreements or contracts, whether oral or written, pertaining to the work to be performed, exists between the parties. This Agreement can be modified only by an amendment in writing, signed by both parties.

[Signatures on following page.]

SIGNATURE PAGE TO
CITY OF BEAUMONT
PUBLIC WORKS AGREEMENT

CITY:

CITY OF BEAUMONT

By:

CONTRACTOR:

TSR Construction and Inspection

By: _____

Print Name: _____

Title: _____

**CITY OF BEAUMONT
PUBLIC WORKS AGREEMENT**

EXHIBIT "A"

INVITATION FOR BIDS

**CITY OF BEAUMONT
PUBLIC WORKS AGREEMENT**

EXHIBIT "B"

CONTRACTOR'S Bid

CITY OF BEAUMONT
PUBLIC WORKS AGREEMENT

EXHIBIT "C"

Insurance Certificates and Endorsements



GENERAL CONDITIONS

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GENERAL CONDITIONS



GC01. DEFINITIONS

- a. Acceptable, Acceptance or words of similar import shall be understood to be the acceptance of the Engineer and/or the City.
- b. Act of God an Act of God is an earthquake of magnitude 3.5 on the Richter scale and tidal waves.
- c. Approval means written authorization by Engineer and/or City.
- d. Contract Documents includes all documents as stated in the Contract.
- e. City and Contractor are those stated in the Contract. The terms City and Owner may be used interchangeably.
- f. Day shall mean calendar day unless otherwise specifically designated.
- g. Engineer shall mean the General Manager, or his or her designee, of the Department of Public Works for the City of Beaumont, acting either directly or through properly authorized agents, such as agents acting within the scope of the particular duties entrusted to them. Also sometimes referred to as the "City's Representative" or "Representative" in the Contract Documents.
- h. Equal, Equivalent, Satisfactory, Directed, Designated, Selected, As Required and similar words shall mean the written approval, selection, satisfaction, direction, or similar action of the Engineer and/or City.
- i. Indicated, Shown, Detailed, Noted, Scheduled or words of similar meaning shall mean that reference is made to the drawings, unless otherwise noted. It shall be understood that the direction, designation, selection, or similar import of the Engineer and/or City is intended, unless stated otherwise.
- j. Install means the complete installation of any item, equipment or material.
- k. Material shall include machinery, equipment, manufactured articles, or construction such as form work, fasteners, etc., and any other classes of material to be furnished in connection with the Contract. All materials shall be new unless specified otherwise.
- l. Perform shall mean that the Contractor, at Contractor's expense, shall take all actions necessary to complete The Work, including furnishing of necessary labor, tools, and equipment, and providing and installing Materials that are indicated, specified, or required to complete such performance.
- m. Project is The Work planned by City as provided in the Contract Documents.

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- n. Provide shall include provide complete in place, that is furnish, install, test and make ready for use.
- o. Recyclable Waste Materials shall mean materials removed from the Project site which are required to be diverted to a recycling center rather than an area landfill. Recyclable Waste Materials include asphalt, concrete, brick, concrete block, and rock.
- p. Specifications means that portion of the Contract Documents consisting of the written requirements for materials, equipment, construction systems, standards and workmanship for the work. Except for Sections 1-9 of the Standard Specifications for Public Works Construction ("Greenbook"), 2015 Edition which are specifically excluded from incorporation into these Contract Documents, the Work shall be done in accordance with the Greenbook, including all current supplements, addenda, and revisions thereof. In the case of conflict between the Greenbook and the Contract Documents, the Contract Documents shall prevail.
- q. The Work means the entire improvement planned by the City pursuant to the Contract Documents.
- r. Work means labor, equipment and materials incorporated in, or to be incorporated in the construction covered by the Contract Documents.

GC02. CONTRACT DOCUMENTS

- a. **Contract Documents.** The Contract Documents are complementary, and what is called for by one shall be as binding as if called for by all.
- b. **Interpretations.** The Contract Documents are intended to be fully cooperative and to be complementary. If Contractor observes that any documents are in conflict, the Contractor shall promptly notify the Engineer in writing. In case of conflicts between the Contract Documents, the order of precedence shall be as follows:
 - 1. Change Orders or Work Change Directives
 - 2. Addenda
 - 3. Special Provisions (or Special Conditions)
 - 4. Technical Specifications
 - 5. Plans (Contract Drawings)
 - 6. Contract
 - 7. General Conditions
 - 8. Instructions to Bidders
 - 9. Notice Inviting Bids
 - 10. Contractor's Bid Forms
 - 11. Greenbook Standard Specifications (Sections 1-9 Excluded)
 - 12. Standard Plans

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13. Reference Documents

With reference to the Drawings, the order of precedence shall be as follows:

1. Figures govern over scaled dimensions
 2. Detail drawings govern over general drawings
 3. Addenda or Change Order drawings govern over Contract Drawings
 4. Contract Drawings govern over Standard Drawings
 5. Contract Drawings govern over Shop Drawings
- c. **Conflicts in Contract Documents.** Notwithstanding the orders of precedence established above, in the event of conflicts, the higher standard shall always apply.
- d. **Organization of Contract Documents.** Organization of the Contract Documents into divisions, sections, and articles, and 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.

GC03. CONTRACTS DOCUMENTS: COPIES & MAINTENANCE

Contractor will be furnished, free of charge, **five (5)** copies of the Contract Documents. Additional copies may be obtained at cost of reproduction.

Contractor shall maintain a clean, undamaged set of Contract Documents at the Project site.

GC04. DETAIL DRAWINGS AND INSTRUCTIONS

- a. **Examination of Contract Documents.** Before commencing any portion of The Work, Contractor shall again carefully examine all applicable Contract Documents, the Project site and other information given to Contractor as to materials and methods of construction and other Project requirements. Contractor shall immediately notify the Engineer of any potential error, inconsistency, ambiguity, conflict or lack of detail or explanation. If Contractor performs, permits, or causes the performance of any Work which is in error, inconsistent or ambiguous, or not sufficiently detailed or explained, Contractor shall bear any and all resulting costs, including, without limitation, the cost of correction. In no case shall the Contractor or any subcontractor proceed with Work if uncertain as to the applicable requirements.
- b. **Additional Instructions.** After notification of any error, inconsistency, ambiguity, conflict or lack of detail or explanation, the Engineer will provide any required additional instructions, by means of drawings or other written direction, necessary for proper execution of Work.
- c. **Quality of Parts, Construction and Finish.** All parts of The Work shall be of the best quality of their respective kinds and the Contractor must use all diligence to

GENERAL CONDITIONS



inform itself fully as to the required construction and finish. In no case shall Contractor proceed with The Work without obtaining first from the Engineer such Approval may be necessary for the proper performance of Work.

- d. **Contractor's Variation from Contract Document Requirements.** If it is found that the Contractor has varied from the requirements of the Contract Documents including the requirement to comply with all applicable laws, ordinances, rules and regulations, the Engineer may at any time, before or after completion of the Work, order the improper Work removed, remade or replaced by the Contractor at the Contractor's expense.

GC05. EXISTENCE OF UTILITIES AT THE WORK SITE

- a. The City has endeavored to determine the existence of utilities at the Project site from the records of the owners of known utilities in the vicinity of the Project. The positions of these utilities as derived from such records are shown on the Plans.
- b. No excavations were made to verify the locations shown for underground utilities. The service connections to these utilities are not shown on the plans. It shall be the responsibility of the Contractor to determine the exact location of all service connections. The Contractor shall make its own investigations, including exploratory excavations, to determine the locations and type of service connections, prior to commencing Work which could result in damage to such utilities. The Contractor shall immediately notify the City and Engineer in writing of any utility discovered in a different position than shown on the Plans or which is not shown on the Plans.
- c. All water meters, water valves, fire hydrants, electrical utility vaults, telephone vaults, gas utility valves, and other subsurface structures shall be relocated or adjusted to final grade by the Contractor. Locations of existing utilities shown on the Plans are approximate and may not be complete. The Contractor shall be responsible for coordinating its Work with all utility companies during the construction of The Work.
- d. Notwithstanding the above, pursuant to Section 4215 of the Government Code, the City has the responsibility to identify, with reasonable accuracy, main or trunkline facilities on the plans and specifications. In the event that main or trunkline utility facilities are not identified with reasonable accuracy in the plans and specifications made a part of the invitation for bids, City shall assume the responsibility for their timely removal, relocation, or protection.
- e. Contractor, except in an emergency, shall contact the appropriate regional notification center, Southern California Underground Service Alert at 1-800-227-2600 at least two working days prior to commencing any excavation if the excavation will be performed in an area which is known, or reasonably should be known, to contain subsurface installations other than the underground facilities

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owned or operated by the City, and obtain an inquiry identification number from that notification center. No excavation shall be commenced or carried out by the Contractor unless such an inquiry identification number has been assigned to the Contractor or any subcontractor of the Contractor and the City has been given the identification number by the Contractor.

GC06. SCHEDULE

- a. **Estimated Schedule.** Within fourteen (14) days after the issuance of the Notice to Proceed, Contractor shall prepare a Project schedule and shall submit this to the Engineer for Approval. The receipt or Approval of any schedules by the Engineer or the City shall not in any way relieve the Contractor of its obligations under the Contract Documents. The Contractor is fully responsible to determine and provide for any and all staffing and resources at levels which allow for good quality and timely completion of the Project. Contractor's failure to incorporate all elements of Work required for the performance of the Contract or any inaccuracy in the schedule shall not excuse the Contractor from performing all Work required for a completed Project within the specified Contract time period. If the required schedule is not received by the time the first payment under the Contract is due, Contractor shall not be paid until the schedule is received, reviewed and accepted by the Engineer.
- b. **Schedule Contents.** The schedule shall allow enough time for inclement weather. The schedule shall indicate the beginning and completion dates of all phases of construction; critical path for all critical, sequential time related activities; and "float time" for all "slack" or "gaps" in the non-critical activities. The schedule shall clearly identify all staffing and other resources which in the Contractor's judgment are needed to complete the Project within the time specified for completion. Schedule duration shall match the Contract time. Schedules indicating early completion will be rejected.
- c. **Schedule Updates.** Contractor shall continuously update its construction schedule. Contractor shall submit an updated and accurate construction schedule to the Engineer whenever requested to do so by Engineer and with each progress payment request. The Engineer may withhold progress payments or other amounts due under the Contract Documents if Contractor fails to submit an updated and accurate construction schedule.

GC07. SUBSTITUTIONS

- a. Pursuant to Public Contract Code Section 3400(b) the City may make a finding that is described in the invitation for bids that designates certain products, things, or services by specific brand or trade name.
- b. Unless specifically designated in the Contract Documents, whenever any material, process, or article is indicated or specified by grade, patent, or proprietary name

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or by name of manufacturer, such Specifications shall be deemed to be used for the purpose of facilitating the description of the material, process or article desired and shall be deemed to be followed by the words "or equal." Contractor may, unless otherwise stated, offer for substitution any material, process or article which shall be substantially equal or better in every respect to that so indicated or specified in the Contract Documents. However, the City may have adopted certain uniform standards for certain materials, processes and articles.

- c. Contractor shall submit requests, together with substantiating data, for substitution of any "or equal" material, process or article no later than thirty-five (35) days after award of the Contract. To facilitate the construction schedule and sequencing, some requests may need to be submitted before thirty-five (35) days after award of Contract. Provisions regarding submission of "or equal" requests shall not in any way authorize an extension of time for performance of this Contract. If a proposed "or equal" substitution request is rejected, Contractor shall be responsible for providing the specified material, process or article. The burden of proof as to the equality of any material, process or article shall rest with the Contractor. The City has the complete and sole discretion to determine if a material, process or article is an "or equal" material, process or article that may be substituted.
- d. Data required to substantiate requests for substitutions of an "or equal" material, process or article data shall include a signed affidavit from the Contractor stating that, and describing how, the substituted "or equal" material, process or article is equivalent to that specified in every way except as listed on the affidavit. Substantiating data shall include any and all illustrations, specifications, and other relevant data including catalog information which describes the requested substituted "or equal" material, process or article, and substantiates that it is an "or equal" to the material, process or article. The substantiating data must also include information regarding the durability and lifecycle cost of the requested substituted "or equal" material, process or article. Failure to submit all the required substantiating data, including the signed affidavit, to the City in a timely fashion will result in the rejection of the proposed substitution.
- e. The Contractor shall bear all of the City's costs associated with the review of substitution requests.
- f. The Contractor shall be responsible for all costs related to a substituted "or equal" material, process or article.
- g. Contractor is directed to the Special Conditions (if any) to review any findings made pursuant to Public Contract Code section 3400.

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GC08. SHOP DRAWINGS

- a. Contractor shall check and verify all field measurements and shall submit with such promptness as to provide adequate time for review and cause no delay in his own Work or in that of any other contractor, subcontractor, or worker on the Project, six (6) copies of all shop or setting drawings, calculations, schedules, and materials list, and all other provisions required by the Contract. Contractor shall sign all submittals affirming that submittals have been reviewed and approved by Contractor prior to submission to Engineer. Each signed submittal shall affirm that the submittal meets all the requirements of the Contract Documents except as specifically and clearly noted and listed on the cover sheet of the submittal.
- b. Contractor shall make any corrections required by the Engineer, and file with the Engineer six (6) corrected copies each, and furnish such other copies as may be needed for completion of the Work. Engineer's approval of shop drawings shall not relieve Contractor from responsibility for deviations from the Contract Documents unless Contractor has, in writing, called Engineer's attention to such deviations at time of submission and has secured the Engineer's written Approval. Engineer's Approval of shop drawings shall not relieve Contractor from responsibility for errors in shop drawings.

GC09. SUBMITTALS

- a. Contractor shall furnish to the Engineer for approval, prior to purchasing or commencing any Work, a log of all samples, material lists and certifications, mix designs, schedules, and other submittals, as required in the specifications. The log shall indicate whether samples will be provided in accordance with other provisions of this Contract.
- b. Contractor will provide samples and submittals, together with catalogs and supporting data required by the Engineer, to the Engineer within a reasonable time period to provide for adequate review and avoid delays in the Work.
- c. These requirements shall not authorize any extension of time for performance of this Contract. Engineer will check and approve such samples, but only for conformance with design concept of work and for compliance with information given in the Contract Documents. Work shall be in accordance with approved samples and submittals.

GC10. MATERIALS

- a. Except as otherwise specifically stated in the Contract Documents, Contractor shall provide and pay for all materials, labor, tools, equipment, water, lights, power, transportation, superintendence, temporary constructions of every nature, and all other services and facilities of every nature whatsoever necessary to execute and complete this Contract within specified time.

GENERAL CONDITIONS



- b. Unless otherwise specified, all materials shall be new and the best of their respective kinds and grades as noted and/or specified, and workmanship shall be of good quality.
- c. Materials shall be furnished in ample quantities and at such times as to ensure uninterrupted progress of The Work and shall be stored properly and protected as required by the Contract Documents. Contractor shall be entirely responsible for damage or loss by weather or other causes to materials or Work.
- d. No materials, supplies, or equipment for Work under this Contract shall be purchased subject to any chattel mortgage or under a conditional sale or other agreement by which an interest therein or in any part thereof is retained by the seller or supplier. Contractor warrants good title to all material, supplies, and equipment installed or incorporated in the work and agrees upon completion of all work to deliver the Project, to the City free from any claims, liens, or charges.
- e. Materials shall be stored on the Project site in such manner so as not to interfere with any operations of the City or any independent contractor.

GC11. CONTRACTOR'S SUPERVISION

Contractor shall continuously keep at the Project site, a competent and experienced full-time Project superintendent approved by the City. Superintendent must be able to proficiently speak, read and write in English. Contractor shall continuously provide efficient supervision of the Project.

GC12. WORKERS

- a. Contractor shall at all times enforce strict discipline and good order among its employees. Contractor shall not employ on the Project any unfit person or any one not skilled in the Work assigned to him or her.
- b. Any person in the employ of the Contractor whom the City may deem incompetent or unfit shall be dismissed from The Work and shall not be employed on this Project except with the written Approval of the City.

GC13. SUBCONTRACTORS

- a. Contractor agrees to bind every subcontractor to the terms of the Contract Documents as far as such terms are applicable to subcontractor's portion of The Work. Contractor shall be as fully responsible to the City for the acts and omissions of its subcontractors and of persons either directly or indirectly employed by its subcontractors, as Contractor is for acts and omissions of persons directly employed by Contractor. Nothing contained in these Contract Documents shall create any contractual relationship between any subcontractor and the City.



- b. The City reserves the right to Approve all subcontractors. The City's Approval of any subcontractor under this Contract shall not in any way relieve Contractor of its obligations in the Contract Documents.
- c. Prior to substituting any subcontractor listed in the Bid Forms, Contractor must comply with the requirements of the Subletting and Subcontracting Fair Practices Act pursuant to California Public Contract Code section 4100 et seq.

GC14. PERMITS AND LICENSES

Permits and licenses necessary for prosecution of The Work shall be secured and paid for by Contractor, unless otherwise specified in the Contract Documents.

- a. Contractor shall obtain and pay for all other permits and licenses required for The Work, including excavation permit and for plumbing, mechanical and electrical work and for operations in or over public streets or right of way under jurisdiction of public agencies other than the City.
- b. The Contractor shall arrange and pay for all off-site inspection of the Work related to permits and licenses, including certification, required by the specifications, drawings, or by governing authorities, except for such off-site inspections delineated as the City's responsibility pursuant to the Contract Documents.
- c. Before Acceptance of the Project, the Contractor shall submit all licenses, permits, certificates of inspection and required approvals to the City.

GC15. UTILITY USAGE

- a. All temporary utilities, including but not limited to electricity, water, gas, and telephone, used on the Work shall be furnished and paid for by Contractor. Contractor shall Provide necessary temporary distribution systems, including meters, if necessary, from distribution points to points on The Work where the utility is needed. Upon completion of The Work, Contractor shall remove all temporary distribution systems.
- b. Contractor shall provide necessary and adequate utilities and pay all costs for water, electricity, gas, oil, and sewer charges required for completion of the Project.
- c. All permanent meters Installed shall be listed in the Contractor's name until Project Acceptance.
- d. If the Contract is for construction in existing facilities, Contractor may, with prior written Approval of the City, use the City's existing utilities by compensating the City for utilities used by Contractor.

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GC16. INSPECTION FEES FOR PERMANENT UTILITIES

All inspection fees and other municipal charges for permanent utilities including, but not limited to, sewer, electrical, phone, gas, water, and irrigation shall be paid for by the City. Contractor shall be responsible for arranging the payment of such fees, but inspection fees and other municipal fees relating to permanent utilities shall be paid by the City. Contractor may either request reimbursement from the City for such fees, or shall be responsible for arranging and coordination with City for the payment of such fees.

GC17. TRENCHES

- a. Trenches Five Feet or More in Depth. The Contractor shall submit to the City, in advance of excavation, a detailed plan showing the design of shoring, bracing, sloping or other provisions to be made for worker protection from the hazard of caving ground during the excavation of any trench or trenches five feet or more in depth. If the plan varies from shoring system standards, the plan shall be prepared by a registered civil or structural engineer. The plan shall not be less effective than the shoring, bracing, sloping, or other provisions of the Construction Safety Orders, as defined in the California Code of Regulations.
- b. Excavations Deeper than Four Feet. If work under this Contract involves digging trenches or other excavation that extends deeper than four feet below the surface, Contractor shall promptly, and before the following conditions are disturbed, notify the City, in writing, of any:
 - 1) Material that the Contractor believes may be material that is hazardous waste, as defined in Section 25117 of the Health and Safety Code, that is required to be removed to a Class I, Class II, or Class III disposal site in accordance with provisions of existing law.
 - 2) Subsurface or latent physical conditions at the site differing from those indicated.
 - 3) Unknown physical conditions at the site of any unusual nature, different materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract.

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

In the event that a dispute arises between the City and the Contractor as to whether the conditions materially differ, or involve hazardous waste, or cause a decrease or increase in the Contractor's cost of, or time required for, performance of any



part of The Work, the Contractor shall not be excused from any scheduled completion date provided for by the Contract, but shall proceed with all Work to be performed under the Contract. Contractor shall retain any and all rights provided either by contract or by law which pertain to the resolution of disputes and protests between the parties.

- c. Groundwater and Dewatering. The Contractor is responsible for all necessary trench and excavation dewatering operations. No additional compensation will be provided should groundwater levels be encountered that are different than those described in the plans and specifications. Discharge of all water must comply with the State Water Resources Control Board's NPDES permit requirements, as described in these specifications.

GC18. DIVERSION OF RECYCLABLE WASTE MATERIALS

In compliance with the applicable City's waste reduction and recycling efforts, Contractor shall divert all Recyclable Waste Materials to appropriate recycling centers. Contractor will be required to submit weight tickets and written proof of diversion with its monthly progress payment requests. Contractor shall complete and execute any certification forms required by City or other applicable agencies to document Contractor's compliance with these diversion requirements. All costs incurred for these waste diversion efforts shall be the responsibility of the Contractor.

GC19. REMOVAL OF HAZARDOUS MATERIALS

Should Contractor encounter material reasonably believed to be polychlorinated biphenyl (PCB) or other toxic wastes and hazardous materials which have not been rendered harmless at the Project site, the Contractor shall immediately stop work at the affected Project site and shall report the condition to the City in writing. The City shall contract for any services required to directly remove and/or abate PCBs and other toxic wastes and hazardous materials, if required by the Project site(s), and shall not require the Contractor to subcontract for such services. The Work in the affected area shall not thereafter be resumed except by written agreement of the City and Contractor.

GC20. SANITARY FACILITIES

Contractor shall provide sanitary temporary toilet buildings for the use of all workers. All toilets shall comply with local codes and ordinances. Toilets shall be kept supplied with toilet paper and shall have workable door fasteners. Toilets shall be serviced no less than once weekly and shall be present in a quantity of not less than 1 per 20 workers as required by CAL-OSHA regulation. The toilets shall be maintained in a sanitary condition at all times. Use of toilet facilities in The Work under construction shall not be permitted. Any other Sanitary Facilities required by CAL-OSHA shall be the responsibility of the Contractor.



GC21. AIR POLLUTION CONTROL

Contractor shall comply with all air pollution control rules, regulations, ordinances and statutes. All containers of paint, thinner, curing compound, solvent or liquid asphalt shall be labeled to indicate that the contents fully comply with the applicable material requirements.

GC22. COMPLIANCE WITH STATE STORM WATER PERMIT

- a. Contractor shall be required to comply with all conditions of the State Water Resources Control Board ("State Water Board") National Pollutant Discharge Elimination System General Permit for Waste Discharge Requirements for Discharges of Storm Water Runoff Associated with Construction Activity ("Permit") for all construction activity which results in the disturbance of in excess of one acre of total land area or which is part of a larger common area of development or sale. Contractor shall be responsible for filing the Notice of Intent and for obtaining the Permit. Contractor shall be solely responsible for preparing and implementing a Storm Water Pollution Prevention Plan ("SWPPP") prior to initiating Work. In bidding on this Contract, it shall be Contractor's responsibility to evaluate the cost of procuring the Permit and preparing the SWPPP as well as complying with the SWPPP and any necessary revision to the SWPPP. Contractor shall comply with all requirements of the State Water Resources Control Board. Contractor shall include all costs of compliance with specified requirements in the Contract amount.
- b. Contractor shall be responsible for procuring, implementing and complying with the provisions of the Permit and the SWPPP, including the standard provisions, monitoring and reporting requirements as required by the Permit. Contractor shall provide copies of all reports and monitoring information to the Engineer.
- c. Contractor shall comply with the lawful requirements of any applicable municipality, the City, drainage district, and other local agencies regarding discharges of storm water to separate storm drain system or other watercourses under their jurisdiction, including applicable requirements in municipal storm water management programs.
- d. Storm, surface, nuisance, or other waters may be encountered at various times during construction of The Work. Therefore, the Contractor, by submitting a Bid, hereby acknowledges that it has investigated the risk arising from such waters, has prepared its Bid accordingly, and assumes any and all risks and liabilities arising therefrom.
- e. Failure to comply with the Permit is in violation of federal and state law. Contractor hereby agrees to indemnify and hold harmless City, its officials, officers, agents, employees and authorized volunteers from and against any and all claims, demands, losses or liabilities of any kind or nature which City, its officials, officers, agents, employees and authorized volunteers may sustain or incur for

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noncompliance with the Permit arising out of or in connection with the Project, except for liability resulting from the sole established negligence, willful misconduct or active negligence of the City, its officials, officers, agents, employees or authorized volunteers. City may seek damages from Contractor for delay in completing the Contract in accordance with the Contract Documents, caused by Contractor's failure to comply with the Permit.

GC23. CLEANING UP

- a. Contractor at all times shall keep premises free from debris such as waste, rubbish, and excess materials and equipment. Contractor shall not store debris under, in, or about the premises. Upon completion of Work, Contractor shall clean the interior and exterior of the building or improvement including fixtures, equipment, walls, floors, ceilings, roofs, window sills and ledges, horizontal projections, and any areas where debris has collected so surfaces are free from foreign material or discoloration. Contractor shall clean and polish all glass, plumbing fixtures, and finish hardware and similar finish surfaces and equipment and contractor shall also remove temporary fencing, barricades, planking and construction toilet and similar temporary facilities from site. Contractor shall also clean all buildings, asphalt and concrete areas to the degree necessary to remove oil, grease, fuel, or other stains caused by Contractor operations or equipment.
- b. Contractor shall fully clean up the site at the completion of The Work. If the Contractor fails to immediately clean up at the completion of The Work, the City may do so and the cost of such clean up shall be charged back to the Contractor.

GC24. LAYOUT AND FIELD ENGINEERING

All field engineering required for laying out The Work and establishing grades for earthwork operations shall be furnished by the Contractor at its expense. Layout shall be done by a registered civil engineer Approved by the Engineer. Any required "as-built" drawings of the Work shall be prepared by the registered civil engineer.

GC25. EXCESSIVE NOISE

- a. The Contractor shall use only such equipment on the work and in such state of repair so that the emission of sound therefrom is within the noise tolerance level of that equipment as established by CAL-OSHA.
- b. The Contractor shall comply with the most restrictive of the following: (1) local sound control and noise level rules, regulations and ordinances and (2) the requirements contained in these Contract Documents, including hours of operation requirements. No internal combustion engine shall be operated on the Project without a muffler of the type recommended by the manufacturer. Should any muffler or other control device sustain damage or be determined to be ineffective or defective, the Contractor shall promptly remove the equipment and shall not

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return said equipment to the job until the device is repaired or replaced. Said noise and vibration level requirements shall apply to all equipment on the job or related to the job, including but not limited to, trucks, transit mixers or transit equipment that may or may not be owned by the Contractor.

GC26. TESTS AND INSPECTIONS

- a. If the Contract Documents, the Engineer, or any instructions, laws, ordinances, or public authority require any part of The Work to be tested or Approved, Contractor shall provide the Engineer at least two (2) working days notice of its readiness for observation or inspection. If inspection is by a public authority other than the City, Contractor shall promptly inform the City of the date fixed for such inspection. Required certificates of inspection (or similar) shall be secured by Contractor. Costs for City testing and City inspection shall be paid by the City. Costs of tests for Work found not to be in compliance shall be paid by the Contractor.
- b. If any Work is done or covered up without the required testing or approval, the Contractor shall uncover or deconstruct the Work, and the Work shall be redone after completion of the testing at the Contractor's cost in compliance with the Contract Documents.
- c. Where inspection and testing are to be conducted by an independent laboratory or agency, materials or samples of materials to be inspected or tested shall be selected by such laboratory or agency, or by the City, and not by Contractor. All tests or inspections of materials shall be made in accordance with the commonly recognized standards of national organizations.
- d. In advance of manufacture of materials to be supplied by Contractor which must be tested or inspected, Contractor shall notify the City so that the City may arrange for testing at the source of supply. Any materials which have not satisfactorily passed such testing and inspection shall not be incorporated into The Work.
- e. If the manufacture of materials to be inspected or tested will occur in a plant or location outside the geographic limits of City, the Contractor shall pay for any excessive or unusual costs associated with such testing or inspection, including but not limited to excessive travel time, standby time and required lodging.
- f. Reexamination of Work may be ordered by the City. If so ordered, Work must be uncovered or deconstructed by Contractor. If Work is found to be in accordance with the Contract Documents, the City shall pay the costs of reexamination and reconstruction. If such work is found not to be in accordance with the Contract Documents, Contractor shall pay all costs.



GC27. PROTECTION OF WORK AND PROPERTY

- a. The Contractor shall be responsible for all damages to persons or property that occur as a result of The Work. Contractor shall be responsible for the proper care and protection of all materials delivered and Work performed until completion and final Acceptance by the City. All Work shall be solely at the Contractor's risk. Contractor shall adequately protect adjacent property from settlement or loss of lateral support as necessary. Contractor shall comply with all applicable safety laws and building codes to prevent accidents or injury to persons on, about, or adjacent to the Project site where Work is being performed. Contractor shall erect and properly maintain at all times, as required by field conditions and progress of work, all necessary safeguards, signs, barriers, lights, and watchmen for protection of workers and the public, and shall post danger signs warning against hazards created in the course of construction.
- b. In an emergency affecting safety of life or of work or of adjoining property, Contractor, without special instruction or authorization from the Engineer, is hereby permitted to act to prevent such threatened loss or injury; and Contractor shall so act, without appeal, if so authorized or instructed by the Engineer or the City. Any compensation claimed by Contractor on account of emergency work shall be determined by and agreed upon by the City and the Contractor.
- c. Contractor shall provide such heat, covering, and enclosures as are necessary to protect all Work, materials, equipment, appliances, and tools against damage by weather conditions.
- d. Contractor shall take adequate precautions to protect existing sidewalks, curbs, pavements, utilities, and other adjoining property and structures, and to avoid damage thereto, and Contractor shall repair any damage thereto caused by The Work operations. Contractor shall:
 - 1) Enclose the working area with a substantial barricade, and arrange work to cause minimum amount of inconvenience and danger to the public.
 - 2) Provide substantial barricades around any shrubs or trees indicated to be preserved.
 - 3) Deliver materials to the Project site over a route designated by the Engineer.
 - 4) Provide any and all dust control required and follow the Applicable air quality regulations as appropriate. If the Contractor does not comply, the City shall have the immediate authority to provide dust control and deduct the cost from payments to the Contractor.
 - 5) Confine Contractor's apparatus, the storage of materials, and the operations of its workers to limits required by law, ordinances, permits, or

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directions of the Engineer. Contractor shall not unreasonably encumber the Project site with its materials.

- 6) Take care to prevent disturbing or covering any survey markers, monuments, or other devices marking property boundaries or corners. If such markers are disturbed by accident, they shall be replaced by an approved civil engineer or land surveyor, at no cost to the City.
- 7) Ensure that existing facilities, fences and other structures are all adequately protected and that, upon completion of all Work, all facilities that may have been damaged are restored to a condition acceptable to the City.
- 8) Preserve and protect from injury all buildings, pole lines and all direction, warning and mileage signs that have been placed within the right-of-way.
- 9) At the completion of work each day, leave the Project site in a clean, safe condition.
- 10) Comply with any stage construction and traffic handling plans. Access to residences and businesses shall be maintained at all times.

These precautionary measures will apply continuously and not be limited to normal working hours. Full compensation for the Work involved in the preservation of life, safety and property as above specified shall be considered as included in the prices paid for the various contract items of Work, and no additional allowance will be made therefor.

- e. Should damage to persons or property occur as a result of The Work, Contractor shall be responsible for proper investigation, documentation, including video or photography, to adequately memorialize and make a record of what transpired. The City shall be entitled to inspect and copy any such documentation, video, or photographs.

GC28. CONTRACTORS MEANS AND METHODS

Contractor is solely responsible for the means and methods utilized to Perform The Work. In no case shall the Contractor's means and methods deviate from commonly used industry standards.

GC29. INSPECTOR'S FIELD OFFICE

- a. The Contractor shall be responsible for providing the inspector's field office. The Office shall be a substantial waterproof construction with adequate natural light and ventilation by means of stock design windows. Door shall have a key type lock or padlock clasp. The office shall have heating and air conditioning and shall be equipped with a telephone, a telephone answering machine, and a fax machine at Contractor's expense.

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- b. A table satisfactory for the study of plans and two chairs shall be Provided by Contractor. Contractor shall Provide and pay for adequate electric lights, local telephone service, and adequate heat and air conditioning for the field office until authorized removal.

GC30. AUTHORIZED REPRESENTATIVES

The City shall designate representatives who shall have the right to be present at the Project site at all times. The City may designate an inspector who shall have the right to observe all of the Contractor's Work. The inspector is not authorized to make changes in the Contract Documents. The inspector shall not be responsible for the Contractor's failure to carry out The Work in accordance with the Contract Documents. Contractor shall provide safe and proper facilities for such access.

GC31. HOURS OF WORK

- a. Eight (8) hours of work shall constitute a legal day's work. The Contractor and each subcontractor shall forfeit, as penalty to the City, twenty-five dollars (\$25) for each worker employed in the execution of Work by the Contractor or any subcontractor for each day during which such worker is required or permitted to work more than eight (8) hours in any one day and forty (40) hours in any week in violation of the provisions of the Labor Code, and in particular, Section 1810 to Section 1815, except as provided in Labor Code Section 1815.
- b. Work shall be accomplished on a regularly scheduled eight (8) hour per day work shift basis, Monday through Friday, between the hours of 7:00 a.m. and 5:00 p.m.
- c. It shall be unlawful for any person to operate, permit, use, or cause to operate any of the following at the Project site, other than between the hours of 7:00 a.m. to 5:00 p.m., Monday through Friday, with no Work allowed on City-observed holidays, unless otherwise Approved by the Engineer:
 - 1) Powered Vehicles
 - 2) Construction Equipment
 - 3) Loading and Unloading Vehicles
 - 4) Domestic Power Tool.

GC32. PAYROLL RECORDS

- a. Pursuant to Labor Code Section 1776, the Contractor and each subcontractor shall maintain weekly certified payroll records showing the name, address, social security number, work classification, straight time and overtime hours paid each day and week, and the actual per diem wages paid to each journeyman,



apprentice, worker or other employee employed in connection with the work. Contractor shall certify under penalty of perjury that records maintained and submitted by Contractor are true and accurate. Contractor shall also require subcontractor(s) to certify weekly payroll records under penalty of perjury.

- b. The payroll records described herein shall be certified and submitted by the Contractor at a time designated by the City. The Contractor shall also provide the following:
 - 1) A certified copy of the employee's payroll records shall be made available for inspection or furnished to such employee or his or her authorized representative on request.
 - 2) A certified copy of all payroll records described herein shall be made available for inspection or furnished upon request of the Department of Industrial Relations ("DIR").
- c. The certified payroll records shall be on forms provided by the Division of Labor Standards Enforcement ("DLSE") of the DIR or shall contain the same information as the forms provided by the DLSE.
- d. Any copy of records made available for inspection and furnished upon request to the public 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 or any subcontractor shall not be marked or obliterated.
- e. In the event of noncompliance with the requirements of this Section, the Contractor shall have ten (10) days in which to comply subsequent to receipt of written notice specifying any item or actions necessary to ensure compliance with this section. Should noncompliance still be evident after such ten (10) day period, the Contractor shall, as a penalty to the City, forfeit Twenty-five Dollars (\$25.00) for each day, or portion thereof, for each worker until strict compliance is effectuated. Upon the request of the DIR, such penalties shall be withheld from contract payments.

GC33. PREVAILING RATES OF WAGES

- a. The Contractor is aware of the requirements of Labor Code Sections 1720 et seq. and 1770 et seq., as well as California Code of Regulations, Title 8, Section 16000 et seq. ("Prevailing Wage Laws"), which require the payment of prevailing wage rates and the performance of other requirements on certain "public works" and "maintenance" projects. Since this Project involves an applicable "public works" or "maintenance" project, as defined by the Prevailing Wage Laws, and since the total compensation is \$1,000 or more, Contractor agrees to fully comply with such Prevailing Wage Laws. The Contractor shall obtain a copy of the prevailing rates of per diem wages at the commencement of this Agreement from the website of

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the Division of Labor Statistics and Research of the Department of Industrial Relations located at www.dir.ca.gov/dlsr/. In the alternative, the Contractor may view a copy of the prevailing rates of per diem wages at the City. Contractor shall make copies of the prevailing rates of per diem wages for each craft, classification or type of worker needed to perform work on the Project available to interested parties upon request, and shall post copies at the Contractor's principal place of business and at the Project site. Contractor shall defend, indemnify and hold the City, its elected officials, officers, employees and agents free and harmless from any claims, liabilities, costs, penalties or interest arising out of any failure or alleged failure to comply with the Prevailing Wage Laws.

- b. The Contractor and each subcontractor shall forfeit as a penalty to the City not more than fifty dollars (\$50) for each calendar day, or portion thereof, for each worker paid less than the stipulated prevailing wage rate for any work done by him, or by any subcontract under him, in violation of the provisions of the Labor Code. The difference between such stipulated prevailing wage rate and the amount paid to each worker for each calendar day or portion thereof for which each worker was paid less than the stipulated prevailing wage rate shall be paid to each worker by the Contractor.
- c. Contractor shall post, at appropriate conspicuous points on the Project site, a schedule showing all determined general prevailing wage rates and all authorized deductions, if any, from unpaid wages actually earned.
- d. If the Work involves federal funds or otherwise requires compliance with the Davis-Bacon Fair Labor Standards Act, the Contractor and all its subcontractors shall comply with the higher of the state or federal prevailing wage rates.

GC34. EMPLOYMENT OF APPRENTICES

The Contractor's attention is directed to the provisions of Sections 1777.5, 1777.6, and 1777.7 of the Labor Code concerning employment of apprentices by the Contractor or any subcontractor. The Contractor shall obtain a certificate of apprenticeship before employing any apprentice pursuant to Section 1777.5, 1777.6, and 1777.7 of the Labor Code. Information relative to apprenticeship standards, wage schedules, and other requirements may be obtained from the Director of Industrial Relations, the Administrator of Apprenticeships, San Francisco, California, or from the Division of Apprenticeship Standards and its branch offices.

GC35. NONDISCRIMINATION/EQUAL EMPLOYMENT OPPORTUNITY

Pursuant to Labor Code Section 1735 and other applicable provisions of law, the Contractor and its subcontractors shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, national origin, age, political affiliation, marital status, or handicap on this Project. The Contractor will take affirmative action to insure that employees are treated during employment or training

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without regard to their race, color, religion, sex, national origin, age, political affiliation, marital status, or handicap.

GC36. LABOR/EMPLOYMENT SAFETY

The Contractor shall maintain emergency first aid treatment for his employees which complies with the Federal Occupational Safety and Health Act of 1970 (29 U.S.C. § 651 et seq.), and California Code of Regulations, Title 8, Industrial Relations Division 1, Department of Industrial Relations, Chapter 4.

GC37. WORKERS' COMPENSATION INSURANCE

The Contractor shall Provide, during the life of this Contract, workers' compensation insurance for all of the employees engaged in Work under this Contract, on or at the Project site, and, in case any of sublet Work, the Contractor shall require the subcontractor similarly to provide workers' compensation insurance for all the latter's employees as prescribed by State law. Any class of employee or employees not covered by a subcontractor's insurance shall be covered by the Contractor's insurance. In case any class of employees engaged in work under this Contract, on or at the Project site, is not protected under the Workers' Compensation Statutes, the Contractor shall provide or shall cause a subcontractor to provide, adequate insurance coverage for the protection of such employees not otherwise protected. The Contractor is required to secure payment of compensation to his employees in accordance with the provisions of Section 3700 of the Labor Code. The Contractor shall file with the City certificates of his insurance protecting workers. Company or companies providing insurance coverage shall be acceptable to the City, if in the form and coverage as set forth in the Contract Documents.

GC38. EMPLOYER'S LIABILITY INSURANCE

Contractor shall provide during the life of this Contract, Employer's Liability Insurance, including Occupational Disease, in the amount of, at least, one million dollars (\$1,000,000.00) per person per accident. Contractor shall provide City with a certificate of Employer's Liability Insurance. Such insurance shall comply with the provisions of the Contract Documents. The policy shall be endorsed, if applicable, to provide a Borrowed Servant/Alternate Employer Endorsement and contain a Waiver of Subrogation in favor of the City.

GC39. COMMERCIAL GENERAL LIABILITY INSURANCE

- a. Contractor shall procure and maintain during the life of this Contract and for such other period as may be required herein, at its sole expense, Commercial General Liability insurance coverage, including but not limited to, premises liability, contractual liability, products/completed operations if applicable, personal and advertising injury – which may arise from or out of Contractor's operations, use, and management of the Project site, or the performance of its obligations hereunder. Policy limits shall not be less than **\$2,000,000** per occurrence for bodily

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- injury, personal injury and property damage. If Commercial General Liability Insurance or other form with a general aggregate limit is used, either the general aggregate limit shall apply separately to this project/location or the general aggregate limit shall be twice the required occurrence limit.
- b. Such policy shall comply with all the requirements of this Article. The limits set forth herein shall apply separately to each insured against whom claims are made or suits are brought, except with respect to the limits of liability. Further the limits set forth herein shall not be construed to relieve the Contractor from liability in excess of such coverage, nor shall it limit Contractor's indemnification obligations to the City, and shall not preclude the City from taking such other actions available to the City under other provisions of the Contract Documents or law.
 - c. Contractor shall make certain that any and all subcontractors hired by Contractor are insured in accordance with this Contract. If any subcontractor's coverage does not comply with the foregoing provisions, Contractor shall indemnify and hold the City harmless from any damage, loss, cost, or expense, including attorneys' fees, incurred by the City as a result thereof.
 - d. All general liability policies provided pursuant to the provisions of this Article shall comply with the provisions of the Contract Documents.
 - e. All general liability policies shall be written to apply to all bodily injury, including death, property damage, personal injury, owned and non-owned equipment, blanket contractual liability, completed operations liability, explosion, collapse, under-ground excavation, removal of lateral support, and other covered loss, however occasioned, occurring during the policy term, and shall specifically insure the performance by Contractor of that part of the indemnification contained in these General Conditions, relating to liability for injury to or death of persons and damage to property. If the coverage contains one or more aggregate limits, a minimum of 50% of any such aggregate limit must remain available at all times; if over 50% of any aggregate limit has been paid or reserved, the City may require additional coverage to be purchased by Contractor to restore the required limits. Contractor may combine primary, umbrella, and as broad as possible excess liability coverage to achieve the total limits indicated above. Any umbrella or excess liability policy shall include the additional insured endorsement described in the Contract Documents.

GC40. AUTOMOBILE LIABILITY INSURANCE

Contractor shall take out and maintain at all times during the term of this Contract Automobile Liability Insurance in the amount of, at least, one million dollars (\$1,000,000). Such insurance shall provide coverage for bodily injury and property damage including coverage for non-owned and hired vehicles, in a form and with insurance companies



acceptable to the City. Such insurance shall comply with the provisions of Article 30 below.

GC41. BUILDER'S RISK [“ALL RISK”]

- a. It is the Contractor's responsibility to maintain or cause to be maintained Builder's Risk [“All Risk”] extended coverage insurance on all work, material, equipment, appliances, tools, and structures which are a part of the Contract and subject to loss or damage by fire, and vandalism and malicious mischief, in an amount to cover 100% of the replacement cost. The City accepts no responsibility until the Contract is formally accepted by the Governing Board for the work. The Contractor is required to file with the City a certificate evidencing fire insurance coverage.
- b. Provide insurance coverage on completed value form, all-risk or special causes of loss coverage.
 - 1) Insurance policies shall be so conditioned as to cover the performance of any extra work performed under the Contract.
 - 2) Coverage shall include all materials stored on site and in transit.
 - 3) Coverage shall include Contractor's tools and equipment.
 - 4) Insurance shall include boiler, machinery and material hoist coverage.
- c. Such insurance shall comply with the provisions of the Contract Documents.

GC42. FORM AND PROOF OF CARRIAGE OF INSURANCE

- a. Any insurance carrier providing insurance coverage required by the Contract Documents shall be admitted to and authorized to do business in the State of California unless waived, in writing, by the City Risk Manager. Carrier(s) shall have an A.M. Best rating of not less than an A:VIII. Insurance deductibles or self-insured retentions must be declared by the Contractor, and such deductibles and retentions shall have the prior written consent from the City. At the election of the City the Contractor shall either 1) reduce or eliminate such deductibles or self-insured retentions, or 2) procure a bond which guarantees payment of losses and related investigations, claims administration, and defense costs and expenses.
- b. Contractor shall cause its insurance carrier(s) to furnish the City with either 1) a properly executed original Certificates(s) of Insurance and certified original copies of Endorsements effecting coverage as required herein, or 2) if requested to do so in writing by the City Risk Manager, provide original Certified copies of policies including all Endorsements and all attachments thereto, showing such insurance is in full force and effect. The City, its Directors and officers, employees, agents or representatives are named as Additional Insureds and Provide a Waiver of



Subrogation in favor of those parties. Further, said Certificate(s) and policies of insurance shall contain the covenant of the insurance carrier(s) that shall provide no less than thirty (30) days written notice be given to the City prior to any material modification or cancellation of such insurance. In the event of a material modification or cancellation of coverage, the City may terminate or Stop Work pursuant to the Contract Documents, unless the City receives, prior to such effective date, another properly executed original Certificate of Insurance and original copies of endorsements or certified original policies, including all endorsements and attachments thereto evidencing coverages set forth herein and the insurance required herein is in full force and effect. Contractor shall not take possession, or use the Project site, or commence operations under this Agreement until the City has been furnished original Certificate(s) of Insurance and certified original copies of Endorsements or policies of insurance including all Endorsements and any and all other attachments as required in this Section. The original Endorsements for each policy and the Certificate of Insurance shall be signed by an individual authorized by the insurance carrier to do so on its behalf.

- c. It is understood and agreed to by the parties hereto and the insurance company(s), that the Certificate(s) of Insurance and policies shall so covenant and shall be construed as primary, and the City's insurance and/or deductibles and/or self-insured retentions or self-insured programs shall not be construed as contributory.
- d. The City reserves the right to adjust the monetary limits of insurance coverage's during the term of this Contract including any extension thereof-if in the City's reasonable judgment, the amount or type of insurance carried by the Contractor becomes inadequate.
- e. Contractor shall pass down the insurance obligations contained herein to all tiers of sub-contractors working under this Contract.

GC43. TIME FOR COMPLETION AND LIQUIDATED DAMAGES

- a. **Time for Completion/Liquidated Damages.** Work shall be commenced within ten (10) days of the date stated in the City's Notice to Proceed and shall be completed by Contractor in the time specified in the Contract Documents. The City is under no obligation to consider early completion of the Project; and the Contract completion date shall not be amended by the City's receipt or acceptance of the Contractor's proposed earlier completion date. Furthermore, Contractor shall not, under any circumstances, receive additional compensation from the City (including but not limited to indirect, general, administrative or other forms of overhead costs) for the period between the time of earlier completion proposed by the Contractor and the Contract completion date. If The Work is not completed as stated in the Contract Documents, it is understood that the City will suffer damage. In accordance with Government Code section 53069.85, being impractical and infeasible to determine the amount of actual damage, it is agreed that Contractor



shall pay to the City as fixed and liquidated damages, and not as a penalty, the sum of \$2,000 for each day of delay until The Work is fully completed. Contractor and its surety shall be liable for any liquidated damages. Any money due or to become due the Contractor may be retained to cover liquidated damages.

- b. **Inclement Weather.** Contractor shall abide the Engineer's determination of what constitutes inclement weather. Time extensions for inclement weather shall only be granted when the Work stopped during inclement weather is on the critical path of the Project schedule.
- c. **Extension of Time.** Contractor shall not be charged liquidated damages because of any delays in completion of The Work due to unforeseeable causes beyond the control and without the fault or negligence of Contractor (or its subcontractors or suppliers). Contractor shall within five (5) Days of identifying any such delay notify the City in writing of causes of delay. The City shall ascertain the facts and extent of delay and grant extension of time for completing The Work when, in its judgment, the facts justify such an extension. Time extensions to the Project shall be requested by the Contractor as they occur and without delay. No delay claims shall be permitted unless the event or occurrence delays the completion of the Project beyond the Contract completion date.
- d. **No Damages for Reasonable Delay.** The City's liability to Contractor for delays for which the City is responsible shall be limited to only an extension of time unless such delays were unreasonable under the circumstances. In no case shall the City be liable for any costs which are borne by the Contractor in the regular course of business, including, but not limited to, home office overhead and other ongoing costs. Damages caused by unreasonable City delay, including delays caused by items that are the responsibility of the City pursuant to Government Code section 4215, shall be based on actual costs only, no proportions or formulas shall be used to calculate any delay damages.

GC44. COST BREAKDOWN AND PERIODIC ESTIMATES

Contractor shall furnish on forms Approved by the City:

- a. Within ten (10) Days of award of the Contract a detailed estimate giving a complete breakdown of the Contract price;
- b. A monthly itemized estimate of Work done for the purpose of making progress payments. In order for the City to consider and evaluate each progress payment application, the Contractor shall submit a detailed measurement of Work performed and a progress estimate of the value thereof before the tenth (10th) Day of the following month.



- c. Contractor shall submit, with each of its payment requests, an adjusted list of actual quantities, verified by the Engineer, for unit price items listed, if any, in the Bid Form.
- d. Following the City's Acceptance of the Work, the Contractor shall submit to the City a written statement of the final quantities of unit price items for inclusion in the final payment request.
- e. The City shall have the right to adjust any estimate of quantity and to subsequently correct any error made in any estimate for payment.

Contractor shall certify under penalty of perjury, that all cost breakdowns and periodic estimates accurately reflect the Work on the Project.

GC45. MOBILIZATION

- a. When a bid item is included in the Bid Form for mobilization, the costs of Work in advance of construction operations and not directly attributable to any specific bid item will be included in the progress estimate ("Initial Mobilization"). When no bid item is provided for "Initial Mobilization," payment for such costs will be deemed to be included in the other items of The Work.
- b. Payment for Initial Mobilization based on the lump sum provided in the Bid Form, which shall constitute full compensation for all such Work. No payment for Initial Mobilization will be made until all of the listed items have been completed to the satisfaction of the Engineer. The scope of the Work included under Initial Mobilization shall include, but shall not be limited to, the following principal items:
 - 1. Obtaining and paying for all bonds, insurance, and permits.
 - 2. Moving on to the Project site of all Contractor's plant and equipment required for first month's operations.
 - 3. Installing temporary construction power, wiring, and lighting facilities.
 - 4. Establishing fire protection system.
 - 5. Developing and installing a construction water supply.
 - 6. Providing and maintaining the field office trailers for the Contractor and the Engineer, complete, with all specified furnishings and utility services including telephones, telephone appurtenances, computer and printer, and copying machine.
 - 7. Providing on-site communication facilities for the Owner and the Engineer, including telephones, radio pagers, and fax machines.



8. Providing on-site sanitary facilities and potable water facilities as specified per Cal-OSHA and these Contract Documents.
9. Furnishing, installing, and maintaining all storage buildings or sheds required for temporary storage of products, equipment, or materials that have not yet been installed in the Work. All such storage shall meet manufacturer's specified storage requirements, and the specific provisions of the specifications, including temperature and humidity control, if recommended by the manufacturer, and for all security.
10. Arranging for and erection of Contractor's work and storage yard, including required project signage.
11. Posting all OSHA required notices and establishment of safety programs per Cal-OSHA.
12. Full-time presence of Contractor's superintendent at the job site as required herein.
13. Submittal of Construction Schedule as required by the Contract Documents.

GC46. PAYMENTS

- a. The City shall make monthly progress payments following receipt of undisputed and properly submitted payment requests. Contractor shall be paid a sum equal to ninety percent (95%) of the value of Work performed up to the last day of the previous month, less the aggregate of previous payments.
- b. The Contractor shall, after the full completion of The Work, submit a final payment application. All prior progress estimates shall be subject to correction in the final estimate and payment.
- c. Unless otherwise required by law, the final payment of five percent (5%) of the value of the Work, if unencumbered, shall be paid no later than sixty (35) Days after the date of recordation of the Notice of Completion.
- d. Acceptance by Contractor of the final payment shall constitute a waiver of all claims against the City arising from this Contract.
- e. Payments to the Contractor shall not be construed to be an acceptance of any defective work or improper materials, or to relieve the Contractor of its obligations under the Contract Documents.
- f. The Contractor shall submit with each payment request the Contractor's conditional waiver of lien for the entire amount covered by such payment request, as well as a valid unconditional waiver of lien from the Contractor and all

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subcontractors and materialmen for all work and materials included in any prior invoices. Waivers of lien shall be in the forms prescribed by California Civil Code Section 3262. Prior to final payment by the City, the Contractor shall submit a final waiver of lien for the Contractor's work, together with releases of lien from any subcontractor or materialmen.

GC47. PAYMENTS WITHHELD AND BACKCHARGES

In addition to amounts which the City may retain under other provisions of the Contract Documents the City may withhold payments due to Contractor as may be necessary to cover:

- a. Stop Notice Claims.
- b. Defective work not remedied.
- c. Failure of Contractor to make proper payments to its subcontractors or suppliers.
- d. Completion of the Contract if there exists a reasonable doubt that the work can be completed for balance then unpaid.
- e. Damage to another contractor or third party.
- f. Amounts which may be due the City for claims against Contractor.
- g. Failure of Contractor to keep the record ("as-built") drawings up to date.
- h. Failure to provide updates on the construction schedule.
- i. Site cleanup.
- j. Failure of the Contractor to comply with requirements of the Contract Documents.
- k. Liquidated damages.
- l. Legally permitted penalties.

Upon completion of the Contract, the City will reduce the final Contract amount to reflect costs charged to the Contractor, backcharges or payments withheld pursuant to the Contract Documents.

GC48. CHANGES AND EXTRA WORK

- a. **Change Order Work.**
 - 1) The City, without invalidating the Contract, may order changes in the Work consisting of additions, deletions or other revisions, the Contract amount



and Contract time being adjusted accordingly. All such changes in the Work shall be authorized by Change Order, and shall be performed under the applicable conditions of the Contract Documents. A Change Order signed by the Contractor indicates the Contractor's agreement therewith, including any adjustment in the Contract amount or the Contract time, and the full and final settlement of all costs (direct, indirect and overhead) related to the Work authorized by the Change Order.

- 2) All claims for additional compensation to the Contractor shall be presented in writing before the expense is incurred and will be adjusted as provided herein. No work shall be allowed to lag pending such adjustment, but shall be promptly executed as directed, even if a dispute arises. No claim will be considered after the work in question has been done unless a written contract change order has been issued or a timely written notice of claim has been made by Contractor. Contractor shall not be entitled to claim or bring suit for damages, whether for loss of profits or otherwise, on account of any decrease or omission of any item or portion of Work to be done. Whenever any change is made as provided for herein, such change shall be considered and treated as though originally included in the Contract, and shall be subject to all terms, conditions and provisions of the original Contract.
- 3) Owner Initiated Change. The Contractor must submit a complete cost proposal, including any change in the Contract time, within seven (7) Days after receipt of a scope of a proposed change order, unless the City requests that proposals be submitted in less than seven (7) Days.
- 4) Contractor Initiated Change. The Contractor must give written notice of a proposed change order required for compliance with the Contract Documents within seven (7) Days of discovery of the facts giving rise to the proposed change order.
- 5) Whenever possible, any changes to the Contract amount shall be in a lump sum mutually agreed to by the Contractor and the City.
- 6) Price quotations from the Contractor shall be accompanied by sufficiently detailed supporting documentation to permit verification by the City.
- 7) If the Contractor fails to submit the cost proposal within the seven (7) Day period (or as requested), the City has the right to order the Contractor in writing to commence the work immediately on a force account basis and/or issue a lump sum change to the contract price in accordance with the City's estimate of cost. If the change is issued based on the City estimate, the Contractor will waive its right to dispute the action unless within fifteen (15)



Days following completion of the added/deleted work, the Contractor presents written proof that the City's estimate was in error.

- 8) Estimates for lump sum quotations and accounting for cost-plus-percentage work shall be limited to direct expenditures necessitated specifically by the subject extra work, and shall be segregated as follows:
- (a) Labor. The costs of labor will be the actual cost for wages prevailing locally for each craft or type of worker at the time the extra work is done, plus employer payments of payroll taxes and insurance, health and welfare, pension, vacation, apprenticeship funds, and other direct costs resulting from Federal, State or local laws, as well as assessment or benefits required by lawful collective bargaining agreements. The use of a labor classification which would increase the extra work cost will not be permitted unless the contractor establishes the necessity for such additional costs. Labor costs for equipment operators and helpers shall be reported only when such costs are not included in the invoice for equipment rental.
 - (b) Materials. The cost of materials reported shall be at invoice or lowest current price at which such materials are locally available in the quantities involved, plus sales tax, freight and delivery. Materials cost shall be based upon supplier or manufacturer's invoice. If invoices or other satisfactory evidence of cost are not furnished within fifteen (15) Days of delivery, then the Engineer shall determine the materials cost, at its sole discretion.
 - (c) Tool and Equipment Use. No payment will be made for the use of small tools, tools which have a replacement value of \$1,000 or less. Regardless of ownership, the rates to be used in determining equipment use costs shall not exceed listed rates prevailing locally at equipment rental agencies, or distributors, at the time the work is performed.
 - (d) Overhead, Profit and Other Charges. The mark-up for overhead (including supervision) and profit on work added to the Contract shall be according to the following:
 - i. "Net Cost" is defined as consisting of costs of labor, materials and tools and equipment only excluding overhead and profit. The costs of applicable insurance and bond premium will be reimbursed to the Contractor and subcontractors at cost only, without mark-up.



- ii. For Work performed by the Contractor's forces the added cost for overhead and profit shall not exceed fifteen (15%) percent of the Net Cost of the Work.
 - iii. For Work performed by a subcontractor, the added cost for overhead and profit shall not exceed fifteen (15%) percent of the Net Cost of the Work to which the Contractor may add five (5%) percent of the subcontractor's Net Cost.
 - iv. For Work performed by a sub-subcontractor the added cost for overhead and profit shall not exceed fifteen (15 %) percent of the Net Cost for Work to which the subcontractor and general contractor may each add an additional five (5 %) percent of the Net Cost of the lower tier subcontractor.
 - iv. No additional markup will be allowed for lower tier subcontractors, and in no case shall the added cost for overhead and profit payable by City exceed twenty-five (25%) percent of the Net Cost as defined herein.
- 9) For added or deducted Work by subcontractors, the Contractor shall furnish to the City the subcontractor's signed detailed estimate of the cost of labor, material and equipment, including the subcontractor markup for overhead and profit. The same requirement shall apply to sub-subcontractors.
- 10) For added or deducted work furnished by a vendor or supplier, the Contractor shall furnish to the City a detailed estimate or quotation of the cost to the Contractor, signed by such vendor or supplier.
- 11) Any change in The Work involving both additions and deletions shall indicate a net total cost, including subcontracts and materials. Allowance for overhead and profit, as specified herein, shall be applied if the net total cost is an extra; overhead and profit allowances shall not be applied if the net total cost is a credit. The estimated cost of deductions shall be based on labor and material prices on the date the Contract was executed.
- 12) Contractor shall not reserve a right to assert impact costs, extended job site costs, extended overhead, constructive acceleration and/or actual acceleration beyond what is stated in the change order for work. No claims shall be allowed for impact, extended overhead costs, constructive acceleration and/or actual acceleration due to a multiplicity of changes and/or clarifications. The Contractor may not change or modify the City's change order form in an attempt to reserve additional rights.
- 13) If the City disagrees with the proposal submitted by Contractor, it will notify the Contractor and the City will provide its opinion of the appropriate price

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and/or time extension. If the Contractor agrees with the City, a change order will be issued by the City. If no agreement can be reached, the City shall have the right to issue a unilateral change order setting forth its determination of the reasonable additions or savings in costs and time attributable to the extra or deleted work. Such determination shall become final and binding if the Contractor fails to submit a claim in writing to the City within fifteen (15) Days of the issuance of the unilateral change order, disputing the terms of the unilateral change order.

- 14) No dispute, disagreement or failure of the parties to reach agreement on the terms of the change order shall relieve the Contractor from the obligation to proceed with performance of the work, including extra work, promptly and expeditiously.
- 15) Any alterations, extensions of time, extra work or any other changes may be made without securing consent of the Contractor's surety or sureties.

GC49. OCCUPANCY

The City reserves the right to occupy or utilize any portion of The Work at any time before completion, and such occupancy or use shall not constitute Acceptance of any part of Work covered by this Contract. This use shall not relieve the Contractor of its responsibilities under the Contract.

GC50. INDEMNIFICATION

Contractor shall defend (with counsel of City's choosing), indemnify and hold the City, its officials, officers, agents, employees, and representatives free and harmless from any and all claims, demands, causes of action, costs, expenses, liabilities, losses, damages or injuries, in law or equity, regardless of whether the allegations are false, fraudulent, or groundless, to property or persons, including wrongful death, to the extent arising out of or incident to any acts, omissions or willful misconduct of Contractor, its officials, officers, employees, agents, consultants and contractors arising out of or in connection with the performance of the Work or this Contract, including claims made by subcontractors for nonpayment, including without limitation the payment of all consequential damages and attorney's fees and other related costs and expenses. Contractor shall defend, at Contractor's own cost, expense and risk, with counsel of City's choosing, any and all such aforesaid suits, actions or other legal proceedings of every kind that may be brought or instituted against City, its officials, officers, agents, employees and representatives. To the extent of its liability, Contractor shall pay and satisfy any judgment, award or decree that may be rendered against City, its officials, officers, employees, agents, employees and representatives, in any such suit, action or other legal proceeding. Contractor shall reimburse City, its officials, officers, agents, employees and representatives for any and all legal expenses and costs incurred by each of them in connection therewith or in



enforcing the indemnity herein provided. The only limitations on this provision shall be those imposed by Civil Code Section 2782.

GC51. RECORD (“AS BUILT”) DRAWINGS

- a. Contractor shall prepare and maintain a complete set of record drawings (herein referred to as “as-builts”) and shall require each trade to prepare its own as-builts. The as-builts must show the entire site for each major trade, including but not limited to water, sewer, electrical, data, telephone, cable, fire alarm, gas and plumbing. Contractor shall mark the as-builts to show the actual installation where the installation varies from the Work as originally shown. Contractor shall mark whichever drawings are most capable of showing conditions fully and where shop drawings are used, Contractor must record a cross-reference at the corresponding location on the contract drawings. Contractor shall give particular attention to concealed elements that would be difficult to measure and record at a later date. Contractor shall use colors to distinguish variations in separate categories of The Work.
- b. Contractor shall note related change order numbers where applicable. Contractor shall organize as-builts into manageable sets, bound with durable paper cover sheets and shall print suitable title, dates and other identification on the cover of each set. Contractor to also provide an electronic version of the as-builts. The suitability of the as-builts will be determined by the Engineer.

GC52. RESOLUTION OF CONSTRUCTION CLAIMS

- a. In accordance with Public Contract Code Sections 20104 *et seq.* and other applicable law, public works claims of \$375,000 or less which arise between the Contractor and the City shall be resolved under the following the statutory procedure unless the City has elected to resolve the dispute pursuant to Public Contract Code Section 10240 *et seq.*
- b. **All Claims:** All claims shall be submitted in writing and accompanied by substantiating documentation. Claims must be filed on or before the date of final payment unless other notice requirements are provided in the contract. "Claim" means a separate demand by the claimant for (1) a time extension, (2) payment of money or damages arising from work done by or on behalf of the claimant and payment of which is not otherwise expressly provided for or the claimant is not otherwise entitled, or (3) an amount the payment of which is disputed by the City.
- c. **Claims Under \$50,000.** The City shall respond in writing to the claim within 45 days of receipt of the claim, or, the City may request, in writing, within 30 days of receipt of the claim, any additional documentation supporting the claim or relating to defenses or claims the City may have. If additional information is needed thereafter, it shall be provided upon mutual agreement of the City and the claimant. The City's written response shall be submitted 15 days after receiving the

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additional documentation, or within the same period of time taken by the claimant to produce the additional information, whichever is greater.

- d. **Claims over \$50,000 but less than or equal to \$375,000.** The City shall respond in writing within 60 days of receipt, or, may request in writing within 30 days of receipt of the claim, any additional documents supporting the claim or relating to defenses or claims the City may have against the claimant. If additional information is needed thereafter, it shall be provided pursuant to mutual agreement between the City and the claimant. The City's response shall be submitted within 30 days after receipt of the further documents, or within the same period of time taken by the claimant to produce the additional information or documents, whichever is greater. The Contractor shall make these records and documents available at all reasonable times, without any direct charge.
- e. The Contractor will submit the claim justification in the following format:
- 1) Summary of claim merit and price, and Contract clause pursuant to which the claim is made.
 - 2) List of documents relating to claim
 - (a) Specifications
 - (b) Drawings
 - (c) Clarifications (Requests for Information)
 - (d) Schedules
 - (e) Other
 - 3) Chronology of events and correspondence
 - 4) Analysis of claim merit
 - 5) Analysis of claim cost
 - 6) Analysis of time impact analysis in CPM format
 - 7) Cover letter and certification of validity of the claim
- f. If the claimant disputes the City's response, or if the City fails to respond within the statutory time period(s), the claimant may so notify the City within 15 days of the receipt of the response or the failure to respond, and demand an informal conference to meet and confer for settlement. Upon such demand, the City shall schedule a meet and confer conference within 30 Days.



- g. If following the meet and confer conference, the claim or any portion thereof remains in dispute, the claimant may file a claim pursuant to Government Code 900 et seq. and Government Code 910 et seq. For purposes of those provisions, the time within which a claim must be filed shall be tolled from the time the claimant submits the written claim until the time the claim is denied, including any time utilized for the meet and confer conference.
- h. Submission of a claim, properly certified, with all required supporting documentation, and written rejection or denial of all or part of the claim by City, is a condition precedent to any action, proceeding, litigation, suit, general conditions claim, or demand for arbitration by Contractor.

GC53. CITY'S RIGHT TO TERMINATE CONTRACT

- a. **Termination for Cause:** The City may, without prejudice to any other right or remedy, serve written notice upon Contractor of its intention to terminate this Contract if the Contractor: (i) refuses or fails to prosecute The Work or any part thereof with such diligence as will ensure its completion within the time required; (ii) fails to complete The Work within the required time; (iii) should file a bankruptcy petition or be adjudged a bankrupt; (iv) should make a general assignment for the benefit of its creditors; (v) should have a receiver appointed; (vi) should persistently or repeatedly refuse or fail to supply enough properly skilled workers or proper materials to complete the work; (vii) should fail to make prompt payment to subcontractors or for material or labor; (viii) persistently disregard laws, ordinances, other requirements or instructions of the City; or (ix) should violate any of the provisions of the Contract Documents.

The notice of intent to terminate shall contain the reasons for such intention to terminate. Unless within ten (10) Days after the service of such notice, such condition shall cease or satisfactory arrangements (acceptable to the City) for the required correction are made, this Contract shall be terminated. In such case, Contractor shall not be entitled to receive any further payment until the Project has been finished. The City may take over and complete The Work by any method it may deem appropriate. Contractor and its surety shall be liable to the City for any excess costs or other damages incurred by the City to complete the Project. If the City takes over The Work, the City may, without liability for so doing, take possession of and utilize in completing The Work such materials, appliances, plant, and other property belonging to the Contractor as may be on the Project site.

- b. **Termination For Convenience:** The City may terminate performance of The Work in whole or, in part, if the City determines that a termination is in the City's interest.

The Contractor shall terminate all or any part of The Work upon delivery to the Contractor of a Notice of Termination specifying that the termination is for the



convenience of the City, the extent of termination, and the effective date of such termination.

After receipt of Notice of Termination, and except as directed by the City, the Contractor shall, regardless of any delay in determining or adjusting any amounts due under this Termination for Convenience clause, immediately proceed with the following obligations:

- 1) Stop Work as specified in the Notice.
 - 2) Complete any Work specified in the Notice of Termination in a least cost/shortest time manner while still maintaining the quality called for under the Contract Documents.
 - 3) Leave the property upon which the Contractor was working and upon which the facility (or facilities) forming the basis of the Contract Documents is situated in a safe and sanitary manner such that it does not pose any threat to the public health or safety.
 - 4) Terminate all subcontracts to the extent that they relate to the portions of The Work terminated.
 - 5) Place no further subcontracts or orders, except as necessary to complete the remaining portion of The Work.
 - 6) Submit to the City, within ten (10) Days from the effective date of the Notice of Termination, all of the documentation called for by the Contract Documents to substantiate all costs incurred by the Contractor for labor, materials and equipment through the Effective Date of the Notice of Termination. Any documentation substantiating costs incurred by the Contractor solely as a result of the City's exercise of its right to terminate this Contract pursuant to this clause, which costs the Contractor is authorized under the Contract Documents to incur, shall: (i) be submitted to and received by the City no later than thirty (30) Days after the Effective Date of the Notice of Termination; (ii) describe the costs incurred with particularity; and (iii) be conspicuously identified as "Termination Costs Occasioned by the City's Termination for Convenience."
 - 7) These provisions are in addition to and not in limitation of any other rights or remedies available to the City.
- c. Notwithstanding any other provision of this Article, when immediate action is necessary to protect life and safety or to reduce significant exposure or liability, the City may immediately order Contractor to cease Work on the Project until such



safety or liability issues are addressed to the satisfaction of the City or the Contract is terminated.

GC54. WARRANTY AND GUARANTEE

- a. Contractor warrants that all materials and equipment furnished under this Contract shall be new unless otherwise specified in the Contract Documents; and that all Work conforms to the Contract Document requirements and is free of any defect whether performed by the Contractor or any subcontractor or supplier.
- b. Unless otherwise stated, all warranty periods shall begin upon the filing of the Notice of Completion. Unless otherwise stated, the warranty period shall be for one year.
- c. The Contractor shall remedy at its expense any damage to City-owned or controlled real or personal property.
- d. Contractor shall furnish the City with all warranty and guarantee documents prior to final Acceptance of the Project by the City.
- e. The City shall notify the Contractor, in writing, within a reasonable time after the discovery of any failure, defect, or damage. The Contractor shall within ten (10) Days after being notified commence and perform with due diligence all necessary Work. If the Contractor fails to promptly remedy any defect, or damage; the county shall have the right to replace, repair, or otherwise remedy the defect, or damage at the Contractor's expense.
- f. In the event of any emergency constituting an immediate hazard to health, safety, property, or licensees, when caused by Work of the Contractor not in accordance with the Contract requirements, the City may undertake at Contractor's expense, and without prior notice, all Work necessary to correct such condition.
- g. With respect to all warranties, express or implied, from subcontractors, manufacturers, or suppliers for Work performed and Materials furnished under this Contract, the Contractor shall:
 - 1) Obtain for City all warranties that would be given in normal commercial practice;
 - 2) Require all warranties to be executed, in writing, for the benefit of the City; and
 - 3) Enforce all warranties for the benefit of the City, unless otherwise directed in writing by the City.



This Article shall not limit the City's rights under this Contract or with respect to latent defects, gross mistakes, or fraud. The City specifically reserves all rights related to defective work, including but not limited to the defect claims pursuant to California Code of Civil Procedure Section 337.15.

GC55. DOCUMENT RETENTION & EXAMINATION

- a. In accordance with Government Code Section 8546.7, records of both the City and the Contractor shall be subject to examination and audit by the State Auditor General for a period of three (3) years after final payment.
- b. Contractor shall make available to the City any of the Contractor's other documents related to the Project immediately upon request of the City.
- c. In addition to the State Auditor rights above, the City shall have the right to examine and audit all books, estimates, records, contracts, documents, bid documents, subcontracts, and other data of the Contractor (including computations and projections) related to negotiating, pricing, or performing the modification in order to evaluate the accuracy and completeness of the cost or pricing data at no additional cost to the City, for a period of four (4) years after final payment.

GC56. SOILS INVESTIGATIONS

When a soils investigation report for the Project site is available, such report shall not be a part of the Contract Documents. Any information obtained from such report as to subsurface soil condition, or to elevations of existing grades or elevations of underlying rock, is approximate only and is not guaranteed. Contractor acknowledges that any soils investigation report (including any borings) was prepared for purposes of design only and Contractor is required to examine the site before submitting its bid and must make whatever tests it deems appropriate to determine the underground condition of the soil.

GC57. SEPARATE CONTRACTS

- a. The City reserves the right to let other contracts in connection with this Work or on the Project site. Contractor shall permit other contractors reasonable access and storage of their materials and execution of their work and shall properly connect and coordinate its Work with theirs.
- b. To ensure proper execution of its subsequent Work, Contractor shall immediately inspect work already in place and shall at once report to the Engineer any problems with the work in place or discrepancies with the Contract Documents.
- c. Contractor shall ascertain to its own satisfaction the scope of the Project and nature of any other contracts that have been or may be awarded by the City in prosecution of the Project to the end that Contractor may perform this Contract in the light of such other contracts, if any. Nothing herein contained shall be



interpreted as granting to Contractor exclusive occupancy at site of the Project. Contractor shall not cause any unnecessary hindrance or delay to any other contractor working on the Project. If simultaneous execution of any contract for the Project is likely to cause interference with performance of some other contract or contracts, the Engineer shall decide which Contractor shall cease Work temporarily and which contractor shall continue or whether work can be coordinated so that contractors may proceed simultaneously. The City shall not be responsible for any damages suffered or for extra costs incurred by Contractor resulting directly or indirectly from award, performance, or attempted performance of any other contract or contracts on the Project site.

GC58. NOTICE AND SERVICE THEREOF

All notices shall be in writing and either served by personal delivery or mailed to the other party as designated in the Bid Forms. Written notice to the Contractor shall be addressed to Contractor's principal place of business unless Contractor designates another address in writing for service of notice. Notice to City shall be addressed to the City as designated in the Notice Inviting Bids unless City designates another address in writing for service of notice. Notice shall be effective upon receipt or five (5) Days after being sent by first class mail, whichever is earlier. Notice given by facsimile shall not be effective unless acknowledged in writing by the receiving party.

GC59. NOTICE OF THIRD PARTY CLAIMS

Pursuant to Public Contract Code Section 9201, the City shall provide Contractor with timely notification of the receipt of any third-party claim relating to the Contract.

GC60. STATE LICENSE BOARD NOTICE.

Contractors are required by law to be licensed and regulated by the Contractors' State License Board which has jurisdiction to investigate complaints against contractors if a complaint regarding a patent act or omission is filed within four (4) years of the date of the alleged violation. A complaint regarding a latent act or omission pertaining to structural defects must be filed within ten (10) years of the date of the alleged violation. Any questions concerning a contractor may be referred to the Registrar, Contractors' State License Board, P.O. Box 26000, Sacramento, California 95826.

GC61. INTEGRATION

- a. Oral Modifications Ineffective. No oral order, objection, direction, claim or notice by any party or person shall affect or modify any of the terms or obligations contained in the Contract Documents.
- b. Contract Documents Represent Entire Contract. The Contract Documents represent the entire agreement of the City and Contractor.



GC62. ASSIGNMENT

Contractor shall not assign, transfer, convey, sublet, or otherwise dispose of this Contract or any part thereof including any claims, without prior written consent of the City. Any assignment without the written consent of the City shall be void. Any assignment of money due or to become due under this Contract shall be subject to a prior lien for services rendered or Material supplied for performance of Work called for under the Contract Documents in favor of all persons, firms, or corporations rendering such services or supplying such Materials to the extent that claims are filed pursuant to the Civil Code, the Code of Civil Procedure or the Government Code.

GC63. CHANGE IN NAME AND NATURE OF CONTRACTOR'S LEGAL ENTITY

Should a change be contemplated in the name or nature of the Contractor's legal entity, the Contractor shall first notify the City in order that proper steps may be taken to have the change reflected on the Contract.

GC64. ASSIGNMENT OF ANTITRUST ACTIONS

Pursuant to Section 7103.5 of the Public Contract Code, in entering into a public works contract or subcontract to supply goods, services, or materials pursuant to a public works contract, Contractor or subcontractor offers and agrees to assign to the City all rights, title, and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. Section 15) or under the Cartwright Act (chapter 2 (commencing with Section 16700) of part 2 of division 7 of the Business and Professions Code), arising from the purchase of goods, services, or materials pursuant to this Contract or any subcontract. This assignment shall be made and become effective at the time the City makes final payment to the Contractor, without further acknowledgment by the parties.

GC65. PROHIBITED INTERESTS

No City official or representative who is authorized in such capacity and on behalf of the City to negotiate, supervise, make, accept, or approve, or to take part in negotiating, supervising, making, accepting or approving any engineering, inspection, construction or material supply contract or any subcontract in connection with construction of the project, shall be or become directly or indirectly interested financially in the Contract.

GC66. LAWS AND REGULATIONS

- a. Contractor shall give all notices and comply with all federal, state and local laws, ordinances, rules and regulations bearing on conduct of work as indicated and specified by their terms. References to specific laws, rules or regulations in this Contract are for reference purposes only, and shall not limit or affect the applicability of provisions not specifically mentioned. If Contractor observes that drawings and specifications are at variance therewith, he shall promptly notify the



Engineer in writing and any necessary changes shall be adjusted as provided for in this Contract for changes in work. If Contractor performs any work knowing it to be contrary to such laws, ordinances, rules and regulations, and without such notice to the Engineer, he shall bear all costs arising therefrom.

- b. Contractor shall be responsible for familiarity with the Americans with Disabilities Act ("ADA") (42 U.S.C. § 12101 et seq.). The Work will be performed in compliance with ADA laws, rules and regulations. Contractor shall comply with the Historic Building Code, including, but not limited to, as it relates to the ADA, whenever applicable.
- c. Contractor acknowledges and understands that, pursuant to Public Contract Code Section 20676, sellers of "mined material" must be on an approved list of sellers published pursuant to Public Resources Code Section 2717(b) in order to supply mined material for this Contract.

GC67. PATENT FEES OR ROYALTIES.

The Contractor shall include in its bid amount the patent fees or royalties on any patented article or process furnished or used in the Work. Contractor shall assume all liability and responsibility arising from the use of any patented, or allegedly patented, materials, equipment, devices or processes used in or incorporated with The Work, and shall defend, indemnify and hold harmless the City, its officials, officers, agents, employees and representatives from and against any and all liabilities, demands, claims, damages, losses, costs and expenses, of whatsoever kind or nature, arising from such use.

GC68. OWNERSHIP OF DRAWING

All Contract Documents furnished by the City are City property. They are not to be used by Contractor or any subcontractor on other work nor shall Contractor claim any right to such documents. With exception of one complete set of Contract Documents, all documents shall be returned to the City on request at completion of The Work.

GC69. NOTICE OF TAXABLE POSSESSORY INTEREST

In accordance with Revenue and Taxation Code Section 107.6, the Contract Documents may create a possessory interest subject to personal property taxation for which Contractor will be responsible.



SPECIAL CONDITIONS

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SC-01. Asbestos Abatement. Asbestos sampling was conducted by the City in the area around the Building B Windows, and the sampling results are included in the Asbestos and Lead Survey Report attached to this specification. Asbestos containing materials were present in the penetration mastic and stucco, and may be present in other inaccessible and untested areas.

The contractor shall follow the abatement recommendations provided in the survey report, including the use of a licensed abatement contractor for abatement of all asbestos containing materials. The contractor is responsible to ensure that all handling, transportation, and disposal are in conformance with applicable CAL/OSHA, EPA, AQMD, and government health agency requirements. The contractor shall provide the City with all Bill of Landing and Manifest documentation associated with the transportation and disposal of asbestos containing materials.

SC-02. Lead Abatement. Lead sampling was conducted by the City in the area around the Building B Windows, and the sampling results are included in the Asbestos and Lead Survey Report attached to this specification. Lead based paint was found present in the coatings on the window frames.

The contractor shall follow the abatement recommendations provided in the survey report, including the use of scraping and stabilization methods to remove loose and flaking paint chips. These methods shall be performed only by those who are properly qualified and trained. The contractor is responsible to ensure that all handling, transportation, and disposal are in conformance with applicable CAL/OSHA requirements and lead regulations.



SPECIAL FEDERAL PROVISIONS

CIP No. F-03 Ramp Replacement

The American Rescue Plan Act (ARPA) of 2021, also referred to as the COVID-19 Stimulus Package is a \$1.9 trillion economic stimulus bill passed by the U.S. congress on March 11, 2021. The funds are to accelerate the country's recovery from the economic and health impacts of the COVID-19 pandemic. ARPA includes \$350 billion for eligible state, local, territorial and tribal governments. These funds known as the Coronavirus State and Local Fiscal Recovery Funds (CSLFRF) provide a substantial infusion of resources to help address impacts of the pandemic and lay the foundation for a strong and equitable recovery.

The City of Beaumont (City) was awarded American Rescue Plan Act (ARPA) funding through an Agreement with the County of Riverside (County) for eligible infrastructure improvement projects. The County's ARPA appropriation is \$479,874,599 million, of which the first installment of \$239,937,300 was received on May 10, 2021. The second installment in the same amount was received on June 6, 2022.

The Contractor acknowledges and agrees to abide by the *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards* (2 C.F.R. 200) including, but not limited to, the federal provisions provided below under this contract:

SSC.01 Suspension and Debarment.

The Contractor and Subcontractors are subject to the non-procurement debarment and suspension regulations implementing Executive Orders 12549 and 12689, 2 C.F.R. part 180. The regulations in 2 C.F.R. part 180 restrict awards, subawards, and contracts with certain parties that are debarred, suspended, or otherwise excluded from or ineligible for participation in Federal assistance programs or activities.

SSC.02 System for Award Management (SAM) Verification.

The successful Contractor and subcontractors are required to register in the System for Award Management (SAM) and provide the City with their Unique Entity ID (UEI) using the following links: <https://sam.gov/content/entity-registration> or <https://usfcr.com/sam-registration/>

SAM registration will be valid for one year from the date the registration is complete. A SAM registration must be renewed each year to remain active and compliant. The City recommends renewing 90 days prior to the SAM expiration date.

Upon registration and receipt of UEI, Contractors and Subcontractors shall submit a SAM Verification form (see Appendices) to the City's Procurement Office: RChara@beaumontca.gov



SSC.03 Non-Discrimination.

The Contractor shall not discriminate in the provision of services, allocation of benefits, accommodation in facilities, or employment of personnel on the basis of ethnic group identification, race, religious creed, color, national origin, ancestry, physical handicap, medical condition, marital status or sex in the performance of this Agreement; and, to the extent they shall be found to be applicable hereto, shall comply with the provisions of the California Fair Employment and Housing Act (Gov. Code 12900 et. seq), the Federal Civil Rights Act of 1964 (P.L.88-352), the Americans with Disabilities Act of 1990 (42 U.S.C. S1210 et seq.) and all other applicable laws or regulations.

SSC.04 Equal Employment Opportunity/Fair Employment Practices.

The Contractor shall not deny benefits to any person on the basis of religion, color, ethnic group identification, sex, age, physical or mental disability, nor shall they discriminate unlawfully against any employee or applicant for employment because of race, religion, color, national origin, ancestry, physical handicap, mental disability, medical condition, marital status, age, or sex. Subrecipient shall ensure that the evaluation and treatment of employees and applicants for employment are free of such discrimination.

1. The Contractor shall comply with the provisions of the Fair Employment and Housing Act (Government Code, Section 12900 et seq.), the regulations promulgated thereunder (California Code of Regulations, Title 2, Section 11000 et seq.), the provisions of Executive Order 11246 of Sept. 23, 1965 and of the rules, regulations, and relevant orders of the Secretary of Labor, the provisions of Article 9.5, Chapter 1, Part 1, Division 3, Title 2 of the Government Code (Government Code, Sections 11135-11139.8), and of the rules, regulations or standards adopted by the County to implement such article.
2. The Contractor shall comply with the provisions of the Copeland "Anti-Kickback" Act, 18 U.S.C. § 874, 40 U.S.C. § 3145, and the requirements of 29 C.F.R. pt. 3 as may be applicable.

SSC.05 Access to Records.

The following access to records requirements apply to this contract:

1. The Contractor agrees to provide the City, County, the FEMA Administrator, the Comptroller General of the United States, or any of their authorized representatives access to any books, documents, papers, and records of the Contractor which are directly pertinent to this contract for the purposes of making audits, examinations, excerpts, and transcriptions.
2. The Contractor agrees to permit any of the foregoing parties to reproduce by any means whatsoever or to copy excerpts and transcriptions as reasonably needed.



3. The Contractor agrees to provide the FEMA Administrator or his or her authorized representatives with access to construction or other work sites pertaining to the work being completed under the contract.
4. In compliance with the Disaster Recovery Act of 2018, the City and the Contractor acknowledge and agree that no language in this contract is intended to prohibit audits or intimal reviews by the FEMA Administrator or the Comptroller General of the United States.

SSC.06 Byrd Anti-Lobbying Amendment.

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

The successful Contractor shall submit the Byrd Anti-Lobbying certification form (see Appendices) within five (5) business days of bid due date in an envelope titled “Federal Special Provisions” to the City’s Procurement Office: RChara@beaumontca.gov

SSC.07 Federal Prevailing Wage - Davis-Bacon and Related Acts (DBRA).

To the extent required by any Federal grant programs applicable to expected funding or reimbursement expenses incurred in connection with the services provided under this contract, the Contractor agrees to comply with the Davis-Bacon Act (40 U.S.C. 3141-3144 and 3146-3148) as supplemented by Department of Labor regulations (29 C.F.R. Part 5) as set forth below.

The Contractor shall be bound to the provisions of the Davis-Bacon Act and agrees to be bound by all the provisions of Labor Code section 1771 regarding prevailing wages. All labor on this project shall be paid neither less than the greater of the minimum wage rates established by the U.S. Secretary of Labor (Federal Wage Rates), or by the State of California Director of Department of Industrial Relations (State Wage Rates). Current DIR requirements may be found at <http://www.dir.ca.gov/lcp.asp>. Additionally, wages are required to be paid not less than once a week.

The Federal minimum wage rates for this project are predetermined by the United States Secretary of Labor. The Federal minimum wage determination for this project is **CA20240025, Modification 2** published January 18, 2024, and attached as for reference in the Appendices herein. General prevailing wage rates may be accessed at the Department of Labor Home Page at www.wdol.gov.

SPECIAL FEDERAL PROVISIONS



If there is a difference between the minimum wage rates predetermined by the Secretary of Labor and the general prevailing wage rates determined by the Director of the California DIR for similar classifications of labor, the Contractor shall pay not less than the higher wage rate. The City will not accept lower State wage rates not specifically included in the Federal minimum wage determinations. This includes "helper" (or other classifications based on hours of experience) or any other classification not appearing in the Federal wage determinations. Where Federal wage determinations do not contain the State wage rate determination otherwise available for use by the Contractor, the Contractor shall pay not less than the Federal minimum wage rate which most closely approximates the duties of the employees in question.

SSC.08 Copeland “Anti-Kickback” Act.

Pursuant to 40 U.S.C. 3145, all contracts and subcontracts in excess of \$2,000 for construction and repair awarded by recipients and subrecipients shall include a provision for compliance with the Copeland “Anti-Kickback” Act (18 U.S.C. 874), as supplemented by Department of Labor regulations (29 C.F.R. Part 3, “Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States”). The Act provides that each Contractor or Subcontractor must be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which the laborer is otherwise entitled.

SSC.09 Contract Work Hours and Safety Standards Act.

Contracts awarded by the City in excess of \$100,000 that involve the employment of mechanics or laborers, but not to purchases of supplies or materials or articles ordinarily available on the open market, or contracts for transportation or transmission of intelligence, must include a provision for compliance with 40 U.S.C. 3702 and 3704, as supplemented by Department of Labor regulations (29 CFR Part 5).

1. Compliance: Subrecipient agrees that it shall comply with Sections 3702 and 3704 of the Contract Work Hours and Safety Standards Act (40 U.S.C. §§ 3701-3708) as supplemented by Department of Labor regulations (29 C.F.R. Part 5), which are incorporated herein.
2. Overtime: No contractor or subcontractor contracting for any part of the work under this contract which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.



3. Violation; liability for unpaid wages; liquidated damages: In the event of any violation of the provisions of paragraph B of this section, the Contractor and any Subcontractor responsible therefore shall be liable for the unpaid wages. In addition, such Contractor and Subcontractor shall be liable to the United States for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic employed in violation of the provisions of paragraph B, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by paragraph B.
4. Withholding for unpaid wages and liquidated damages: The City shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the Contractor or Subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such Contractor or Subcontractor for unpaid wages and liquidated damages as provided in the clause set for in paragraph C of this section.
5. Subcontracts: The Contractor or Subcontractor shall insert in any subcontracts the clauses set forth in paragraphs A through D of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime Contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs A through D of this section.

SSC.10 Clean Air Act.

The Contractor agrees to comply with all applicable standards, orders, or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. Section 7401 et seq. The Contractor agrees to report each violation to the County and understands and agrees that the City will, in turn, report each violation as required to assure notification to the California Governor's Office of Emergency Services, Federal Emergency Management Agency (FEMA), and the appropriate Environmental Protection Agency Regional Office

SSC.11 Federal Water Pollution Control Act.

The Contractor agrees to comply with all applicable standards, orders, or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. Sections 1251 et seq. The Contractor agrees to report each violation to the County and understands and agrees that the City will, in turn, report each violation as required to assure notification to the Federal Emergency Management Agency (FEMA), and the appropriate Environmental Protection Agency Regional Office.

SPECIAL FEDERAL PROVISIONS

SSC.12 Never Contract with the Enemy.

The Contractor and Subcontractors are subject to the regulations implementing Never Contract with the Enemy in 2 CFR part 183. The regulations in 2 CFR part 183 affect covered contracts, grants and cooperative agreements that are expected to exceed \$50,000 within the period of performance, under this contract, are performed outside the United States and its territories, and are in support of a contingency operation in which members of the Armed Forces are actively engaged in hostilities.

SSC.13 Compliance with Economic Sanctions in Response to Russia's Action in Ukraine.

The Contractor shall certify that it is not a target of economic sanctions imposed in response to Russia's actions in Ukraine imposed by the United States government or the State of California. The Recipient and its Contractor is required to comply with the economic sanctions imposed in response to Russia's actions in Ukraine, including with respect to, but not limited to, the federal executive orders identified in California Executive Order N-6-22, located at <https://www.gov.ca.gov/wp-content/uploads/2022/03/3.4.22-RussiaUkraine-Executive-Order.pdf> and the sanctions identified on the United States Department of the Treasury website (<https://home.treasury.gov/policy-issues/financial-sanctions/sanctionsprograms-and-country-information/ukraine-russia-related-sanctions>).

The Contractor is required to comply with all applicable reporting requirements regarding compliance with the economic sanctions, including, but not limited to, those reporting requirements set forth in California Executive Order N-6-22 for all parties with one or more agreements with the State of California, the City of Beaumont, or any other local agency, with a value of Five Million Dollars (\$5,000,000) or more. Notwithstanding any other provision in these documents, failure to comply with the economic sanctions and all applicable reporting requirements may result in the disqualification or termination of this contract, if awarded.

For parties and contractors with an agreement value of Five Million Dollars (\$5,000,000) or more with the State of California, the County of Riverside, or any other local agency, reporting requirements include, but are not limited to, information related to steps taken in response to Russia's actions in Ukraine, including but not limited to:

1. Desisting from making any new investments or engaging in financial transactions with Russian institutions or companies that are headquartered or have their principal place of business in Russia;
2. Not transferring technology to Russia or companies that are headquartered or have their principal place of business in Russia; and
3. Direct support to the government and people of Ukraine.



To comply with this requirement, the Contractor shall insert their name and Federal ID Number (if available) on the certification form in the Appendices, execute by a duly authorized representative for the contractor and return to the City in an envelope titled “Special Federal Provisions” to the City’s Procurement Office: RChara@beaumontca.gov

SSC.14 Prohibition on certain Telecommunications and Video Surveillance Services or Equipment.

The Contractor and Subcontractors are prohibited from obligating or expending loan or grant funds to:

1. Procure or obtain;
2. Extend or renew a contract to procure or obtain; or
3. Enter into a contract (or extend or renew a contract) to procure or obtain equipment, services, or systems that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. As described in Public Law 115–232, section 889, covered telecommunications equipment is telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities).
 - a. For the purpose of public safety, security of government facilities, physical security surveillance of critical infrastructure, and other national security purposes, video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities).
 - b. Telecommunications or video surveillance services provided by such entities or using such equipment.
 - c. Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of the National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country.
4. In implementing the prohibition under Public Law 115–232, section 889, subsection (f), paragraph (1), heads of executive agencies administering loan, grant, or subsidy programs shall prioritize available funding and technical support to assist affected businesses, institutions and organizations as is reasonably necessary for those affected entities to transition from covered communications equipment and services, to procure replacement equipment and services, and to ensure that communications service to users and customers is sustained.

SSC.15 Small, Minority, Women's Business Enterprises, and Labor Surplus Area Firms.

Pursuant to § 200.321, Contractors must take all necessary affirmative steps to assure that minority businesses, women's business enterprises, and labor surplus area firms are used when possible:

Affirmative steps must include:

1. Placing qualified small and minority businesses and women's business enterprises on solicitation lists;
2. Assuring that small and minority businesses, and women's business enterprises are solicited whenever they are potential sources;
3. Dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by small and minority businesses, and women's business enterprises;
4. Establishing delivery schedules, where the requirement permits, which encourage participation by small and minority businesses, and women's business enterprises;
5. Using the services and assistance, as appropriate, of such organizations as the Small Business Administration and the Minority Business Development Agency of the Department of Commerce; and
6. Requiring the prime contractor, if subcontracts are to be let, to take the affirmative steps listed in paragraphs (b)(1) through (5) of this section.

The successful Contractor shall submit proof of solicitation along with a list of contracted small and minority businesses, women's business enterprises, and labor surplus area firms (see Appendices) within five (5) business days of bid due date in an envelope titled "Special Federal Provisions" to the City's Procurement Office: RChara@beaumontca.gov

SSC.16 Domestic Preferences for Procurements.

Contractors and Subcontractors should, to the greatest extent practicable under a Federal award, provide a preference for the purchase, acquisition, or use of goods, products, or materials produced in the United States (including but not limited to iron, aluminum, steel, cement, and other manufactured products). The requirements of this section must be included in all subawards including all contracts and purchase orders for work or products under this contract.

For purposes of this section:

1. "Produced in the United States" means, for iron and steel products, that all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States.
2. "Manufactured products" means items and construction materials composed in whole or in part of non-ferrous metals such as aluminum; plastics and polymer-based products such as polyvinyl chloride pipe; aggregates such as concrete; glass, including optical fiber; and lumber.

SPECIAL FEDERAL PROVISIONS



The successful Contractor shall identify any procurement of domestic material and supplies when submitting Construction Submittals for review under this contract.

Infrastructure projects awarded with Federal financial assistance in addition to American Rescue Plan Act (ARPA) funding must implement the Buy America preferences set forth in 2 CFR part 184.

SSC.17 Hatch Act.

Contractor agrees to comply, as applicable, with requirements of the Hatch Act (5 U.S.C. §§ 1501-1508 and 7324-7328), which limit certain political activities of State or local government employees whose principal employment is in connection with an activity financed in whole or in part by this federal assistance.

SSC.18 Increasing Seat Belt Use in the United States.

Pursuant to Executive Order 13043, 62 FR 19217 (Apr. 18, 1997), Contractor should encourage its contractors to adopt and enforce on-the-job seat belt policies and programs for their employees when operating company-owned, rented or personally owned vehicles.

SSC.19 Reducing Text Messaging While Driving.

Pursuant to Executive Order 13513, 74 FR 51225 (Oct. 6, 2009), Contractor should encourage its employees, subcontractors, and contractors to adopt and enforce policies that ban text messaging while driving, and Contractor should establish workplace safety policies to decrease accidents caused by distracted drivers.

SSC.20 Project Signage.

The Contractor shall include appropriate acknowledgement of credit to the County for its support when promoting the Infrastructure Project(s) or using any data and/or information developed under this Contract. Signage shall be posted in a prominent location at Infrastructure Project site(s) and shall include the U.S. Department of Treasury's, the County's, and the City's color logos, along with the following disclosure statement: *"Funding for this project has been provided in full or in part from the American Rescue Plan Act, and through an agreement with the County of Riverside."* The Contractor shall also include in each of its contracts for work under this contract a provision that incorporates the requirements stated within this paragraph.

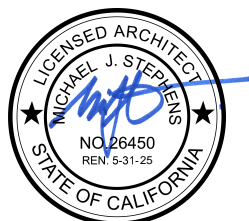
Project Manual
CITY OF BEAUMONT
RAMP REPLACEMENT



707 Brookside Avenue
Redlands, CA 92373
(909) 375-3030

SGH #21-60100-00

January 15, 2024



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**CITY OF BEAUMONT
RAMP REPLACEMENT**

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SECTION 01 10 00 - SUMMARY OF WORK

PART 1 – GENERAL

1.1 DESIGN REQUIREMENTS

- A. Work under this Contract includes furnishing all labor, materials, services and transportation, except as specifically excluded which is required for completion of Project in accordance with provisions of Contract Documents.
- B. Work to be included as part of this Contract:
 - 1. Ramp replacement for several locations as shown on the drawings. Demo existing ramps, stairs, landings, railings, sidewalks, asphalt, signage, landscaping, and other miscellaneous items.
- C. The following restrictions apply to access and to use of site:
 - 1. Use of Site: Limit use of premises to Work in areas indicated. Confine operations to areas within the existing Building and those areas of the site where new mechanical electrical and plumbing are being installed. Allow for Owner occupancy and use by of the site.
 - 2. Driveways and Entrances: Keep driveways and entrances serving premises clear and accessible to Owner, Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on site.
 - 3. Full Owner Occupancy: Owner will occupy site and existing buildings during entire construction period. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform Work so as not to interfere with Owner's operations.

1.2 SUBMITTALS

- A. Work may be conducted on regularly scheduled weekdays, Monday through Friday, between the hours of 7:00 A.M. and 4:00 P.M.

1.3 INTERRUPTION OF EXISTING UTILITY SERVICES

- A. When necessary to interrupt any existing utility service to make connections, minimum of 48 hours advance notice shall be given to Owner and Architect. Interruptions in utility services shall be of shortest possible duration for Work at hand and shall be approved by Architect.
- B. In event any utility service is interrupted without required 48 hours' notice, Contractor shall be financially liable for all damages suffered by Owner due to unauthorized interruption.

1.4 VERIFICATION OF EXISTING CONDITIONS

- A. Contractor shall be responsible to examine site of Work and after investigation to decide for himself/herself character of materials, equipment and utilities to be encountered and all other existing conditions affecting Work. Contractor is also responsible to provide sufficient costs to cover provisions of all items of Work under existing conditions referred to herein.

PART 2 - PRODUCTS

2.1 NOT USED.

PART 3 - EXECUTION

3.1 NOT USED.

END OF SECTION

SECTION 01 20 00 - PRICE AND PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Changes in the Work.
- B. Schedule of Values.

1.2 CHANGES IN THE WORK

- A. Changes in the Work affecting Structural Safety, Access or Fire and Life Safety, will be submitted for City of Beaumont for approval. Changes not affecting Structural Safety, Access or Fire and Life Safety will not be submitted for approval.
- B. Minor Changes in the Work: Architect will issue supplemental instructions authorizing minor changes in the Work, not involving adjustment to the Contract Sum or the Contract Time, on AIA Document G710 or Architect's form.
- C. Proposal Requests
 - 1. Owner-Initiated Proposal Requests - Work Change Proposal Request (WCPR): Architect will issue through a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.
 - a. Work Change Proposal Requests issued by Architect are not instructions either to stop work in progress or to execute the proposed change.
 - b. Within time specified in the General Conditions after receipt of Proposal Request, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.
 - 1) Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
 - 2) Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 - 3) Include costs of labor and supervision directly attributable to the change.
 - 4) Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
 - 2. Contractor-Initiated Proposals: If latent or changed conditions require modifications to the Contract, Contractor may initiate a claim by submitting a request for a change to Architect.

- a. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.
 - b. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
 - c. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 - d. Include costs of labor and supervision directly attributable to the change.
 - e. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
 - f. Comply with requirements in Section 01 60 00 Product Requirements if the proposed change requires the substitution of one product or system for the product or system specified.
- D. Construction Change Directive to the Contractor:
1. Construction Change Directive: Architect will issue a Construction Change Directive and completed WCPR (Work Change Proposal Request). Construction Change Directive instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.
 - a. Construction Change Directive contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.
 2. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Change Directive.
- E. Change Orders Procedures: On Owner's approval of a completed Construction Change Directive, Architect will prepare a Change Order for signatures of the Owner and Contractor.
1. Stipulated Price Change Order: Based on Contractor's Change Order Request as approved by Architect.
 2. Time and Material Change Orders: Submit itemized account and supporting data after completion of change within time limits indicated in Conditions of Contract. Architect will determine change allowable in Contract Price and Contract Time as provided in Contract Documents.
 3. Maintain detailed records of work done on Time and Material basis. Provide full information required for evaluation of proposed changes, and to substantiate costs for changes in Work.
 4. Refer to the General Conditions for additional requirements.

5. Execution of Change Orders: Architect will issue Change Orders for signature of parties as provided in Conditions of the Contract.
6. Refer to Change Order Form included at the end of this section.

1.3 SCHEDULE OF VALUES

- A. Submit printed schedule on AIA Forms G702 and G703 - Application and Certificate for Payment and Continuation Sheet. Contractor's standard form or electronic media printout will be considered, submit sample forms to Architect for approval.
- B. Submit application for progress payment in accordance with the General Conditions.
- C. Submit Schedule of Values in duplicate within 10 calendar days after Notice to Proceed for Architect's approval.
- D. Format: Utilize Table of Contents of this Project Manual. Identify each line item with number and title of the major Specification Section. Identify site mobilization and bonds and insurance. On projects of more than one building, list buildings separately. List mechanical, electrical, plumbing and fire protection Work separately for each building and for site Work.
 1. Arrange the Schedule of Values in a tabular form with separate columns to indicate the following for each item listed. Each sheet of the Schedule of Values shall be titled and numbered sequentially.
 - a. Line Item Number
 - b. Description of Item
 - c. Quantity
 - d. Unit of Measure
 - e. Unit of Price
 - f. Value of Line Item
 - g. Line Item Value Request this month
 - h. Line Item Value previously completed.
 - i. At the bottom of each sheet, the Total Amount shall be tabulated and carried forward on each page and the TOTAL AMOUNT presented at the end.
- E. Break down the plumbing and mechanical portions of the work at a minimum into a rough, finish, including air balance and electrical portion.
- F. Break out rough grading, fine grading, and underground utilities.
- G. Include separate line items, showing amount of General Contractor's overhead and profit, bonds and insurance, supervision, and then remainder of general items.
- H. Revise schedule to list approved Change Orders, with each Application for Payment.

PART 2 - PRODUCTS

2.1 NOT USED

PART 3 - EXECUTION

3.0 NOT USED

END OF SECTION

SECTION 01 26 10 - REQUESTS FOR INFORMATION (RFI)

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Administrative requirements for Requests for Information (RFI).

1.2 DEFINITIONS

- A. Request for Information:
 - 1. Written request prepared by Contractor requesting additional information necessary to clarify an item which he believes is not clearly shown or called for in the drawings or specifications, or to address problems which have arisen under field conditions, hereinafter referred to as RFI.
 - 2. Properly prepared request for information shall include a detailed written statement that indicates specific Drawings or Specifications in need of clarification and nature of clarification requested.
 - a. Drawings shall be identified by Drawing number and location on Drawing sheet.
 - b. Specifications shall be identified by Section number, page and paragraph.
 - 3. Contractor's documents with similar titles, such as "Request for Interpretation" or "Request for Clarification" shall be considered RFIs.
 - 4. RFIs and Architect's responses are not Changes in the Work; if a Change in the Work is required in response to an RFI, separate documents shall be issued in accordance with Section 01 20 00.
- B. Improper RFIs:
 - 1. RFIs that are not properly prepared or incomplete.
 - 2. Improper RFIs will be processed by Architect at Architect's standard hourly rate and Architect will charge Owner, and such costs will be deducted from moneys still due the Contractor. Architect will notify Contractor before processing of improper RFIs.
- C. Frivolous RFIs:
 - 1. RFIs that request information that is clearly shown on Contract Documents.
 - 2. Frivolous RFIs may be returned unanswered or may be processed by Architect at Architect's standard hourly rate and Architect will charge

Owner, and such costs will be deducted from moneys still due Contractor. Architect will notify Contractor before processing of frivolous RFIs.

1.3 CONTRACTOR'S REQUESTS FOR INFORMATION

- A. When the Contractor is unable to determine from Contract Documents, material, process or system to be installed, Architect will be requested to make clarification of indeterminate item.
 - 1. Whenever possible, such clarification shall be requested at next appropriate project meeting, with response entered into meeting minutes. When clarification at meeting is not possible, because of urgency of need, or complexity of item, Contractor shall prepare and submit RFI to Architect.
- B. Contractor shall endeavor to keep number of RFIs to a minimum. In the event the process becomes unwieldy, in the opinion of Architect, because of number and frequency of RFIs submitted, the Architect may require the Contractor to abandon process and submit future requests as either submittals, substitutions or requests for change.
- C. RFIs shall be submitted on form acceptable to Architect. Forms shall be completely filled in, and if prepared by hand, shall be fully legible after photocopying or transmission by facsimile (fax) or email scan. Each page of attachments to RFIs shall bear RFI number in lower right corner.
- D. RFI's shall be originated by Contractor:
 - 1. RFIs from subcontractors or material suppliers shall be submitted through, reviewed by, and signed by Contractor before submittal to Architect.
 - 2. RFIs sent by subcontractor or suppliers directly to Architect or Architect's consultants shall not be accepted and will be returned unanswered.
- E. Contractor shall carefully study Contract Documents to ensure that requested information is not available therein. RFIs which request information available in Contract Documents will be deemed "improper" or "frivolous" as noted above.
- F. In cases where RFIs are issued to request clarification of coordination issues, for example pipe and duct routing, clearances, specific locations of Work shown diagrammatically, and similar items, Contractor shall fully lay out suggested solution using drawings or sketches drawn to scale, and submit same with RFI. RFIs which fail to include suggested solution will be returned unanswered with requirement that Contractor submit a complete request.

1. Contractors are encouraged to utilize photocopies of Contract Documents to completely illustrate their questions, and to provide sketches as required to communicate question, concepts, and suggestions.
- G. Do not use RFIs for following purposes:
1. To request approval of submittals.
 2. To request approval of substitutions.
 3. To request changes which entail additional cost or credit.
 4. To request changes which entail change of time of completion.
 5. To request different methods of performing Work than those drawn and specified.
- H. In event Contractor believes that clarification by Architect results in additional cost or time, Contractor shall not proceed with Work indicated by RFI until Change Order or Construction Change Directive is prepared and approved in accordance with Section 01 20 00. RFIs shall not automatically justify cost increase in Work or change in project schedule.
1. Answered RFIs shall not be construed as approval to perform extra Work.
 2. Unanswered RFIs will be returned with stamp or notation: Not Reviewed.
- I. Contractor shall prepare and maintain log of RFIs, and at any time requested by Architect, Contractor shall furnish copies of log showing outstanding RFIs. Contractor shall note unanswered RFIs in log.
- J. Contractor shall allow up to 7 days review and response time for RFIs, however, Architect will endeavor to respond in timely fashion to RFIs.

1.1 ARCHITECT'S RESPONSE TO RFIs

- A. Architect will respond to RFIs on one of following forms:
1. Properly prepared RFIs:
 - a. If no Change in the Work is required, Architect will respond in space provided on the RFI form.
 - b. If a Change in the Work is required, Architect will issue in accordance with Section 01 20 00.
 2. Improper or Frivolous RFIs:
 - a. Notification of Processing Fee(s).
 - b. Unanswered RFIs will be returned with stamp or notation: "Not Reviewed".

- B. Architect may opt to retain RFIs for discussion during regularly scheduled project meetings for inclusion of responses in meeting minutes in lieu of responding on written form.

PART 2 - PRODUCTS

2.1 NOT USED

PART 3 - EXECUTION

3.1 NOT USED

(RFI FORM ON NEXT PAGE)

**ARCHITECT'S
SUPPLEMENTAL INSTRUCTIONS**
(Architect's Response to RFI)

RFI No. _____
Date on RFI: _____
Date actually
received by Architect: _____

Copies to _____

- Owner
- Contractor
- Inspector (Field)

PROJECT: _____

OWNER: _____ Date of Issuance
to the Contractor: _____

TO: _____ ARCHITECT:
(Contractor)

CONTRACT FOR: _____ ARCHITECT'S:
PROJECT NO. _____

Conduct the Work in accordance with the following Supplemental Instructions issued in accordance with the Contract Documents without change in Contract Sum or Contract Time. Proceeding with the Work in accordance with these instructions indicates acknowledgement that there will be no change in the Contract Price, Contract Time, or both. If a change in either or both the Contract Sum or Contract Time is anticipated, submit a Change Order Proposal for the Work before proceeding with the change. Submit the CO proposal within 7 days from the date of this response.

Description: _____

Response: _____

Attachments and Clarification Drawings:

Project Architect

END OF SECTION

SECTION 01 30 00 - ADMINISTRATIVE REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED SECTION(S):

01 33 00 – Submittal Procedures

1.2 SECTION INCLUDES

- A. Project Management and Coordination: Project Coordination, Mechanical and Electrical Coordination, Project Meetings.
- B. Construction Progress Documentation: Construction Progress Schedule, Two-week Look Ahead Schedule, Construction Photographs.
- C. Submittal Procedures: Shop Drawings, Product Data, Samples, Source Quality Control Reports, Finishes Materials Schedule, Coordinated Drawings. Provide Submittals for items specified on the Drawings regardless of whether there is a corresponding Specification Section.

1.3 PROJECT COORDINATION

- A. Coordinate scheduling, submittals, and Work of various Sections of Project Manual to ensure efficient and orderly sequence of installation of interdependent construction elements, with provisions for accommodating items installed later.
- B. Verify utility requirements and characteristics of operating equipment are compatible with building utilities. Coordinate Work of various Sections having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.
- C. Coordinate space requirements and installation of mechanical and electrical Work that are indicated diagrammatically on Drawings. Follow routing shown for pipes, ducts, and conduit, as closely as practicable; place runs parallel with line of building. Utilize spaces efficiently to maximize accessibility for other installation, for maintenance, and for repairs.
- D. In finished areas except as otherwise indicated, conceal pipes, ducts, and within wiring construction. Coordinate locations of fixtures and outlets with finish elements.
- E. Coordinate completion and cleanup of Work of separate sections in preparation for Certified Completion and for portions of Work designated for Owner's occupancy.
- F. After Owner occupancy of premises, coordinate access to site for correction of defective Work and Work not in accordance with Contract Documents, to minimize disruption of Owner's activities.

1.5 PROGRESS MEETINGS

- A. Architect will schedule and administer meetings throughout progress of Work as needed.
- B. Architect will make arrangement for meetings, prepare agenda with copies for participants,

preside at meetings.

- C. Attendance Required: Project Coordinator, Major Subcontractors and Suppliers, Project Inspector, key Owner personnel and Architect as appropriate to agenda topics for each meeting.
- D. Agenda:
 - 1. Review minutes of previous meetings.
 - 2. Review of Work progress.
 - 3. Field observations, problems, and decisions.
 - 4. Identification of problems that impede planned progress.
 - 5. Review of submittals schedule and status of submittals.
 - 6. Maintenance of Construction Progress Schedule.
 - 7. Corrective measures to regain projected schedules.
 - 8. Maintenance of quality and work standards.
 - 9. Effect of proposed changes on progress schedule and coordination.
 - 10. Other business relating to Work.
- E. Architect will record minutes and distribute copies within seven days after meeting to participants, and those affected by decisions made.

1.6 PREINSTALLATION MEETING

- A. When required in individual Specification Sections, convene pre-installation meeting before starting Work of Section.
- B. Require attendance of parties directly affecting, or affected by, Work of specific Section.
 - a. Notify Architect four days in advance of meeting date.
- D. Prepare agenda and preside at meeting:
 - 1. Review conditions of installation, preparation and installation procedures.
 - 2. Review coordination with related Work.
- E. Contractor shall record minutes and distribute copies within three days after meeting to participants, Architect and those affected by decisions made.

1.7 SUBMITTAL PROCEDURES (Also refer to Section 01 33 00 – Submittal Procedures)

- A. Transmit separate request for EACH Section submittal directly to Architect.

1. Bind submittals sturdily, neatly label covers.
 2. Include SGH Architects job number as it appears on Contract Documents.
 3. Include Authority Having Jurisdiction application or approval number.
- B. Submittal number shall use a sequential number followed by a hyphen then the Specification Section followed by a hyphen and then the revision number (e.g., 1.0-05 12 00-0). Resubmittals shall have the original number and include the revision number as the suffix (e.g., 1.0-05 12 00-1).
- C. Identify Project, Contractor, Subcontractor or supplier; pertinent Drawing sheet and detail number(s), and Specification Section number, as appropriate.
1. Provide name, and telephone number of individual who may be contacted for further information.
- D. Apply Contractor's dated stamp with Contractor's original signature or initials affixed thereto, certifying that review, verification of products required, field dimensions, adjacent construction Work, and coordination of information is according to requirements of Work and Contract Documents. Stamped signatures or initials are not acceptable.
- E. Schedule submittals to expedite Project. Coordinate submission of related items.
1. Make submittals according to Construction Schedule and adequate enough in advance of scheduled dates of installation to provide required time for reviews for securing necessary approvals for possible revision and re-submittal and for placing orders and securing delivery.
 2. Schedule submittals such that related materials and assemblies that support or are affected by the submitted materials are either submitted simultaneously or in order of installation sequence such that impacts, and coordination can be evaluated as part of the review.
 3. Late submittals, not in accordance with the "Schedule for Submission of Shop Drawings, Product Data and Samples" and the Construction Schedule will not be considered an acceptable reason for initiating a substitution requests caused by late ordering and procurement of materials.
- F. Identify variations from Contract Documents and Product or system limitations that is detrimental to performance of completed Work.
- G. Substitutions: Submit only as approved per the General Conditions and Section 01 60 00, state effect of approved substitution on construction schedule, and changes required in other work or products.
- H. Owner-Directed Substitution Approval: Substitution submittals specifically directed by Owner to be approved by the Architect for this project shall pertain to a specific item only. The Architect's stamped approval of Owner-Directed Substitution does not constitute approval for any other item, other projects or parts of project. A Change Order shall be prepared to affect the Owner's authorization of Owner-Directed Substitution.

- I. Provide space for Contractor and Architect review stamps.
- J. Revise and resubmit submittals in their entirety, identify changes made since previous submittal.
- K. Distribute copies of reviewed submittals to concerned parties. Instruct parties to promptly report any inability to comply with provisions.
- L. Determine and verify field dimensions and conditions, materials, catalog numbers and similar data.
- M. Coordinate as required with all trades and all public agencies involved.
- N. Unless otherwise specifically authorized by Architect, make submittals in groups containing associated items within the same Section. Architect may reject partial submittals as not complying with provisions of this Section.
- O. Where individual Sections require structural calculations, prepare submittal under direction of qualified California Licensed Structural Engineer and shall bear the Engineer's stamp and signature.
- P. Format of Submittals: Submit Electronic Submittals, including but not limited to Product Data, Shop Drawings, Schedules, Certifications, tests, logs, for ease of information distribution. At Contractor's option he may submit standard printed data on reproducible media and in number of copies required per this Section and other project Sections. Identify submitted items that are applicable to the project, including any deviations, with arrows, clouds, or other distinct graphic, or in highlighted writing that can be reproduced with black and white copiers easily discernible from background information.

1.8 CONSTRUCTION PROGRESS SCHEDULE

- A. Submit Construction Progress Schedule in duplicate within 10 Days (per WVUSD General Conditions) after the date on the Notice to Proceed for Architect's review.
 - 1. Schedule shall reflect amount of time stipulated in Agreement.
 - 2. If the Contractor proposes an earlier completion dated than stipulated in the Agreement, Change Order will be issued reflecting revised completion date at no change in Contract Sum.
- B. Revise and resubmit as required.
- C. Scheduling may utilize programs including Microsoft Project Schedule, Primavera Project Planner (P3), Primavera SureTrak Project Manager, Meridian Project Systems or similar programs addressing the requirements.
- D. Submit computer generated network analysis diagram in accordance with Section 01 32 16.13 using Critical Path Method, generally as outlined in Associated General Contractors of America (AGC) publication "Construction Planning and Scheduling", latest Edition.
- E. Indicate complete sequence of construction by activity, identifying Work of separate stages and other logically grouped activities. Indicate early and late start, early and late finish, float

dates and duration. Ownership of float time is shared commodity, not for exclusive use by either party. Use float time to make up Work behind schedule until float time is depleted. Submittals returned in less time than allowed by Contract, shall be used to reduce Contractor time extension requests.

- F. Indicate Milestones and target date and their activities including completion dates,
- G. No Time extensions will be granted nor delay damages paid until a delay occurs that impacts the schedule consumes all available float or contingency time available and extends the work beyond the contract completion date.
- H. Indicate estimated percentage of completion for each item of Work at each submission.
- I. Schedule for Submission of Shop Drawings, Product Data and Samples: Incorporate "Schedule for Submission of Shop Drawings, Product Data and Samples" in Construction Progress Schedule. This schedule shall include submittal dates required for shop drawings, product data, samples and product delivery dates, including Deferred Approval Items, if any, and including those items furnished by Owner.

Provide time in schedule for Architect's review of submittals according to Contract Time. Allow 14 calendar days for submittals requiring consultants' review.
- J. Submit revised schedules with each Application for Payment identifying changes since previous version.
- K. As a minimum allow 15 calendar days in schedule for final inspections before final acceptance. Include time to correct punch list items prior to final acceptance.
- L. Substantially Completed buildings scheduled to be substantially completed and may be delivered to the Owner for beneficial occupancy prior to Final Completion as allowed by the City of Beaumont

1.9 TWO-WEEK LOOK AHEAD SCHEDULE

- A. Submit a Two Week Look Ahead Schedule and shall contain the following:
 - 1. Prepare detailed two-week schedule projections for the Work to be performed during the following weeks beyond the week it is presented at the weekly construction meeting or at the request of the Architect during the construction period.
 - 2. Be plotted in bar chart or time scale logic format and be of such size that all activity numbers and descriptions are clearly legible.
 - 3. Be sorted by sub-contractor responsibility, actual start, early start and total float.
 - 4. Include activity ID, description and float for each activity.
 - 5. Include all activities, completed, in progress and scheduled to start within the time frame of the date minus one week to the data date plus two weeks.
 - 6. Schedule shall be updated and provided at each regular progress meeting for review and comparison to approved project schedule status.

1.10 CONSTRUCTION PHOTOGRAPHS

- A. Photographer: Engage qualified persons to take construction photographs.
- B. Photographic Film: Medium format, 2-1/4 by 2-3/4 inches.
- C. Do not permit prints to be issued for any purpose without specific written authorization from the Architect.
- D. Digital Images: Provide images in uncompressed TIFF format, produced by a digital camera with minimum sensor size of 4.0 megapixels, and at an image resolution of not less than 1024 by 768.
 - 1. Provide Electronic or Digital copies to Owner.
- E. Date Stamp: Unless otherwise indicated, date and time stamp each photograph as it is being taken so stamp is integral to photograph.
 - 1. Identify each print with job name, location from which photograph was taken, photographer's name address and photograph number.
- F. Pre-Construction Photographs: Before starting construction, take 4 color photographs of Project site and surrounding properties from different vantage points, as directed by Architect. Show existing conditions adjacent to property.
- G. Periodic Construction Photographs: Take 4 color photographs monthly, coinciding with cutoff date associated with each Application of Payment. Photographer shall select vantage points to best show status of construction and progress since last photographs were taken. Take photographs same time of day.
 - 1. Field Office Prints: Retain 1 set of prints of periodic photographs in field office at Project site available at all times for reference. Identify photographs same as for those submitted to Architect.
 - 2. Final Completion Construction Photographs: Take 8 color photographs after date of Substantial Completion for submission as Project Record Documents. Architect will direct photographer for desired vantage points.
 - 3. Submit Construction Photographs to Owner monthly, submit before Application for Payment.

1.11 COORDINATED DRAWINGS

- A. Submit drawings that indicate routing, locations sizes, types and number of components in concealed spaces where potential conflict may occur between structures, mechanical, electrical, communications and ceiling suspension systems.
- B. Indicate locations of ceiling penetrations and surface-mounted items. Provide cross sections at areas to indicate proper support of ceilings and non-interference with work of other Sections of specifications. Cross sections shall indicate coordination required and proposed solutions for routing of elements where potential conflict exists. Reproduction of Architect's reflected ceiling plan is not acceptable.

- C Drawings shall be based on field measurements, shop drawings and product data.
- D Conflicts shall be brought to Architect's attention immediately.
- E Submit to Architect, in writing, requests for clarification or interpretations that will affect intent and/or scope of Contract Documents.
- F Coordinated drawings shall indicate each class of Work in affected area. Drawing or written submittal shall include Contractor's recommendations for solution of any potential conflicts as well as recommendations tendered by any Work of any Section of Specifications which may be affected thereby.
- G Submit coordinated drawings in scale of not less than 1/8" = 1'-0" with necessary sections and profiles at an appropriate, clearly readable enlarged scale. Submit coordinated drawings as one electronic (CD) copy and one bond (hard) copy.
- H Architect will review submittals, make appropriate notations and comments to ensure solution meets intent of Contract Documents and then return to Contractor for implementation.
- I Contractor shall be responsible for proper coordination of Work of Sections of Specifications in execution of coordinated drawings. Installation of materials, components or equipment under one Section of Specifications without full and complete, agreement, knowledge and consent by fabricators of adjacent or otherwise related or affected Work will not be approved.
- J It shall be incumbent upon Contractor that fabricators of Work involved in execution of coordinated drawings be informed, consulted and advised in sufficient advance time to arrive at solutions where no extension of contract time for extra cost to Owner will be approved due to Contractor's negligence in expeditious, timely submittal of coordinated drawings.

1.12 SHOP DRAWINGS

- A. Within 10 days (per WVUSD General Conditions) from Notice to Proceed submit to Architect for review and acceptance, "Schedule for Submission of Shop Drawings, Product Data and Samples" (Submission Schedule) listing required submittals and review dates. Schedule shall allow sufficient time for checking by Architect. Incorporate Submission Schedule in Construction Progress Schedule. Days: Calendar Days.
 - 1. Additionally, submit all Shop Drawings, Product Data and Samples according to the following guidelines. Guidelines are provided to allow Architect and Engineers adequate time for review and is not intended to dictate contractor's means and methods:
 - a. Contract of 60 to 90 days: Submit within 15 days from acceptance of Submission Schedule. Allow Architect 15 days to respond (defined as reviewed and returned). Re-submittals: allow contractor 7 days, allow Architect 10 days to respond.
 - b. Contract of 90 to 180 days: Submit within 30 days from Notice to Proceed. Allow Architect 15 days to respond. Re-submittals: allow Contractor 10 days, and Architect 15 days to respond.
 - c. Contract of 180 to 270 days: Submit within 45 days from Notice to Proceed. Allow Architect 21 days to respond. Re-submittals: allow

- Contractor 10 days, and Architect 15 days to respond.
- d. Contract of 270 to 360 days: Submit within 60 days from Notice to Proceed. Allow Architect 21 days to respond. Re-submittals: allow Contractor 10 days, and Architect 15 days to respond.
- B. Submit newly prepared information, drawn to accurate scale. Highlight, encircle or otherwise indicate deviations from Contract Documents.
- Do not reproduce Contract Documents or copy standard information as the basis of Shop Drawings. Standard information prepared without specific reference to Project will not be approved as shop drawings.
- C. Shop drawings shall include fabrications and installation drawings, setting diagrams, schedules, patterns, templates and similar drawings. Include following information:
1. Dimensions
 2. Identification of products and materials included.
 3. Compliance with specified standards.
 4. Notation of coordination requirements.
 5. Notation of dimensions established by field measurement.
- D. Sheet Size for print submittals: Except for templates, patterns and similar full-size drawings, submit shop drawings on sheets at least 8-1/2 inch x 11 inch, but not larger than 30 inch x 42 inch.
- E. Contractor shall review, stamp with his approval as herein required, and submit with reasonable promptness and in orderly sequence, according to Submittal Schedule, all shop drawings required by Contract Documents or subsequently by Architect as covered by modifications. Shop drawings shall be properly identified. At time of submission Contractor shall inform Architect in writing and with highlighted annotation on shop drawings of any deviation in shop drawings from requirements of Contract Documents.
- F. Stamp: Each page of shop drawings shall bear Contractor's stamp, which shall signify Contractor's representation that he has determined and verified materials, field measurements and field construction criteria related thereto, or will do so, and has checked and coordinated information contained in shop drawings. Each stamp shall be accompanied by wet signature or initial of employee of Contractor who may be contacted for information. Stamped signatures or initials are not acceptable.
- G. Method of Review: Submit Electronic Shop Drawing Submittals. Identify submitted items that are applicable to the project, including any deviations, with arrows, clouds, or other distinct graphic, or in highlighted writing that can be reproduced with black and white copiers easily discernible from background information.
1. Comments or corrections will be noted on submittals and returned to Contractor, who shall identify all changes made since previous submittal and resubmit in same manner. When reviewed, submittals will be stamped and returned to Contractor Who shall make distribution of electronic copies as required.

H. Processing Time

1. Allow enough time for submittal review, including time for re-submittals, as follows:
 - a. Time for review shall commence on Architect's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including re-submittals.
 - b. In accordance with the Schedule for Submission of Shop Drawings, Product Data and Samples. Review of each submittal for conformance with design concept of Project and with information given in Contract Documents. Architect's review of a separate item shall not indicate acceptance of assembly in which that item functions. Allow additional time if coordination with subsequent submittals is required. Architect will advise Contractor when a submittal being processed must be delayed for coordination.
 - c. Submittals requiring Consultants' Review: Where review of submittals by Architect's consultants is required, allow 14 calendar days for review of each submittal.
2. Re-submittal Review: In accordance with the Schedule for Submission of Shop Drawings, Product Data and Samples for each re-submittal.

I. Submittal of shop drawings to Architect, shall be made by Contractor with dated transmittal form or letter, and not by subcontractors or suppliers.

J. Architect's review of shop drawings shall not relieve Contractor of responsibility for any deviation from requirements of Contract Documents unless Contractor has informed Architect in writing of such deviation at time of submission and Architect has given written acceptance to specific deviation, nor shall Architect's review relieve Contractor from responsibility for errors or omissions in shop drawings.

K. No portion of Work requiring shop drawings shall be commenced until shop drawings have been returned with review by Architect.

L. At Contractor's option, he may request and if Architect approves use Architect's computer-generated drawings in electronic format. Contractor's request must be in writing with list of drawings requested and BIM format required. Contractor assumes all liability for accuracy of shop drawings if he opts to use Architect's drawings. Software for BIM formats requested by Contractor not currently available to Architect will be provided by Contractor at his own expense. Complete BIM Drawing Request Form at the end of this Section for request.

1. Engineers' Drawings, BIM engineers' drawings are available only at discretion of the Engineer.

1.13 PRODUCT DATA

A. Submit within time required by Shop Drawings.

B. Submittal shall be in electronic format; all files to be .pdf format.

- C. Mark each copy to identify applicable products, models, options and other data. Supplement manufacturers' standard data to provide information unique to this Project.
- D. After review, distribute and provide copies for Record Documents.

1.14 SAMPLES

- A. Submit within time required by Shop Drawings.
- B. Submit samples to illustrate functional and aesthetic characteristics of product with integral parts and attachment devices. Coordinate sample submittals for interfacing Work.
- C. Submit samples of finishes from the full range of manufacturers' standard colors, textures and patterns for Architect selections, or in custom colors selected.
- D. Include identification on each sample with full Project information.
- E. Submit minimum of three (3) samples or as specified in individual Sections of Specifications, two (2) of which will be retained by Architect.
- F. Reviewed samples which may be used in the Work are indicated Sections of the Specifications, two (2) of which will be retained by the Architect.
- G. Selection or rejection of samples will be determined by Architect in writing.
- H. Colors: Materials that are visually related to other finishes require that subcontractors submit their samples before normally scheduled in order that color selection can be made for other items that are scheduled to be ordered earlier in construction schedule. Complete submittal of color charts and color samples shall be made before related colors will be selected Architect. Contractor shall be responsible to coordinate submittal schedules so as not to delay Work.

1.15 FINISHES MATERIALS SCHEDULE

- A. Submit in accordance with Submittal Procedures.
- B. Submit Schedule verifying lead times of materials and products as scheduled on the Drawings.

1.16 MANUFACTURER'S INSTRUCTIONS

- A. When specified in individual Specification Sections, submit manufacturer's printed instruction for delivery, storage, assembly, installation, start-up, adjusting and finishing in quantities specified for product data.
- B. Identify conflicts between manufacturer's Instructions and contract documents.

1.17 MANUFACTURER'S CERTIFICATIONS

- A. When specified in individual Specification Sections, submit manufacturers' certificate to Architect for review in quantities specified for product data.
- B. Indicate that material or product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits and certifications as appropriate.

- C. Certificates may be recent or previous test results on material or product but must be acceptable to Architect.

1.18 SPECIAL PROCEDURES - ACCELERATION OF THE WORK

- A. If, in judgment of Architect or Owner, it becomes necessary at any time to accelerate Work or portion thereof, Contractor, when ordered or directed by Architect or Owner, shall deploy workers in such portions of Project where directed to enable others to properly engage and carry on their work.
 - 1. If circumstances require that entire Work or portion thereof be completed at date earlier than Contract Completion Date as adjusted by change orders, Contractor, when ordered or directed by Owner or Architect, shall increase his forces, equipment, hours of work, and/or number of shifts and shall expedite delivery of materials to meet the altered completion date or dates ordered or directed. Any increase in cost to Contractor in compliance with such orders or directives will be adjusted in accordance with Contract Documents.
- B. If, in judgment of Architect or Owner, Work is behind schedule and rate of placement of work is inadequate to regain scheduled progress so as to ensure timely completion of Work or separable portion thereof, Contractor, when so informed by Architect or Owner, shall immediately take action to increase rate of Work placement.
 - 1. This shall be accomplished by any one or combination of following or other suitable measures:
 - a. An increase in working forces,
 - b. An increase in equipment or tools,
 - c. An increase in hours of work or number of shifts,
 - d. Expediting delivery of materials.
 - 2. Contractor shall, within ten (10) calendar days after being so informed, notify Architect of specific measures taken and/or planned to increase rate of progress together with estimate of when scheduled progress will be regained. Should plan of action be deemed inadequate by Architect or Owner, Contractor will take additional steps or make adjustments as necessary to his plan of action until it meets with Architect's or Owner's approval.
 - 3. Acceleration of Work will continue until scheduled progress is regained. Scheduled progress shall be established from latest revised approved progress schedule for Project.
 - 4. Timely completion will be understood as Contract Completion Date as revised by all time extensions granted at time acceleration is undertaken.
 - 5. Contractor shall not be entitled to additional compensation for additional effort he applies to Work under terms of this sub-paragraph.

- C. Any directive or order to accelerate Work will be in writing. Any directive or order terminating accelerated Work will be in writing.

1.19 PRECEDENCE

- A. The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all; performance by the Contractor shall be required only to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results.
- B. In the event of conflicts or discrepancies among the Contract Documents, interpretations will be based on the following priorities:
 - 1. The Agreement.
 - 2. Addenda, with those of later date having precedence over those of earlier date.
 - 3. The General Conditions of the Contract for Construction.
 - 4. Drawings and Technical Specifications.
 - 5. In the case of an inconsistency between Drawings and Specifications or within either Document not clarified by addendum, the better quality or greater quantity of Work shall be provided in accordance with the Architect's interpretation.
 - 6. Any work called for in the Drawings and not mentioned in the Specifications, or vice versa, shall be performed as though fully set forth in both.
 - 7. Contractor shall secure written permission from, Architect before proceeding with work affected by omission or discrepancies in the Contract.
 - a. Separate sections of this Specification are arranged only for convenience of Contractor, and nothing stated herein should be misconstrued as suggesting jurisdiction over items of work by any different building trades.

1.20 SAFETY PLAN

- A. During the entire construction period, it shall be the sole responsibility of each Contractor to maintain conditions at the Project Site to meet the requirements of the Federal Occupational Safety and Health Administration (OSHA) and California Occupational regulations. This provision shall cover the Contractor's employees and all other persons working upon or visiting the site. The Contractor shall become fully informed of all applicable standards and regulations and inform all persons and representatives responsible for work under this Contract.
 - 1. Each Contractor shall submit to the Project Manager their Company Safety Plan within seven (7) calendar days following date of issuance of the letter of intent.

PART 2 - PRODUCTS

2.1 MOTOR HORSEPOWER - MECHANICAL AND ELECTRICAL COORDINATION

- A. In general, motors larger than 1/2 Hp shall be three phase, motors 1/2 Hp or less shall be single phase.
- B. Voltage and phase of motors as scheduled on electrical drawings shall take precedence in case of conflict between mechanical and electrical drawings or requirements 2 01 A., above.
- C. Under Work of Divisions 21, 22, and 23 and as shown on the drawings. shall include coordination of mechanical equipment with requirements of Division 26 before ordering.
 - 1. If motors' horsepower is changed under Work of the mechanical/plumbing drawings, the additional electrical cost of change shall be the responsibility of the Mechanical or Plumbing Sub-Contractor. Increase or decrease motor horsepower from that specified shall not be made without written approval from Architect.

2.2 PRODUCTS FOR PATCHING AND EXTENDING WORK

- A. Refer to Section 01 70 00 Execution Requirements.

PART 3 - EXECUTION

3.1 NOT USED.

(BIM FORM ON NEXT PAGE)

BIM MODEL REQUEST FORM

Date: _____

SGH Job Number: _____

Project: _____

Project Architect: _____

We _____
Contractor

Request the following listed BIM Model(s) for use in the execution of our Work under the Contract Documents of the subject project, and hereby assume all and sole responsibility of field verification and coordination with the Work of associated trades.

The Contractor further agrees, to the fullest extent permitted by law, to indemnify and hold harmless the Architect, its officers, directors, employees and subconsultants (collectively, Architect) against any damages, liabilities or costs, including reasonable attorneys' fees and defense costs, arising from or allegedly arising from or in any way connected with the unauthorized reuse or modification of the electronic files by the Contractor or any person or entity that acquires or obtains the electronic files from or through the Contractor without the written authorization of the Architect.

Model Name:	Dated	Model Title
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Requested File Format

RVT (Revit - 2015)

Requested File Deliverable

USB Flash Drive

E-MAIL (Newforma Info Exchange)

FTP (Zipped Files)

CD Rom

Contractor's E-mail address

Contractors are not required to pay for the first 2 models (maximum). Additional models available at a rate of \$50.00 per model.

Total payment enclosed \$ _____, (checks made payable to **SGHArchitects**).

Signed: _____

Title: _____

Company: _____

Address: _____

Telephone: _____

Contact: *SGHArchitects Inc.*
Project Manager

END OF FORM

END OF SECTION

SECTION 01 32 00 – CONSTRUCTION PROGRESS DOCUMENTATION

PART 1 - GENERAL

1.1 SUMMARY

- A. The work includes the preparation and submission of the schedules and reports specified herein, including the up-to-date maintenance thereof as required. The Conditions of the Contract and the other sections of Division 1 apply to this section as fully as if repeated herein.

1.2 CONSTRUCTION SCHEDULE

- A. Immediately upon being awarded the Contract and before request for a partial payment, the Contractor shall prepare and submit to the Architect a construction progress schedule. The schedule shall be prepared in chart form according to the Critical Path Method (CPM) with the dates for beginning and completion of each trade and activity included. Computer prepared CPM charts are acceptable. The schedule shall conform to the working time and the time of completion established under the terms of the Contract and shall be subject to modification by and approval of the Owner. When, in the opinion of the Owner, it becomes necessary to accelerate the work, the Contractor, when so ordered, shall modify the schedule to conform to such requirements.
- B. The Construction Schedule shall be continuously updated and, if necessary, redrawn and submitted simultaneously with the application for progress payments. Each revised schedule shall indicate the work actually accomplished during the previous period and the schedule for completion of the remaining work.
- C. A copy of the most recent updated Construction Schedule shall be posted in the Contractor's job office, and copies of all out-of-date schedules shall be kept at the job office at all times for perusal by the Owner.

1.3 SUBMITTAL SCHEDULE

- A. The Contractor shall also furnish a separate schedule along with the Construction Schedule specified above, showing the proposed dates for submittal of all samples, shop drawings, and product data.
- B. Submit two copies of the submittal schedule to the Architect.

1.4 SCHEDULE OF VALUES

- A. Immediately upon being awarded the Contract, and before request for payment, prepare and submit to the Architect a Schedule of Values allocated to the various portions of the work. This Schedule of Values, unless objected to by the Architect, shall be used only as the basis for the Contractor's Applications for Payment.
- B. The schedule shall list the installed value of the component parts of the work in sufficient detail to serve as a basis for computing values for progress payments during construction. Follow the table of contents of this Project Manual as the format for listing component items.

For each major line item list sub-values of major products or operations under the item, where applicable.

- C. Each item shall include a directly proportional amount of the Contractors overhead and profit.
- D. For items on which progress payments will be requested for stored materials, break down the value into (1) the cost of the materials, delivered and unloaded, with taxes paid, and (2) the total installed value.
- E. The sum of all values listed in the schedule shall equal the total Contract sum.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION

SECTION 01 32 16.13 - NETWORK ANALYSIS SCHEDULES

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. References
- B. Quality Assurance.
- C. Format
- D. Schedule
- E. Submittals
- F. Review and Evaluation.
- G. Updating Schedule.
- H. Distribution

1.2 REFERENCES

- A. "Construction Planning and Scheduling", The Associated General Contractors of America (AGC), Washington, D.C., Latest Edition.

1.3 QUALITY ASSURANCE

- A. Scheduler: Contractor's Personnel specializing in CPM scheduling with one year minimum experience in scheduling construction Work of complexity comparable to this Project, and having use of computer facilities capable of delivering detailed graphic printout within 48 hours of request.
- B. Contractor's Administrative Personnel: One year minimum experience in using and monitoring CPM schedule on comparable projects.

1.4 FORMAT

- A. Scheduling may utilize programs (Latest Editions) including Microsoft Project, Primavera Project Planner for Windows (P3), Primavera SureTrack Project Manager, Meridian Project Systems or similar programs addressing the requirements.
- B. Listings: Reading from left to right, in ascending order for each activity. Identify each activity with applicable Specification section number.
- C. Diagram Sheet Size: 30 inches high by width required.
- D. Scale and Spacing: To allow for notations and revisions.

1.5 SCHEDULE

- A. Prepare Network Analysis Schedule and supporting mathematical analyses using Critical Path Method, under concepts and methods outlines in AGC's "Construction Planning and Scheduling".
- B. Diagrams to illustrate order and interdependence of activities and sequence of Work, how start of given activity depends on completion of preceding activities, and how completion of activity may restrain start of subsequent activities.
- C. Illustrate complete sequence of construction by activity, identifying Work of separate stages and other logically grouped activities. Indicate early and late start, early and late finish, float dates and duration. Provide dates for procurement and delivery of critical products and dates for installation and provision for testing. Provide legend for symbols and abbreviations used. Indicate fabrication, delivery and installation activities.
- D. Incorporate Schedule for Submission of Shop Drawings and Samples. Submittal dates required for shop drawings, product data, samples and product delivery dates, including those furnished by Owner. Provide time in schedule for review of submittals.
- E. Mathematical Analysis: Tabulate each activity of detailed network diagrams, using calendar dates and identifying for each activity:
 - 1. Preceding and following event number.
 - 2. Activity description.
 - 3. Estimated duration of activity, in maximum 15 day intervals.
 - 4. Earliest start date.
 - 5. Earliest finish date.
 - 6. Actual start date.
 - 7. Actual finish date.
 - 8. Latest start date.
 - 9. Latest finish date.
 - 10. Lag time, total and free float for each activity and critical path.
 - 11. Monetary value of activity, keyed to Schedule of Values.
 - 12. Manpower and cost loading of scheduled activities.
 - 13. Percentage of activity completed.
 - 14. Responsibility
- D. Analysis Program: Capable of compiling monetary value of completed and partially completed activities of accepting revised completion dates and re-computation of all dates and float.
- E. Required Sorts: List activities in sorts or groups:
 - 1. By preceding Work item or event number from lowest to highest.
 - 2. By amount of float, then in order of early start.
 - 3. By responsibility in order of earliest possible start date.
 - 4. In order of latest allowable start dates.
 - 5. In order of latest allowable finish dates.
 - 6. Contractor's periodic payment request sorted by Schedule of Values.
 - 7. Listing of basic input data that generates report.
 - 8. Listing of activities on critical path.

- F. Coordinate contents with Schedule of Values.
 - 1. Contractor shall not sequester float through strategies including extending activity duration estimates to consume available float, using preferential logic, using extensive or insufficient crew or resource loading, use of float suppression techniques, special lead or lag logic restraints or imposed dates.

1.6 SUBMITTALS

- A. COMPLETE Network Analysis Schedule: Within 10 days after Notice to Proceed, submit Draft of proposed COMPLETE Network Analysis Schedule for review. Include written certification that major mechanical and electrical Subcontractors have reviewed and accepted proposed schedule. Make submittals in sufficient time for Architect's review.
- B. Participate in review of Preliminary and Complete Network Analysis Schedule jointly with Architect.
- C. Number of opaque reproductions Contractor requires, plus three copies which will be retained by Architect.
- D. One reproducible transparency and one opaque reproduction.
- E. All schedule submittals, including progress updates for duration of Work, shall include electronic submittal in original file format, by e-mail or delivered on storage media agreed to.
- F. Updated network schedule with each Application for Payment.

1.7 REVIEW AND EVALUATION

- A. Participate in joint review and evaluation of network diagrams and analysis with Architect at each submittal.
- B. Evaluate project status to determine Work behind schedule and Work ahead of schedule.
- C. After review, revise as necessary as result of review and resubmit within 10 days.

1.8 UPDATING SCHEDULE

- A. Maintain schedule to record actual start and finish dates of completed activities.
 - 1. Submit updated schedule at each scheduled project meeting or monthly, whichever is more frequent.
- B. Indicate progress of each activity to date of revision with project completion date of each activity. Update diagrams to graphically depict current status of Work.
- C. Identify activities modified since previous submittal, major changes in Work, and other identifiable changes.

- D. Indicate changes required to maintain Date of Certified Completion.
- E. Submit sorts required to support recommended changes.
- F. Provide narrative report to define problem areas, anticipated delays and impact on Schedule. Report corrective action taken or proposed and its effect including effect of change on schedule of separate contractors.

1.9 DISTRIBUTION

- A. Following joint review, distribute copies of updated schedule to Contractor's project site file, to Subcontractors, Suppliers, Architect, Owner and other concerned parties.
- B. Instruct recipients to promptly report, in writing, problems anticipated by projections shown in schedule.

PART 2 - PRODUCTS

2.1 NOT USED.

PART 3 - EXECUTION

3.1 NOT USED.

END OF SECTION

SECTION 01 33 00 – SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Submittal Procedures
- B. Shop Drawings
- C. Product Data
- D. Samples
- E. Manufacturers' Instructions
- F. Manufacturers' Certificates
- G. Coordinated Drawings

1.2 SUBMITTAL PROCEDURES

- A. Transmit separate request for each submittal directly to the General Contractor.
 - 1. Bind submittals sturdily, neatly label covers.
 - 2. Include Architect job number as it appears on Contract Documents.
 - 3. Include agency application or approval number.
- B. Sequentially number the transmittal forms. Resubmittals to have original number with a revision number suffix (ie. 01.1, 01.2 etc.)
- C. Identify Project, Contractor, Subcontractor or supplier; pertinent Drawing sheet and detail number(s), and Specification Section number, as appropriate.
 - 1. Provide name and telephone number of individuals who may be contacted for further information.
- D. Apply Contractor's dated stamp with Contractor's original signature or initials affixed thereto, certifying that review, verification of Products required, field dimensions, adjacent construction Work, and coordination of information is in accordance with the requirements of the Work and Contract Documents. Stamped signatures or initials are not acceptable.
- E. Schedule submittals to expedite the Project. Coordinate submission of related items.
 - 1. Make all submittals in accordance with the progress schedule and far enough in advance of scheduled dates of installation to provide required time for reviews for securing necessary approvals for possible revision and resubmittal and for placing orders and securing delivery.

- F. Identify variations from Contract Documents and Product or system limitations which may be detrimental to successful performance of the completed Work.
- G. State effect of substitution on construction schedule, and changes required in other work or products.
- H. Provide space for Contractor and Architect review stamps.
- I. Revise and resubmit submittals as required, identify all changes made since previous submittal.
- J. Distribute copies of reviewed submittals to concerned parties. Instruct parties to promptly report any inability to comply with provisions.
- K. Determine and verify all field dimensions and conditions, materials, catalog numbers and similar data.
- L. Coordinate as required with all trades and all public agencies involved.
- M. Unless otherwise specifically authorized by Architect, make all submittals in groups containing all associated items. Architect may reject partial submittals as not complying with the provisions of this section.

1.3 SHOP DRAWINGS

- A. Submit a schedule of the shop drawings, listing their required submission and review dates to the Architect for review and acceptance. The schedule shall allow sufficient time for checking by the Architect. In addition, the shop drawing submission and review dates shall be incorporated into the progress schedule required in the General Conditions.
- B. Submit newly prepared information, drawn to accurate scale. Highlight, encircle or otherwise indicate deviations from the Contract Documents. Do not reproduce Contract Documents or copy standard information as the basis of Shop Drawings. Standard information prepared without specific reference to the Project will not be approved as Shop Drawings.
- C. Shop Drawings shall include fabrications and installation drawings, setting diagrams, schedules, patterns, templates and similar drawings. Include the following information:
 - 1. Dimensions
 - 2. Identification of products and materials included.
 - 3. Compliance with specified standards.
 - 4. Notation of coordination requirements.
 - 5. Notation of dimensions established by field measurement.
- D. Sheet Size: Except for templates, patterns and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 inch x 11 inch, but not larger than 30 inch x 42 inch.

- E. The Contractor shall review, stamp with his approval as herein required, and submit with reasonable promptness and in orderly sequence, in accordance with the submittal schedule, all shop drawings required by the Contract Documents or subsequently by the Architect as covered by modifications. Shop drawings shall be properly identified. At the time of submission, the Contractor shall inform the Architect in writing of any deviation in the shop drawings from the requirements of the Contract Documents.
- F. Stamp: Each page of shop drawings shall bear the Contractor's stamp, which shall signify the Contractor's representation that he has determined and verified materials, field measurements and field construction criteria related thereto, or will do so, and has checked and coordinated the information contained in the shop drawings. Each stamp shall be accompanied by a wet signature or initial of an employee of the Contractor who may be contacted for information. Stamped signatures or initials are not acceptable.
- G. Method of Review: Make initial submittal of two blueline prints and one sepia transparency of the shop drawings. Comments or corrections will be noted on the transparency and returned to the Contractor, who shall identify all changes made since the previous submittal and resubmit in the same manner. When reviewed, the transparency will be stamped and returned to the Contractor who shall make distribution of copies as required.
- H. The Architect will review shop drawings with reasonable promptness so as not to cause any delay, but only for conformance with the design concept of the project and with the information given in the Contract Documents. The Architect's favorable review of a separate item shall not indicate acceptance of an assembly in which the item functions.
- I. Submittal of shop drawings to the Architect shall be made by the Contractor with a dated transmittal form or letter, and not by subcontractors or suppliers.
- J. The Architect's review of shop drawings shall not relieve the Contractor of responsibility for any deviation from the requirements of the Contract Documents unless the Contractor has informed the Architect in writing of such deviation at the time of submission and the Architect has given written acceptance to the specific deviation, nor shall the Architect's favorable review relieve the Contractor from responsibility for errors or omissions in the shop drawings.
- K. No portion of work requiring shop drawings shall be commenced until the shop drawings have been returned with a favorable review by the Architect.

1.4 PRODUCT DATA

- A. Submit six (6) copies. One (1) copy will be retained by the Architect.
- B. Mark each copy to identify applicable products, models, options and other data. Supplement manufacturers' standard data to provide information unique to this Project.
- C. After review, distribute and provide copies for Record Documents.

1.5 SAMPLES

- A. Submit samples to illustrate functional and aesthetic characteristics of the Product with integral parts and attachment devices. Coordinate sample submittals for interfacing work.

- B. Submit samples of finishes from the full range of manufacturers' standard colors, textures and patterns for Architect selection, or in custom colors selected.
- C. Include identification on each sample with full Project information.
- D. Submit a minimum of six (6) samples or as specified in individual sections of the specifications, three of which will be retained by the Architect.
- E. Reviewed samples which may be used in the Work are indicated in individual specification Sections.
- F. Selection or rejection of samples will be made by the Architect in writing.

1.6 MANUFACTURER'S INSTRUCTIONS

- A. 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.
- B. Identify conflicts between manufacturers' instructions and Contract Documents.

1.7 MANUFACTURER'S CERTIFICATES

- A. When specified in individual specification Sections, submit manufacturers' certificate to Architect for review in quantities specified for Product Data.
- B. Indicate material or product conforms to or exceeds specified requirements. Submit supporting reference date, affidavits and certifications as appropriate.
- C. Certificates may be recent or previous test results on material or product but must be acceptable to Architect.

1.8 COORDINATED DRAWINGS

- A. Submit drawings which indicate routing, locations, sizes, types and numbers of components in concealed spaces where potential conflict may occur between structures, mechanical, electrical, fire sprinklers, communications and ceiling suspension systems.
- B. Indicate locations of all ceiling penetrations and surface-mounted items. Provide cross sections at all areas to indicate proper support of ceilings and non-interference with work of other sections of the specifications. Cross sections shall indicate coordination required and proposed solutions for routing of elements where potential conflict exists. Reproduction of Architect's reflected ceiling plan is not acceptable.
- C. Drawings shall be based on field measurements, shop drawings and product data.
- D. Conflicts shall be brought to Architect's attention immediately.
- E. Submit to the General Contractor, in writing, requests for clarification or interpretations that will affect the intent of the Contract Documents.

- F. The coordinated drawings shall indicate each class of work in the affected area. The drawing or written submittal shall include Contractor's recommendations for the solution of any potential conflicts as well as recommendations tendered by any work of any section of the specifications which may be affected thereby.
- G. Submit the coordinated drawings in a scale of not less than 1/8" = 1' - 0" with necessary sections and profiles at an appropriate, clearly readable enlarged scale. Submit the coordinated drawings as one reproducible and two blue-line prints.
- H. The Architect will review the submittals, make appropriate notations and comments to ensure the solution meets the intent of the Contract Documents and then return to Contractor for implementation.
- I. The Contractor shall be responsible for the proper coordination of the work of all sections of the specifications in the execution of coordinated drawing. Any installation of materials, components or equipment under one section of the specifications without full and complete, agreement, knowledge and consent by fabricators of adjacent or otherwise related or affected work will not be approved.
- J. It shall be incumbent upon the Contractor that all fabricators of work involved in the execution of coordinated drawings be informed, consulted and advised in sufficient advance time to arrive at solutions where no extension of contract time or extra cost to the Owner will be approved due to Contractor's negligence in the expeditious, timely submittal of coordinated drawings.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

NOT USED

END OF SECTION

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SECTION 01 35 16 - ALTERATION PROJECT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes special procedures for alteration work.

1.3 DEFINITIONS

- A. Alteration Work: This term includes remodeling, renovation, repair, and maintenance work performed within existing spaces or on existing surfaces as part of the Project.
- B. Consolidate: To strengthen loose or deteriorated materials in place.
- C. Design Reference Sample: A sample that represents the Architect's prebid selection of work to be matched; it may be existing work or work specially produced for the Project.
- D. Dismantle: To remove by disassembling or detaching an item from a surface, using gentle methods and equipment to prevent damage to the item and surfaces; disposing of items unless indicated to be salvaged or reinstalled.
- E. Match: To blend with adjacent construction and manifest no apparent difference in material type, species, cut, form, detail, color, grain, texture, or finish as approved by Architect.
- F. Refinish: To remove existing finishes to base material and apply new finish to match original, or as otherwise indicated.
- G. Repair: To correct damage and defects, retaining existing materials, features, and finishes. This includes patching, piecing-in, splicing, consolidating, or otherwise reinforcing or upgrading materials.
- H. Replace: To remove, duplicate, and reinstall entire item with new material. The original item is the pattern for creating duplicates unless otherwise indicated.
- I. Replicate: To reproduce in exact detail, materials, and finish unless otherwise indicated.
- J. Reproduce: To fabricate a new item, accurate in detail to the original, and from either the same or a similar material as the original, unless otherwise indicated.
- K. Retain: To keep existing items that are not to be removed or dismantled.
- L. Strip: To remove existing finish down to base material unless otherwise indicated.

1.4 COORDINATION

- A. Alteration Work Subschedule: A construction schedule coordinating the sequencing and scheduling of alteration work for entire Project, including each activity to be performed, and based on Contractor's Construction Schedule. Secure time commitments for performing critical construction activities from separate entities responsible for alteration work.
1. Schedule construction operations in sequence required to obtain best Work results.
 2. Coordinate sequence of alteration work activities to accommodate the following:
 - a. Owner's continuing occupancy of portions of existing building.
 - b. Owner's partial occupancy of completed Work.
 - c. Other known work in progress.
 - d. Tests and inspections.
 3. Detail sequence of alteration work, with start and end dates.
 4. Utility Services: Indicate how long utility services will be interrupted. Coordinate shutoff, capping, and continuation of utility services.
 5. Use of stairs.
 6. Equipment Data: List gross loaded weight, axle-load distribution, and wheel-base dimension data for mobile and heavy equipment proposed for use in existing structure. Do not use such equipment without certification from Contractor's professional engineer that the structure can support the imposed loadings without damage.
- B. Pedestrian and Vehicular Circulation: Coordinate alteration work with circulation patterns within Project building(s) and site. Some work is near circulation patterns. Circulation patterns cannot be closed off entirely and in places can be only temporarily redirected around small areas of work. Plan and execute the Work accordingly.

1.5 MATERIALS OWNERSHIP

- A. Historic items, relics, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, antiques, and other items of interest or value to Owner that may be encountered or uncovered during the Work, regardless of whether they were previously documented, remain Owner's property.
1. Carefully dismantle and salvage each item or object in a manner to prevent damage and protect it from damage, then promptly deliver it to Owner where directed at Project site.

1.6 INFORMATIONAL SUBMITTALS

- A. Alteration Work Subschedule:

1. Submit alteration work subschedule within seven (7) days of date established for commencement of alteration work.
- B. Preconstruction Documentation: Show preexisting conditions of adjoining construction and site improvements that are to remain, including finish surfaces, that might be misconstrued as damage caused by Contractor's alteration work operations.

1.7 QUALITY ASSURANCE

- A. Specialist Qualifications: An experienced firm regularly engaged in specialty work similar in nature, materials, design, and extent to alteration work as specified in each Section and that has completed a minimum of five (5) recent projects with a record of successful in-service performance that demonstrates the firm's qualifications to perform this work.
 1. Field Supervisor Qualifications: Full-time supervisors experienced in specialty work similar in nature, material, design, and extent to that indicated for this Project. Supervisors shall be on-site when specialty work begins and during its progress. Supervisors shall not be changed during Project except for causes beyond the control of the specialist firm.
 - a. Construct new mockups of required work whenever a supervisor is replaced.
 - B. Title X Requirement: Each firm conducting activities that disturb painted surfaces shall be a "Lead-Safe Certified Firm" according to 40 CFR 745, Subpart E, and use only workers that are trained in lead-safe work practices.
 - C. Alteration Work Program: Prepare a written plan for alteration work for whole Project, including each phase or process and protection of surrounding materials during operations. Show compliance with indicated methods and procedures specified in this and other Sections. Coordinate this whole-Project alteration work program with specific requirements of programs required in other alteration work Sections.
 1. Dust and Noise Control: Include locations of proposed temporary dust- and noise-control partitions and means of egress from occupied areas coordinated with continuing on-site operations and other known work in progress.
 2. Debris Hauling: Include plans clearly marked to show debris hauling routes, turning radii, and locations and details of temporary protective barriers.
 - D. Fire-Prevention Plan: Prepare a written plan for preventing fires during the Work, including placement of fire extinguishers, fire blankets, rag buckets, and other fire-control devices during each phase or process. Coordinate plan with Owner's fire-protection equipment and requirements. Include fire-watch personnel's training, duties, and authority to enforce fire safety.
 - E. Safety and Health Standard: Comply with ANSI/ASSE A10.6.

1.8 STORAGE AND HANDLING OF SALVAGED MATERIALS

- A. Salvaged Materials:

1. Clean loose dirt and debris from salvaged items unless more extensive cleaning is indicated.
 2. Pack or crate items after cleaning; cushion against damage during handling. Label contents of containers.
 3. Store items in a secure area until delivery to Owner.
 4. Transport items to Owner's storage area on-site.
 5. Protect items from damage during transport and storage.
- B. Salvaged Materials for Reinstallation:
1. Repair and clean items for reuse as indicated.
 2. Pack or crate items after cleaning and repairing; cushion against damage during handling. Label contents of containers.
 3. Protect items from damage during transport and storage.
 4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment unless otherwise indicated. Provide connections, supports, and miscellaneous materials to make items functional for use indicated.
- C. Existing Materials to Remain: Protect construction indicated to remain against damage and soiling from construction work. Where permitted by Architect, items may be dismantled and taken to a suitable, protected storage location during construction work and reinstalled in their original locations after alteration and other construction work in the vicinity is complete.
- D. Storage: Catalog and store items within a weathertight enclosure where they are protected from moisture, weather, condensation, and freezing temperatures.
1. Identify each item for reinstallation with a nonpermanent mark to document its original location. Indicate original locations on plans, elevations, sections, or photographs by annotating the identifying marks.
 2. Secure stored materials to protect from theft.
 3. Control humidity so that it does not exceed 85 percent. Maintain temperatures 5 degrees Fahrenheit or more above the dew point.
- E. Storage Space:
1. Owner will arrange for limited on-site location(s) for free storage of salvaged material. This storage space does not include security and climate control for stored material.

1.9 FIELD CONDITIONS

- A. Survey of Existing Conditions: Record existing conditions that affect the Work by use of measured drawings preconstruction photographs.
- B. Discrepancies: Notify Architect of discrepancies between existing conditions and Drawings before proceeding with removal and dismantling work.
- C. Owner's Removals: Before beginning alteration work, verify in correspondence with Owner that all items to be removed and salvaged by the Owner have been removed.
- D. Size Limitations in Existing Spaces: Materials, products, and equipment used for performing the Work and for transporting debris, materials, and products shall be of sizes that clear surfaces within existing spaces, areas, rooms, and openings, including temporary protection, by 12 inches or more.

PART 2 - PRODUCTS - (Not Used)

PART 3 - EXECUTION

3.1 PROTECTION

- A. Protect persons, motor vehicles, surrounding surfaces of building, building site, plants, and surrounding buildings from harm resulting from alteration work.
 - 1. Use only proven protection methods, appropriate to each area and surface being protected.
 - 2. Provide temporary barricades, barriers, and directional signage to exclude the public from areas where alteration work is being performed.
 - 3. Erect temporary barriers to form and maintain fire-egress routes.
 - 4. Erect temporary protective covers over walkways and at points of pedestrian and vehicular entrance and exit that must remain in service during alteration work.
 - 5. Contain dust and debris generated by alteration work, and prevent it from reaching the public or adjacent surfaces.
 - 6. Provide shoring, bracing, and supports as necessary. Do not overload structural elements.
 - 7. Protect floors and other surfaces along hauling routes from damage, wear, and staining.
 - 8. Provide supplemental sound-control treatment to isolate demolition work from other areas of the building.

- B. Temporary Protection of Materials to Remain:
 - 1. Protect existing materials with temporary protections and construction. Do not remove existing materials unless otherwise indicated.
 - 2. Do not attach temporary protection to existing surfaces except as indicated as part of the alteration work program.
- C. Comply with each product manufacturer's written instructions for protections and precautions. Protect against adverse effects of products and procedures on people and adjacent materials, components, and vegetation.
- D. Utility and Communications Services:
 - 1. Notify Owner, Architect, authorities having jurisdiction, and entities owning or controlling wires, conduits, pipes, and other services affected by alteration work before commencing operations.
 - 2. Disconnect and cap pipes and services as required by authorities having jurisdiction, as required for alteration work.
 - 3. Maintain existing services unless otherwise indicated; keep in service and protect against damage during operations. Provide temporary services during interruptions to existing utilities.
- E. Existing Drains: Prior to the start of work in an area, test drainage system to ensure that it is functioning properly. Notify Architect immediately of inadequate drainage or blockage. Do not begin work in an area until the drainage system is functioning properly.
 - 1. Prevent solids such as adhesive or mortar residue or other debris from entering the drainage system. Clean out drains and drain lines that become sluggish or blocked by sand or other materials resulting from alteration work.
 - 2. Protect drains from pollutants. Block drains or filter out sediments, allowing only clean water to pass.
- F. Existing Roofing: Prior to the start of work in an area, install roofing protection.

3.2 PROTECTION FROM FIRE

- A. General: Follow fire-prevention plan and the following:
 - 1. Comply with NFPA 241 requirements unless otherwise indicated.
 - 2. Remove and keep area free of combustibles, including rubbish, paper, waste, and chemicals, unless necessary for the immediate work.
 - a. If combustible material cannot be removed, provide fire blankets to cover such materials.

- B. Heat-Generating Equipment and Combustible Materials: Comply with the following procedures while performing work with heat-generating equipment or combustible materials, including welding, torch-cutting, soldering, brazing, removing paint with heat, or other operations where open flames or implements using high heat or combustible solvents and chemicals are anticipated:
1. Obtain Owner's approval for operations involving use of open-flame or welding or other high-heat equipment. Use of open-flame equipment is not permitted. Notify Owner at least 72 hours before each occurrence, indicating location of such work.
 2. As far as practicable, restrict heat-generating equipment to shop areas or outside the building.
 3. Do not perform work with heat-generating equipment in or near rooms or in areas where flammable liquids or explosive vapors are present or thought to be present. Use a combustible gas indicator test to ensure that the area is safe.
 4. Use fireproof baffles to prevent flames, sparks, hot gases, or other high-temperature material from reaching surrounding combustible material.
 5. Prevent the spread of sparks and particles of hot metal through open windows, doors, holes, and cracks in floors, walls, ceilings, roofs, and other openings.
 6. Fire Watch: Before working with heat-generating equipment or combustible materials, station personnel to serve as a fire watch at each location where such work is performed. Fire-watch personnel shall have the authority to enforce fire safety. Station fire watch according to NFPA 51B, NFPA 241, and as follows:
 - a. Train each fire watch in the proper operation of fire-control equipment and alarms.
 - b. Prohibit fire-watch personnel from other work that would be a distraction from fire-watch duties.
 - c. Cease work with heat-generating equipment whenever fire-watch personnel are not present.
 - d. Have fire-watch personnel perform final fire-safety inspection each day beginning no sooner than 30 minutes after conclusion of work in each area to detect hidden or smoldering fires and to ensure that proper fire prevention is maintained.
 - e. Maintain fire-watch personnel at each area of Project site until two hours after conclusion of daily work.
- C. Fire-Control Devices: Provide and maintain fire extinguishers, fire blankets, and rag buckets for disposal of rags with combustible liquids. Maintain each as suitable for the type of fire risk in each work area. Ensure that nearby personnel and the fire-watch personnel are trained in fire-extinguisher and blanket use.

3.3 PROTECTION DURING APPLICATION OF CHEMICALS

- A. Protect motor vehicles, surrounding surfaces of building, building site, plants, and surrounding buildings from harm or spillage resulting from applications of chemicals and adhesives.
- B. Cover adjacent surfaces with protective materials that are proven to resist chemicals selected for Project unless chemicals being used will not damage adjacent surfaces as indicated in alteration work program. Use covering materials and masking agents that are waterproof and UV resistant and that will not stain or leave residue on surfaces to which they are applied. Apply protective materials according to manufacturer's written instructions. Do not apply liquid masking agents or adhesives to painted or porous surfaces. When no longer needed, promptly remove protective materials.
- C. Do not apply chemicals during winds of sufficient force to spread them to unprotected surfaces.
- D. Neutralize alkaline and acid wastes and legally dispose of off Owner's property.
- E. Collect and dispose of runoff from chemical operations by legal means and in a manner that prevents soil contamination, soil erosion, undermining of paving and foundations, damage to landscaping, or water penetration into building interior.

3.4 GENERAL ALTERATION WORK

- A. Have specialty work performed only by qualified specialists.
- B. Ensure that supervisory personnel are present when work begins and during its progress.
- C. Record existing work before each procedure (preconstruction), and record progress during the work. Use digital preconstruction documentation photographs or video recordings.
- D. Perform surveys of Project site as the Work progresses to detect hazards resulting from alterations.
- E. Notify Architect of visible changes in the integrity of material or components whether from environmental causes including biological attack, UV degradation, freezing, or thawing or from structural defects including cracks, movement, or distortion.
 - 1. Do not proceed with the work in question until directed by Architect.

END OF SECTION

SECTION 01 40 00 - QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for quality assurance and quality control.
- B. Testing and inspection services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
 - 1. Specific quality-assurance and quality-control requirements for individual work results are specified in their respective Specification Sections. Requirements in individual Sections may also cover production of standard products.
 - 2. Specified tests, inspections, and related actions do not limit Contractor's other quality-assurance and quality-control procedures that facilitate compliance with the Contract Document requirements.
 - 3. Requirements for Contractor to provide quality-assurance and quality-control services required by Architect, Owner, or authorities having jurisdiction are not limited by provisions of this Section.
 - 4. Specific test and inspection requirements are not specified in this Section.

1.3 DEFINITIONS

- A. Experienced: When used with an entity or individual, "experienced" unless otherwise further described means having successfully completed a minimum of five (5) previous projects similar in nature, size, and extent to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.
- B. Field Quality-Control Tests: Tests and inspections that are performed on-site for installation of the Work and for completed Work.
- C. Installer/Applicator/Erector: Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, assembly, and similar operations.
 - 1. Use of trade-specific terminology in referring to a trade or entity does not require that certain construction activities be performed by accredited or unionized individuals, or that requirements specified apply exclusively to specific trade(s).

- D. Mockups: Full-size physical assemblies that are constructed on-site either as freestanding temporary built elements or as part of permanent construction. Mockups are constructed to verify selections made under Sample submittals; to demonstrate aesthetic effects and qualities of materials and execution; to review coordination, testing, or operation; to show interface between dissimilar materials; and to demonstrate compliance with specified installation tolerances. Mockups are not Samples. Unless otherwise indicated, approved mockups establish the standard by which the Work will be judged.
- E. Product Tests: Tests and inspections that are performed by a nationally recognized testing laboratory (NRTL) according to 29 CFR 1910.7, by a testing agency accredited according to NIST's National Voluntary Laboratory Accreditation Program (NVLAP), or by a testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with specified requirements.
- F. Source Quality-Control Tests: Tests and inspections that are performed at the source; for example, plant, mill, factory, or shop.
- G. Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.
- H. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.
- I. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Contractor's quality-control services do not include contract administration activities performed by Architect.

1.4 DELEGATED-DESIGN SERVICES

- A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.
 - 1. If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Architect.

1.5 CONFLICTING REQUIREMENTS

- A. Conflicting Standards and Other Requirements: If compliance with two or more standards or requirements are specified and the standards or requirements establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer conflicting requirements that are different, but apparently equal, to Architect for direction before proceeding.
- B. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits.

- C. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Architect for a decision before proceeding.

1.6 ACTION SUBMITTALS

- A. Delegated-Design Services Submittal: In addition to Shop Drawings, Product Data, and other required submittals, submit a statement signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional, indicating that the products and systems are in compliance with performance and design criteria indicated. Include list of codes, loads, and other factors used in performing these services.

1.7 INFORMATIONAL SUBMITTALS

- A. Contractor's Quality-Control Plan: For quality-assurance and quality-control activities and responsibilities.
- B. Qualification Data: For Contractor's quality-control personnel.
- C. Schedule of Tests and Inspections: Prepare in tabular form and include the following:
 - 1. Specification Section number and title.
 - 2. Entity responsible for performing tests and inspections.
 - 3. Description of test and inspection.
 - 4. Identification of applicable standards.
 - 5. Identification of test and inspection methods.
 - 6. Number of tests and inspections required.
 - 7. Time schedule or time span for tests and inspections.
 - 8. Requirements for obtaining samples.
 - 9. Unique characteristics of each quality-control service.
- D. Reports: Prepare and submit certified written reports and documents as specified.
- E. Permits, Licenses, and Certificates: For Owner's record, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents established for compliance with standards and regulations bearing on performance of the Work.

1.8 CONTRACTOR'S QUALITY-CONTROL PLAN

- A. Quality-Control Plan, General: Submit quality-control plan within ten (10) days of Notice of Award.

Submit in format acceptable to Architect. Identify personnel, procedures, controls, instructions, tests, records, and forms to be used to carry out Contractor's quality-assurance and quality-control responsibilities. Coordinate with Contractor's Construction Schedule.

- B. Quality-Control Personnel Qualifications: Engage qualified personnel trained and experienced in managing and executing quality-assurance and quality-control procedures similar in nature and extent to those required for Project.
 - 1. Project quality-control manager
- C. Submittal Procedure: Describe procedures for ensuring compliance with requirements through review and management of submittal process. Indicate qualifications of personnel responsible for submittal review.
- D. Testing and Inspection: In quality-control plan, include a comprehensive schedule of Work requiring testing or inspection, including the following:
 - 1. Contractor-performed tests and inspections including Subcontractor-performed tests and inspections. Include required tests and inspections and Contractor-elected tests and inspections. Distinguish source quality-control tests and inspections from field quality-control tests and inspections.
 - 2. Special inspections required by authorities having jurisdiction and indicated on the Statement of Special Inspections.
- E. Continuous Inspection of Workmanship: Describe process for continuous inspection during construction to identify and correct deficiencies in workmanship in addition to testing and inspection specified. Indicate types of corrective actions to be required to bring work into compliance with standards of workmanship established by Contract requirements and approved mockups.
- F. Monitoring and Documentation: Maintain testing and inspection reports including log of approved and rejected results. Include work Architect has indicated as nonconforming or defective. Indicate corrective actions taken to bring nonconforming work into compliance with requirements. Comply with requirements of authorities having jurisdiction.

1.9 REPORTS AND DOCUMENTS

- A. Test and Inspection Reports: Prepare and submit certified written reports specified in other Sections. Include the following:
 - 1. Date of issue.
 - 2. Project title and number.
 - 3. Name, address, telephone number, and email address of testing agency.
 - 4. Dates and locations of samples and tests or inspections.
 - 5. Names of individuals making tests and inspections.

6. Description of the Work and test and inspection method.
 7. Identification of product and Specification Section.
 8. Complete test or inspection data.
 9. Test and inspection results and an interpretation of test results.
 10. Record of temperature and weather conditions at time of sample taking and testing and inspection.
 11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
 12. Name and signature of laboratory inspector.
 13. Recommendations on retesting and reinspecting.
- B. Manufacturer's Technical Representative's Field Reports: Prepare written information documenting manufacturer's technical representative's tests and inspections specified in other Sections. Include the following:
1. Name, address, telephone number, and email address of technical representative making report.
 2. Statement on condition of substrates and their acceptability for installation of product.
 3. Statement that products at Project site comply with requirements.
 4. Summary of installation procedures being followed, whether they comply with requirements and, if not, what corrective action was taken.
 5. Results of operational and other tests and a statement of whether observed performance complies with requirements.
 6. Statement whether conditions, products, and installation will affect warranty.
 7. Other required items indicated in individual Specification Sections.
- C. Factory-Authorized Service Representative's Reports: Prepare written information documenting manufacturer's factory-authorized service representative's tests and inspections specified in other Sections. Include the following:
1. Name, address, telephone number, and email address of factory-authorized service representative making report.
 2. Statement that equipment complies with requirements.
 3. Results of operational and other tests and a statement of whether observed performance complies with requirements.

4. Statement whether conditions, products, and installation will affect warranty.
5. Other required items indicated in individual Specification Sections.

1.10 QUALITY ASSURANCE

- A. General: Qualifications paragraphs in this article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.
- B. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units. As applicable, procure products from manufacturers able to meet qualification requirements, warranty requirements, and technical or factory-authorized service representative requirements.
- C. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- D. Installer Qualifications: A firm or individual experienced in installing, erecting, applying, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.
- E. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of the system, assembly, or product that are similar in material, design, and extent to those indicated for this Project.
- F. Specialists: Certain Specification Sections require that specific construction activities shall be performed by entities who are recognized experts in those operations. Specialists shall satisfy qualification requirements indicated and shall be engaged for the activities indicated.
 1. Requirements of authorities having jurisdiction shall supersede requirements for specialists.
- G. Testing Agency Qualifications: An NRTL, an NVLAP, or an independent agency with the experience and capability to conduct testing and inspection indicated, as documented according to ASTM E329; and with additional qualifications specified in individual Sections; and, where required by authorities having jurisdiction, that is acceptable to authorities.
- H. Manufacturer's Technical Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to observe and inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.

- I. Factory-Authorized Service Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
1. Contractor responsibilities include the following:
 - a. Provide test specimens representative of proposed products and construction.
 - b. Submit specimens in a timely manner with sufficient time for testing and analyzing results to prevent delaying the Work.
 - c. Provide sizes and configurations of test assemblies, mockups, and laboratory mockups to adequately demonstrate capability of products to comply with performance requirements.
 - d. Build site-assembled test assemblies and mockups using installers who will perform same tasks for Project.
 - e. Build laboratory mockups at testing facility using personnel, products, and methods of construction indicated for the completed Work.
 - f. When testing is complete, remove test specimens, test assemblies and mockups, and laboratory mockups; do not reuse products on Project.
 2. Testing Agency Responsibilities: Submit a certified written report of each test, inspection, and similar quality-assurance service to Architect, with copy to Contractor. Interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from the Contract Documents.
- J. Mockups: Before installing portions of the Work requiring mockups, build mockups for each form of construction and finish required to comply with the following requirements, using materials indicated for the completed Work:
1. Build mockups of size indicated.
 2. Build mockups in location indicated or, if not indicated, as directed by Architect.
 3. Notify Architect seven (7) days in advance of dates and times when mockups will be constructed.
 4. Employ supervisory personnel who will oversee mockup construction. Employ workers that will be employed to perform same tasks during the construction at Project.
 5. Demonstrate the proposed range of aesthetic effects and workmanship.
 6. Obtain Architect's approval of mockups before starting corresponding work, fabrication, or construction.
 - a. Allow seven (7) days for initial review and each re-review of each mockup.
 7. Maintain mockups during construction in an undisturbed condition as a standard for judging the completed Work.
 8. Demolish and remove mockups when directed unless otherwise indicated.

- K. Laboratory Mockups: Comply with requirements of preconstruction testing and those specified in individual Specification Sections.

1.11 QUALITY CONTROL

- A. Owner Responsibilities: Where quality-control services are indicated as Owner's responsibility, Owner will engage a qualified testing agency to perform these services.
 - 1. Owner will furnish Contractor with names, addresses, and telephone numbers of testing agencies engaged and a description of types of testing and inspection they are engaged to perform.
 - 2. Payment for these services will be made from testing and inspection allowances, as authorized by Change Orders.
 - 3. Costs for retesting and reinspecting construction that replaces or is necessitated by work that failed to comply with the Contract Documents will be charged to Contractor, and the Contract Sum will be adjusted by Change Order.
- B. Contractor Responsibilities: Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Perform additional quality-control activities, whether specified or not, to verify and document that the Work complies with requirements.
 - 1. Unless otherwise indicated, provide quality-control services specified and those required by authorities having jurisdiction. Perform quality-control services required of Contractor by authorities having jurisdiction, whether specified or not.
 - 2. Engage a qualified testing agency to perform quality-control services.
 - a. Contractor shall not employ same entity engaged by Owner, unless agreed to in writing by Owner.
 - 3. Notify testing agencies at least twenty-four (24) hours in advance of time when Work that requires testing or inspection will be performed.
 - 4. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
 - 5. Testing and inspection requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
 - 6. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.
- C. Retesting/Reinspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that replaced Work that failed to comply with the Contract Documents.
- D. Testing Agency Responsibilities: Cooperate with Architect, and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.

1. Notify Architect, and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
 2. Determine the locations from which test samples will be taken and in which in-situ tests are conducted.
 3. Conduct and interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
 4. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.
 5. Do not release, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the Work.
 6. Do not perform duties of Contractor.
- E. Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing as specified in Section 01 33 00 "Submittal Procedures."
- F. Manufacturer's Technical Services: Where indicated, engage a manufacturer's technical representative to observe and inspect the Work. Manufacturer's technical representative's services include participation in preinstallation conferences, examination of substrates and conditions, verification of materials, observation of Installer activities, inspection of completed portions of the Work, and submittal of written reports.
- G. Associated Contractor Services: Cooperate with agencies and representatives performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:
1. Access to the Work.
 2. Incidental labor and facilities necessary to facilitate tests and inspections.
 3. Adequate quantities of representative samples of materials that require testing and inspection. Assist agency in obtaining samples.
 4. Facilities for storage and field curing of test samples.
 5. Delivery of samples to testing agencies.
 6. Preliminary design mix proposed for use for material mixes that require control by testing agency.
 7. Security and protection for samples and for testing and inspection equipment at Project site.

- H. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and quality-control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspection.
 - 1. Schedule times for tests, inspections, obtaining samples, and similar activities.

1.12 SPECIAL TESTS AND INSPECTIONS

- A. Special Tests and Inspections: Engage a qualified testing agency to conduct special tests and inspections required by authorities having jurisdiction as the responsibility of Owner, and as follows:
 - 1. Verifying that manufacturer maintains detailed fabrication and quality-control procedures and reviewing the completeness and adequacy of those procedures to perform the Work.
 - 2. Notifying Architect and Contractor promptly of irregularities and deficiencies observed in the Work during performance of its services.
 - 3. Submitting a certified written report of each test, inspection, and similar quality-control service to Architect, with copy to Contractor and to authorities having jurisdiction.
 - 4. Submitting a final report of special tests and inspections at Substantial Completion, which includes a list of unresolved deficiencies.
 - 5. Interpreting tests and inspections and stating in each report whether tested and inspected work complies with or deviates from the Contract Documents.
 - 6. Retesting and reinspecting corrected work.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 ACCEPTABLE TESTING AGENCIES

- A. The Special Inspector must be acceptable by the City of Beaumont, in the category of work required to have special inspection.
- B. The construction materials testing laboratory must be acceptable by the City of Beaumont, for testing of materials, systems, components, and equipment.

3.2 TEST AND INSPECTION LOG

- A. Test and Inspection Log: Prepare a record of tests and inspections. Include the following:
 - 1. Date test or inspection was conducted.
 - 2. Description of the Work tested or inspected.

3. Date test or inspection results were transmitted to Architect.
 4. Identification of testing agency or special inspector conducting test or inspection.
- B. Maintain log at Project site. Post changes and revisions as they occur. Provide access to test and inspection log for Architect's reference during normal working hours.
1. Submit log at Project closeout as part of Project Record Documents.

3.3 REPAIR AND PROTECTION

- A. General: On completion of testing, inspection, sample taking, and similar services, repair damaged construction and restore substrates and finishes.
1. Provide materials and comply with installation requirements specified in other Specification Sections or matching existing substrates and finishes. Restore patched areas and extend restoration into adjoining areas with durable seams that are as invisible as possible. Comply with the Contract Document requirements for cutting and patching in Section 01 70 00 "Execution Requirements".
- B. Protect construction exposed by or for quality-control service activities.
- C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION

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SECTION 01 42 00 - REFERENCES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 DEFINITIONS

- A. General: Basic Contract definitions are included in the Conditions of the Contract.
- B. "Approved": When used to convey Architect's action on Contractor's submittals, applications, and requests, "approved" is limited to Architect's duties and responsibilities as stated in the Conditions of the Contract.
- C. "Directed": A command or instruction by Architect. Other terms including "requested," "authorized," "selected," "required," and "permitted" have the same meaning as "directed."
- D. "Indicated": Requirements expressed by graphic representations or in written form on Drawings, in Specifications, and in other Contract Documents. Other terms including "shown," "noted," "scheduled," and "specified" have the same meaning as "indicated."
- E. "Regulations": Laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, and rules, conventions, and agreements within the construction industry that control performance of the Work.
- F. "Furnish": Supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.
- G. "Install": Unload, temporarily store, unpack, assemble, erect, place, anchor, apply, work to dimension, finish, cure, protect, clean, and similar operations at Project site.
- H. "Provide": Furnish and install, complete and ready for the intended use.
- I. "Project Site": Space available for performing construction activities. The extent of Project site is shown on Drawings and may or may not be identical with the description of the land on which Project is to be built.

1.3 INDUSTRY STANDARDS

- A. Applicability of Standards: Unless 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 to the extent referenced. Such standards are made a part of the Contract Documents by reference.
- B. Publication Dates: Comply with standards in effect as of date of the Contract Documents unless otherwise indicated.

- C. Copies of Standards: Each entity engaged in construction on Project should be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.
1. Where copies of standards are needed to perform a required construction activity, obtain copies directly from publication source.

1.4 ABBREVIATIONS AND ACRONYMS

- A. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities indicated in Gale's "Encyclopedia of Associations: National Organizations of the U.S." or in Columbia Books' "National Trade & Professional Associations of the United States."
- B. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. The information in this list is subject to change and is believed to be accurate as of the date of the Contract Documents.
1. AABC - Associated Air Balance Council; www.aabc.com.
 2. AAMA - American Architectural Manufacturers Association; www.aamanet.org.
 3. AAPFCO - Association of American Plant Food Control Officials; www.aapfco.org.
 4. AASHTO - American Association of State Highway and Transportation Officials; www.transportation.org.
 5. AATCC - American Association of Textile Chemists and Colorists; www.aatcc.org.
 6. ABMA - American Bearing Manufacturers Association; www.americanbearings.org.
 7. ABMA - American Boiler Manufacturers Association; www.abma.com.
 8. ACI - American Concrete Institute; (Formerly: ACI International); www.concrete.org.
 9. ACPA - American Concrete Pipe Association; www.concrete-pipe.org.
 10. AEIC - Association of Edison Illuminating Companies, Inc. (The); www.aeic.org.
 11. AF&PA - American Forest & Paper Association; www.afandpa.org.
 12. AGA - American Gas Association; www.aga.org.
 13. AHAM - Association of Home Appliance Manufacturers; www.aham.org.
 14. AHRI - Air-Conditioning, Heating, and Refrigeration Institute (The); www.ahrinet.org.
 15. AI - Asphalt Institute; www.asphaltinstitute.org.
 16. AIA - American Institute of Architects (The); www.aia.org.
 17. AISC - American Institute of Steel Construction; www.aisc.org.
 18. AISI - American Iron and Steel Institute; www.steel.org.
 19. AITC - American Institute of Timber Construction; www.aitc-glulam.org.
 20. AMCA - Air Movement and Control Association International, Inc.; www.amca.org.
 21. ANSI - American National Standards Institute; www.ansi.org.
 22. AOSA - Association of Official Seed Analysts, Inc.; www.aosaseed.com.
 23. APA - APA - The Engineered Wood Association; www.apawood.org.
 24. APA - Architectural Precast Association; www.archprecast.org.
 25. API - American Petroleum Institute; www.api.org.
 26. ARI - Air-Conditioning & Refrigeration Institute; (See AHRI).
 27. ARI - American Refrigeration Institute; (See AHRI).
 28. ARMA - Asphalt Roofing Manufacturers Association; www.asphaltroofing.org.
 29. ASCE - American Society of Civil Engineers; www.asce.org.
 30. ASCE/SEI - American Society of Civil Engineers/Structural Engineering Institute; (See ASCE).

31. ASHRAE - American Society of Heating, Refrigerating and Air-Conditioning Engineers; www.ashrae.org.
32. ASME - ASME International; (American Society of Mechanical Engineers); www.asme.org.
33. ASSE - American Society of Safety Engineers (The); www.asse.org.
34. ASSE - American Society of Sanitary Engineering; www.asse-plumbing.org.
35. ASTM - ASTM International; www.astm.org.
36. ATIS - Alliance for Telecommunications Industry Solutions; www.atis.org.
37. AWEA - American Wind Energy Association; www.awea.org.
38. AWI - Architectural Woodwork Institute; www.awinet.org.
39. AWMAC - Architectural Woodwork Manufacturers Association of Canada; www.awmac.com.
40. AWPA - American Wood Protection Association; www.awpa.com.
41. AWS - American Welding Society; www.aws.org.
42. AWWA - American Water Works Association; www.awwa.org.
43. BHMA - Builders Hardware Manufacturers Association; www.buildershardware.com.
44. BIA - Brick Industry Association (The); www.gobrick.com.
45. BICSI - BICSI, Inc.; www.bicsi.org.
46. BIFMA - BIFMA International; (Business and Institutional Furniture Manufacturer's Association); www.bifma.org.
47. BISSC - Baking Industry Sanitation Standards Committee; www.bissc.org.
48. BWF - Badminton World Federation; (Formerly: International Badminton Federation); www.bissc.org.
49. CDA - Copper Development Association; www.copper.org.
50. CE - Conformite Europeenne; <http://ec.europa.eu/growth/single-market/ce-marking/>.
51. CEA - Canadian Electricity Association; www.electricity.ca.
52. CEA - Consumer Electronics Association; www.ce.org.
53. CFFA - Chemical Fabrics and Film Association, Inc.; www.chemicalfabricsandfilm.com.
54. CFSEI - Cold-Formed Steel Engineers Institute; www.cfsei.org.
55. CGA - Compressed Gas Association; www.cganet.com.
56. CIMA - Cellulose Insulation Manufacturers Association; www.cellulose.org.
57. CISCA - Ceilings & Interior Systems Construction Association; www.cisca.org.
58. CISPI - Cast Iron Soil Pipe Institute; www.cispi.org.
59. CLFMI - Chain Link Fence Manufacturers Institute; www.chainlinkinfo.org.
60. CPA - Composite Panel Association; www.pbmdf.com.
61. CRI - Carpet and Rug Institute (The); www.carpet-rug.org.
62. CRRC - Cool Roof Rating Council; www.coolroofs.org.
63. CRSI - Concrete Reinforcing Steel Institute; www.crsi.org.
64. CSA - CSA Group; www.csagroup.com.
65. CSA - CSA International; www.csa-international.org.
66. CSI - Construction Specifications Institute (The); www.csinet.org.
67. CSSB - Cedar Shake & Shingle Bureau; www.cedarbureau.org.
68. CTI - Cooling Technology Institute; (Formerly: Cooling Tower Institute); www.cti.org.
69. CWC - Composite Wood Council; (See CPA).
70. DASMA - Door and Access Systems Manufacturers Association; www.dasma.com.
71. DHI - Door and Hardware Institute; www.dhi.org.
72. ECA - Electronic Components Association; (See ECIA).
73. ECAMA - Electronic Components Assemblies & Materials Association; (See ECIA).
74. ECIA - Electronic Components Industry Association; www.eciaonline.org.

75. EIA - Electronic Industries Alliance; (See TIA).
76. EIMA - EIFS Industry Members Association; www.eima.com.
77. EJMA - Expansion Joint Manufacturers Association, Inc.; www.ejma.org.
78. ESD - ESD Association; (Electrostatic Discharge Association); www.esda.org.
79. ESTA - Entertainment Services and Technology Association; (See PLASA).
80. ETL - Intertek (See Intertek); www.intertek.com.
81. EVO - Efficiency Valuation Organization; www.evo-world.org.
82. FCI - Fluid Controls Institute; www.fluidcontrolsinstitute.org.
83. FIBA - Federation Internationale de Basketball; (The International Basketball Federation); www.fiba.com.
84. FIVB - Federation Internationale de Volleyball; (The International Volleyball Federation); www.fivb.org.
85. FM Approvals - FM Approvals LLC; www.fmglobal.com.
86. FM Global - FM Global; (Formerly: FMG - FM Global); www.fmglobal.com.
87. FRSA - Florida Roofing, Sheet Metal & Air Conditioning Contractors Association, Inc.; www.floridarooft.com.
88. FSA - Fluid Sealing Association; www.fluidsealing.com.
89. FSC - Forest Stewardship Council U.S.; www.fscus.org.
90. GA - Gypsum Association; www.gypsum.org.
91. GANA - Glass Association of North America; www.glasswebsite.com.
92. GS - Green Seal; www.greenseal.org.
93. HI - Hydraulic Institute; www.pumps.org.
94. HI/GAMA - Hydronics Institute/Gas Appliance Manufacturers Association; (See AHRI).
95. HMMA - Hollow Metal Manufacturers Association; (See NAAMM).
96. HPVA - Hardwood Plywood & Veneer Association; www.hpva.org.
97. HPW - H. P. White Laboratory, Inc.; www.hpwhite.com.
98. IAPSC - International Association of Professional Security Consultants; www.iapsc.org.
99. IAS - International Accreditation Service; www.iasonline.org.
100. ICBO - International Conference of Building Officials; (See ICC).
101. ICC - International Code Council; www.iccsafe.org.
102. ICEA - Insulated Cable Engineers Association, Inc.; www.icea.net.
103. ICPA - International Cast Polymer Alliance; www.icpa-hq.org.
104. ICRI - International Concrete Repair Institute, Inc.; www.icri.org.
105. IEC - International Electrotechnical Commission; www.iec.ch.
106. IEEE - Institute of Electrical and Electronics Engineers, Inc. (The); www.ieee.org.
107. IES - Illuminating Engineering Society; (Formerly: Illuminating Engineering Society of North America); www.ies.org.
108. IESNA - Illuminating Engineering Society of North America; (See IES).
109. IEST - Institute of Environmental Sciences and Technology; www.iest.org.
110. IGMA - Insulating Glass Manufacturers Alliance; www.igmaonline.org.
111. IGSHPA - International Ground Source Heat Pump Association; www.igshpa.okstate.edu.
112. ILI - Indiana Limestone Institute of America, Inc.; www.iliai.com.
113. Intertek - Intertek Group; (Formerly: ETL SEMCO; Intertek Testing Service NA); www.intertek.com.
114. ISA - International Society of Automation (The); (Formerly: Instrumentation, Systems, and Automation Society); www.isa.org.
115. ISAS - Instrumentation, Systems, and Automation Society (The); (See ISA).

116. ISFA - International Surface Fabricators Association; (Formerly: International Solid Surface Fabricators Association); www.isfanow.org.
117. ISO - International Organization for Standardization; www.iso.org.
118. ISSFA - International Solid Surface Fabricators Association; (See ISFA).
119. ITU - International Telecommunication Union; www.itu.int/home.
120. KCMA - Kitchen Cabinet Manufacturers Association; www.kcma.org.
121. LMA - Laminating Materials Association; (See CPA).
122. LPI - Lightning Protection Institute; www.lightning.org.
123. MBMA - Metal Building Manufacturers Association; www.mbma.com.
124. MCA - Metal Construction Association; www.metalconstruction.org.
125. MFMA - Maple Flooring Manufacturers Association, Inc.; www.maplefloor.org.
126. MFMA - Metal Framing Manufacturers Association, Inc.; www.metalframingmfg.org.
127. MHIA - Material Handling Industry of America; www.mhia.org.
128. MIA - Marble Institute of America; www.marble-institute.com.
129. MMPA - Moulding & Millwork Producers Association; www.wmmpa.com.
130. MPI - Master Painters Institute; www.paintinfo.com.
131. MSS - Manufacturers Standardization Society of The Valve and Fittings Industry Inc.; www.mss-hq.org.
132. NAAMM - National Association of Architectural Metal Manufacturers; www.naamm.org.
133. NACE - NACE International; (National Association of Corrosion Engineers International); www.nace.org.
134. NADCA - National Air Duct Cleaners Association; www.nadca.com.
135. NAIMA - North American Insulation Manufacturers Association; www.naima.org.
136. NBGQA - National Building Granite Quarries Association, Inc.; www.nbgqa.com.
137. NBI - New Buildings Institute; www.newbuildings.org.
138. NCAA - National Collegiate Athletic Association (The); www.ncaa.org.
139. NCMA - National Concrete Masonry Association; www.ncma.org.
140. NEBB - National Environmental Balancing Bureau; www.nebb.org.
141. NECA - National Electrical Contractors Association; www.necanet.org.
142. NeLMA - Northeastern Lumber Manufacturers Association; www.nelma.org.
143. NEMA - National Electrical Manufacturers Association; www.nema.org.
144. NETA - International Electrical Testing Association; www.netaworld.org.
145. NFHS - National Federation of State High School Associations; www.nfhs.org.
146. NFPA - National Fire Protection Association; www.nfpa.org.
147. NFPA - NFPA International; (See NFPA).
148. NFRC - National Fenestration Rating Council; www.nfrc.org.
149. NHLA - National Hardwood Lumber Association; www.nhla.com.
150. NLGA - National Lumber Grades Authority; www.nlga.org.
151. NOFMA - National Oak Flooring Manufacturers Association; (See NWFA).
152. NOMMA - National Ornamental & Miscellaneous Metals Association; www.nomma.org.
153. NRCA - National Roofing Contractors Association; www.nrca.net.
154. NRMCA - National Ready Mixed Concrete Association; www.nrmca.org.
155. NSF - NSF International; www.nsf.org.
156. NSPE - National Society of Professional Engineers; www.nspe.org.
157. NSSGA - National Stone, Sand & Gravel Association; www.nssga.org.
158. NTMA - National Terrazzo & Mosaic Association, Inc. (The); www.ntma.com.
159. NWFA - National Wood Flooring Association; www.nwfa.org.
160. PCI - Precast/Prestressed Concrete Institute; www.pci.org.
161. PDI - Plumbing & Drainage Institute; www.pdionline.org.

162. PLASA - PLASA; (Formerly: ESTA - Entertainment Services and Technology Association); www.plasa.org.
163. RCSC - Research Council on Structural Connections; www.boltcouncil.org.
164. RFCI - Resilient Floor Covering Institute; www.rfci.com.
165. RIS - Redwood Inspection Service; www.redwoodinspection.com.
166. SAE - SAE International; www.sae.org.
167. SCTE - Society of Cable Telecommunications Engineers; www.scte.org.
168. SDI - Steel Deck Institute; www.sdi.org.
169. SDI - Steel Door Institute; www.steeldoor.org.
170. SEFA - Scientific Equipment and Furniture Association (The); www.sefalabs.com.
171. SEI/ASCE - Structural Engineering Institute/American Society of Civil Engineers; (See ASCE).
172. SIA - Security Industry Association; www.siaonline.org.
173. SJI - Steel Joist Institute; www.steeljoist.org.
174. SMA - Screen Manufacturers Association; www.smainfo.org.
175. SMACNA - Sheet Metal and Air Conditioning Contractors' National Association; www.smacna.org.
176. SMPTE - Society of Motion Picture and Television Engineers; www.smpte.org.
177. SPFA - Spray Polyurethane Foam Alliance; www.sprayfoam.org.
178. SPIB - Southern Pine Inspection Bureau; www.spib.org.
179. SPRI - Single Ply Roofing Industry; www.spri.org.
180. SRCC - Solar Rating & Certification Corporation; www.solar-rating.org.
181. SSINA - Specialty Steel Industry of North America; www.ssina.com.
182. SSPC - SSPC: The Society for Protective Coatings; www.sspc.org.
183. STI - Steel Tank Institute; www.steeltank.com.
184. SWI - Steel Window Institute; www.steelwindows.com.
185. SWPA - Submersible Wastewater Pump Association; www.swpa.org.
186. TCA - Tilt-Up Concrete Association; www.tilt-up.org.
187. TCNA - Tile Council of North America, Inc.; www.tileusa.com.
188. TEMA - Tubular Exchanger Manufacturers Association, Inc.; www.tema.org.
189. TIA - Telecommunications Industry Association (The); (Formerly: TIA/EIA - Telecommunications Industry Association/Electronic Industries Alliance); www.tiaonline.org.
190. TIA/EIA - Telecommunications Industry Association/Electronic Industries Alliance; (See TIA).
191. TMS - The Masonry Society; www.masonrysociety.org.
192. TPI - Truss Plate Institute; www.tpinst.org.
193. TPI - Turfgrass Producers International; www.turfgrassod.org.
194. TRI - Tile Roofing Institute; www.tilerroofing.org.
195. UL - Underwriters Laboratories Inc.; www.ul.com.
196. UNI - Uni-Bell PVC Pipe Association; www.uni-bell.org.
197. USAV - USA Volleyball; www.usavolleyball.org.
198. USGBC - U.S. Green Building Council; www.usgbc.org.
199. USITT - United States Institute for Theatre Technology, Inc.; www.usitt.org.
200. WA - Wallcoverings Association; www.wallcoverings.org.
201. WASTEC - Waste Equipment Technology Association; www.wastec.org.
202. WCLIB - West Coast Lumber Inspection Bureau; www.wclib.org.
203. WCMA - Window Covering Manufacturers Association; www.wcmanet.org.
204. WDMA - Window & Door Manufacturers Association; www.wdma.com.
205. WI - Woodwork Institute; www.wicnet.org.
206. WSRCA - Western States Roofing Contractors Association; www.wsrca.com.

207. WWPA - Western Wood Products Association; www.wwpa.org.
- C. Code Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. This information is believed to be accurate as of the date of the Contract Documents.
1. DIN - Deutsch's Institute fur Normung e.V.; www.din.de.
 2. IAPMO - International Association of Plumbing and Mechanical Officials; www.iapmo.org.
 3. ICC - International Code Council; www.iccsafe.org.
 4. ICC-ES - ICC Evaluation Service, LLC; www.icc-es.org.
- D. State Government Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. This information is subject to change and is believed to be accurate as of the date of the Contract Documents.
1. CBHF; State of California; Department of Consumer Affairs; Bureau of Electronic and Appliance Repair, Home Furnishings and Thermal Insulation; www.bearhfti.ca.gov.
 2. CCR; California Code of Regulations; Office of Administrative Law; California Title 24 Energy Code; www.calregs.com.
 3. CDHS; California Department of Health Services; (See CDPH).
 4. CDPH; California Department of Public Health; Indoor Air Quality Program; www.cal-iaq.org.
 5. CPUC; California Public Utilities Commission; www.cpuc.ca.gov.
 6. SCAQMD; South Coast Air Quality Management District; www.aqmd.gov.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

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SECTION 01 50 00 - TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Temporary Utilities: Electricity, lighting, heat, ventilation, telephone service, water and sanitary facilities.
- B. Temporary Controls: Barriers, enclosures, fencing, protection of Work and security.
- C. Construction Facilities: Access roads, parking, progress cleaning, project sign, Architect's banner, and field office trailer.
- D. Special Controls: Waste disposal facilities, Water Control, Dust Control, Erosion and Sediment Control, Noise Control, Pollution Control.
- E. Comply with Title 24, Part 9, California Fire Code, Chapter 33 Fire Safety During Construction and Demolition, during all Phases of project.

1.2 SUBMITTALS

- A. Site Plan: Show temporary facilities, utility hookups, staging areas, limits of work area boundaries, and parking areas for construction personnel.

1.3 TEMPORARY ELECTRICITY

- A. Provide temporary electrical service suitable to conduct construction operations.
- B. Connect to existing power service. Power consumption shall not disrupt Owner's need for continuous service.
- C. Contractor shall pay cost of energy used. Exercise measures to conserve energy.
- D. Provide power outlets for construction operations with branch wiring and distribution boxes located where needed. Provide flexible power cords as required.
- E. Provide feeder switch at source distribution equipment.
- F. Permanent existing convenience receptacles may be utilized during construction.

1.4 TEMPORARY LIGHTING

- A. Provide and maintain adequate lighting for construction operations.
- B. Maintain lighting and provide routine repairs.
- C. Permanent building lighting may be utilized during construction.

1.5 TEMPORARY HEAT

- A. Provide heating devices and heat as required to maintain specified conditions for construction operations.
- B. Utilize Owner's existing heat plant, extend and supplement with temporary heating devices as required to maintain specified conditions for construction operations.
- C. Contractor shall pay cost of energy used. Exercise measures to conserve energy.

1.6 TEMPORARY VENTILATION

- A. Not required..

1.7 TELEPHONE SERVICE

- A. Contractor shall provide cell phone numbers of superintendent and management team and shall be reachable at all hours of the day or night.

1.8 TEMPORARY WATER SERVICE

- A. Provide for suitable quality water service.
- B. Contractor shall pay cost of water used. Exercise measures to conserve water.
- C. Extend branch piping with outlets located so water is available by hose with threaded connections.

1.9 TEMPORARY SANITARY FACILITIES

- A. Provide and maintain required facilities and enclosures. Existing facilities

1.10 TEMPORARY FIRE PROTECTION

- A. Provide fire protection during construction according to CFC Chapter 33, including but not limited to fire extinguisher requirements and exit access requirements.
- B. Conform to Title 24, Part 9, California Fire Code, Chapter 33, , Fire Safety During Construction/Demolition.

1.11 BARRIERS

- A. Provide barriers to prevent unauthorized entry to construction areas and to protect existing facilities and adjacent properties from damage from construction operations and demolition.
- B. Provide barricades required by governing authority for public rights-of-way and for public access to existing facilities.

- C. Provide protection for plant life designated to remain. Replace damaged plant life.
- D. Protect non-owned vehicular traffic, stored materials, site and structures from damage.
- E. Provide steel trench plates, orange mesh fencing, construction site marker and other protective means to keep site and users, Owner's personnel, visitors and students safe, protected, and separated from ongoing construction operations. Provide temporary access at all paths of travel. Yellow warning tape is not acceptable means of separation and protection. At all open trenching operations, enclose entire trenching operation area including stockpiled backfill within orange mesh construction fencing. Provide steel trench plate "bridges" at all walkways.
 - 1. Notify Fire Marshall at least 48-hours prior to beginning utility work in the existing Fire Lane.
 - 2. Allow Fire Marshall access at reasonable times during progress of the work for inspections.

1.12 FENCING FOR CONSTRUCTION OPERATIONS

- A. Construction: Commercial grade chain link fence, , top and bottom knuckled selvage (closed end).
 - 1. Provide screen full height of fence, 1-3/4 inch mesh, 11 gauge, woven open mesh 100% polypropylene with 78 percent wind break, reinforced tape at grommets at 18 inches centers at perimeter, attach screen to chain link fence with 11 gauge hog rings by Roxford Fordell, Los Angeles, CA.
- B. Provide 6 foot high fence around construction site; equip with vehicular and pedestrian gates with locks.
- C. Submit detailed fencing and construction traffic plan for review and approval by Architect.
- D. At completion of project repair concrete or A.C. substrate, fill holes to match existing materials flush with adjacent surface.

1.13 STAGING AREAS

- A. Coordinate with Owner for location, extent, and type of construction staging area.
 - 1. Fixed Equipment may be new or used, temporary or permanent, devices including any heat generating or cooling equipment that can be operated in a safe manner and with approval from the authorities having jurisdiction.

PART 3 - EXECUTION

3.1 REMOVAL

- A. Remove all temporary control measures in accordance with regulatory requirements at completion of construction.

END OF SECTION

SECTION 01 57 20 - CONTROL OF CONSTRUCTION NOISE

PART 1 - GENERAL

1.1 DESCRIPTION

- A. This section specifies the control of noise arising from construction operations and associated activities. Noise control measures specified are an obligation of the Contractor with the costs included within the various contract items of work.

1.2 QUALITY ASSURANCE

- A. Establish and maintain quality assurance program for the control of noise.

1.3 SUBMITTALS

- A. Noise Control Plan: After the contract is awarded, prior to the commencement of the Work, the Contractor shall meet with the Owner to discuss the proposed Noise Control Plan and to develop mutual understanding relative to details of the Plan.
 - 1. The Noise Control shall comply with the constraints set forth by the Owner, and be in compliance with the noise control regulations of the Owner and the City of Walnut.
 - 2. Submit a description of the instruments to be used in monitoring noise.
 - 3. Show the areas and boundaries where noisy work will occur.
 - 4. Approval of the Contractor's Noise Control Plan will not relieve the Contractor of responsibility for proper and continuing control of noise throughout the project site.

1.4 NOISE CONTROL

- A. General: Take every practicable precaution and action to eliminate or minimize noise emanating from the construction operations.
- B. Timing: Perform noise-producing work in less-sensitive hours of the day or week as directed by the Owner.
- C. Constraints: Control and abate noise produced by the Work at or below the decibel levels and within the time periods specified.
 - 1. Repetitive, high level impact noise will be permitted only between normal construction time specified in Section 01 10 00 Summary of Work unless otherwise permitted by the Owner. Repetitive impact noise on the property shall not exceed the following dB limitations:
 - Time Duration of Impact Noise Sound Level in dB
 - More than 12 minutes in any hour 70
 - Less than 30 seconds of any hour 85
 - Less than three minutes of any hour 80
 - Less than 12 minutes of any hour 75

2. Provide equipment, sound-deadening devices, and take noise abatement measures that are necessary to comply with the requirements specified, and comply with the following:
 - a. Maximum permissible construction equipment noise levels within 50 feet of any building on the premises shall be 75 decibels.
 - b. Provide shields or other physical barriers to restrict the transmission of noise.
 - c. Provide soundproof housings or enclosures for noise-producing machinery.
 - d. Use intake and exhaust mufflers on internal combustion engines that are maintained to have equipment perform below noise levels specified.
 - e. Line hoppers and bins with sound deadening material.
 - f. Conduct truck loading, unloading and hauling operations so that noise is kept to a minimum.
3. At least once every five successive working days while work is being performed, above 55 dBA noise level, measure sound level for noise exposure due to the construction. Measure noise exposure at the property line or 50 feet from the noise source, whichever is greater. Measure the sound levels on the A weighing network of a General-Purpose sound level meter at slow response. To minimize the effect of reflective sound waves at buildings, measurements may be taken three to six feet in front of any building face. Submit the recorded information to the Architect noting any problems and the alternatives for mitigating actions.

PART 2 - PRODUCTS

2.1 NOT USED.

PART 3 - EXECUTION

3.1 NOT USED.

END OF SECTION

SECTION 01 57 23 – STORM WATER POLLUTION CONTROL

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Preparation, implementation, and monitoring of Storm Water Pollution Prevention Plan (SWPPP) for the purpose of preventing the discharge of pollutants from the Project site into receiving waters. This includes the elimination of pollution discharges such as improper dumping, storm water that has been in contact with pollutants, erosions, spills or leakage from storage tanks or transfer areas.
- B. Related Sections
 - 1. General Conditions
 - 2. Section 01 50 00: Temporary Facilities and Controls.
 - 3. Section 01 70 00: Execution Requirements.

1.2 SUBMITTALS

- A. Provide action plan on how run off of roof drains and catch basins will be accommodated.

1.3 QUALITY ASSURANCE

- A. Comply with the following as a minimum requirement: California Storm Water Best Management Practice Handbook for Construction Activity (BMP Handbook) Current adopted edition.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. Provide the quality, grade, and type of materials as specified in Best Management Practice, BMP, Handbook

PART 3 – EXECUTION

3.1 PREPARATION AND SUBMITTAL

- A. For new or existing Project sites with land disturbance of less than one (1) acre a Notice of Intent (NOI) is not required, however any BMP indicated in BMP Handbook required to prevent or minimize storm water pollution shall be implemented at no cost to OWNER. CONTRACTOR shall prepare and submit to Architect a SWPPP for review and approval by OWNER.

3.2 IMPLEMENTATION

- A. Install perimeter controls prior to starting Work at the Project site.
- B. Contain on-site storm water on the Project site. Do not drain on-site water directly into the storm drain.
- C. Designate trained personnel for the proper implementation of the SWPPP.
- D. Revise SWPPP to suit changing Project site conditions and also when properly installed systems are ineffective.

3.3 MONITORING

- A. Provide daily site monitoring of catch basins to ensure no sediments are getting into them. Make adjustments daily to protect catch basins as work progresses.

3.4 SPECIAL MONITORING OF RUNOFF

- A. CONTRACTOR is responsible for providing proper storage of tools and materials. If rain or storm water run off comes in contact with pollutants (such as soil stabilizers, paint or fluid from vehicles) report to Architect immediately. CONTRACTOR will be required to sample and remediate contaminated water.

3.5 LIABILITIES AND PENALTIES

- A. Review of the SWPPP and inspection log by Architect shall not relieve CONTRACTOR from liabilities arising from non-compliance of storm water pollution regulations.
- B. Payment of penalties for non-compliance by CONTRACTOR shall be the sole responsibility of CONTRACTOR.
- C. Compliance with the Clean Water Act pertaining is the sole responsibility of CONTRACTOR. Any fine against OWNER due to non-compliance by CONTRACTOR, OWNER shall recover all costs of the fine by appropriate OWNER Assessment.

END OF SECTION

SECTION 01 60 00 - PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Products
- B. Transportation and handling.
- C. Storage and protection.
- D. Product options.
- E. Substitutions

1.2 PRODUCTS

- A. Product: means new material, machinery, components, equipment, fixtures and systems forming Work. Does not include machinery and equipment used for preparation, fabrication, conveying and erection of Work. Products may also include existing materials or components required for reuse.
- B. Do not use materials and equipment removed from existing premises, except as specifically permitted by Contract Documents.
- C. Provide interchangeable components from the same manufacturer.

1.3 TRANSPORTATION AND HANDLING

- A. Transport and handle products in accordance with manufacturer's instructions.
- B. Promptly inspect shipments to assure that products comply with requirements, quantities are correct and products are undamaged.
- C. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement or damage.

1.4 STORAGE AND PROTECTION

- 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.
- B. For exterior storage of fabricated products, place on sloped supports, above ground and protect as necessary to prevent deterioration or damage to the product.
- C. When approved by the Owner, provide off-site storage and protection in a bonded warehouse approved by Owner when site does not permit on-site storage or protection at no cost to Owner.
- D. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to avoid condensation.

- 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 ensure products are undamaged and are maintained under specified conditions.

1.5 PRODUCT OPTIONS

- A. Where products are specified by reference standards or by description only, provide products meeting those standards or that description, made by a manufacturer acceptable to Architect.
- B. Where products are specified by naming one or more manufacturers, provide products of one of the named manufacturers that meets or exceeds specifications.
- C. Where any specific article, device, equipment, product, material, fixture, patented process, form, method, or type of construction is indicated or specified by name, make, trade name, or catalog number, whether with or without the phrase "or equal," such specification shall be deemed to establish the minimum qualities of function, dimension, appearance, and performance (collectively the Basis of Design) for that material, process, or article. Such specification shall be deemed to be followed by the phrase "or equal."
- D. If a named product, or named manufacturer's equivalent product does not fully meet the specification, that manufacturer shall provide a custom or modified product to meet the specification.
- E. Where expressly noted "no substitutions" in individual Sections, no product options are permitted.
- F. When the phrase "or equal" is used or implied, it shall mean "an equivalent product, approved by the Architect in accordance with the requirements of this Section."
- G. Products, proposed as substitutions, shall conform to requirements listed in the respective Section of this Manual and have at least 10 successful installations in commercial projects similar in scale and complexity to those required for this Project that have been in service for minimum of 5 years and remain in satisfactory condition.

1.6 SUBSTITUTIONS

- A. Manufacturers and products listed in Specifications form basis for design and quality intended. Bidders may propose substitutions of equal design and quality and must be accompanied by completed Request Form included at end of this Section, other forms not permitted. Submit separate form for each proposed substitution. Except for Sections listed on the Finish Schedule that require submittal prior to bid, all substitution requests shall be submitted as required herein.

1. Substitution requests, if any, shall be submitted to Architect within 5 calendar days after bid opening. Architect will issue acceptance or rejection of request.
- B. Substitutions must clearly be in Owner's best interest because of quality, cost, performance, conformity to code requirements or availability. Architect will make decision as to acceptance of proposed substitution.
1. Submittal of proposed substitutions shall be made only by Contractor. Architect will not review direct submittal by manufacturers, suppliers or subcontractors.
 2. Burden of proof as to equality of any material, process or article shall rest with Contractor. Provision authorizing submissions of "or equal" justification data shall not in any way authorize an extension of time for performance of this Contract.
 3. Substitutions shall, without exception, be manufactured of same basic materials and comply with or exceed all Specification requirements of dimension, function, structure and appearance, without deviation. Provide itemized comparison of quality and performance.
 4. Use of approved substitutions shall in no way relieve Contractor from responsibility for compliance with Contract Documents after installation.

Contractor shall assume all extra costs caused by use of approved substitute materials.
 5. Statement indicating why specified material or product cannot be provided.
 6. Coordination information, including list of changes or modifications needed to other parts of Work and to construction performed by Owner and separate contractors that will be necessary to accommodate proposed substitution.
 7. Detailed side by side comparison of significant qualities of proposed substitution with those of the Work specified. Mark clearly affected specification Section for any differences from item specified. Significant qualities may include attributes such as performance, weight, size, durability, visual effect and specific features and requirements indicated.
 8. Product Data Samples, including drawings and descriptions of products and fabrication and installation procedures.
 9. List of similar installations for completed projects with project names and addresses and names and addresses of Architects and Owners.
 10. Material test reports from qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
 11. Cost information, including a proposal of change, if any, in the Contract Sum.

12. Substitutions for specified product, brand or manufacture that have been submitted and disapproved by Architect shall not be resubmitted in any modified form.
 13. In case materials are substituted and installed without proper authorization, Contractor shall remove such materials and install those specified at his own expense.
 14. Contractor shall determine effect approved substitutions will have on other portions of Work and so inform his subcontractors and employees of these effects.
 15. Acceptance of proposed substitution shall be determined solely by specifying Architect. The final decision shall be the Architect's in accordance with the General Conditions.
- C. Substitutions may be considered when product becomes unavailable through no fault of Contractor. Provide letter from manufacturer, on manufacturer's letterhead, stating lack of availability.
 - D. Unacceptable Substitutions: substitution requests initiated by late submittals that have caused materials to become unavailable due to delay in ordering and procurement will not be acceptable reason for substitutions.
 - E. Provide same warranty for substitution as for specified product.
 - F. Contractor shall pay costs for time required by Architect for review and for any redesign services associated with substitutions and for costs of re-approval by Regulatory Agencies.
 - G. Substitutions will not be considered when they are indicated or implied on shop drawing or product data submittals, without separate written request.
 - H. Each subcontractor is responsible for providing products and construction methods compatible with products and construction methods of other subcontractors. If dispute arises between subcontractors over concurrently selectable but incompatible products, Architect will determine which products shall be used.
 - I. Substitution Submittal Procedure: In accordance with the General Conditions, Division 01, General Requirements for Administrative Requirements and this Section.

1.7 OWNER-FURNISHED, OWNER-INSTALLED WORK (OFOI)

- A. Indicate in construction progress schedule owner-furnish owner-installed items and schedule time for installation.
- B. Items indicated on Drawings as OFOI will be furnished by Owner and installed by Owner. Work indicated as OFOI will be performed under separate contract employees by Owner at its discretion.
Where work of this Contract adjoins or conflicts with OFOI, work, Contractor shall cooperate with Owner and its employees in manner that will provide for reasonable and accurate completion of this Contract and work under separate contact.

- C. Coordinate with OFOI work affecting this contract. Including verification and interfacing of this contract with OFOI work.

1.8 OWNER-FURNISHED, CONTRACTOR-INSTALLED WORK (OFCl)

- A. Indicate in the construction progress Schedule Owner-Furnish Contractor-Installed items and schedule time for their installation.
- B. Contractor shall verify exact sizes and services required for each item of equipment indicated on Drawings or in Project Manual as OFCI and shall obtain from Owner rough-in drawings, diagrams, setting templates and other necessary information to ensure proper mating of assemblies.
- C. Contractor shall receive at project site each item of equipment from Owner and from that time on shall assume full responsibility for items and equipment until one year from date of Certified Completion.
- D. Contractor shall give Owner 15 days prior notice of requirements for delivery to site of all OFCI equipment.
- E. Contractor shall be responsible for receiving OFCI items and equipment and shall uncrate, inspect and notify Owner in writing within 7 days of receiving said items or equipment of acceptance or rejection of items or equipment. Owner, after receiving notice, will take appropriate action to have items or equipment made acceptable for Contractor's use. Rejected items shall be carefully stored and protected from damage by Contractor until Owner takes appropriate action.
- F. Contractor shall be responsible for final placing, installation, connection, start-up, checking, testing and demonstrated satisfactory operation. Owner will provide names of manufacturer's representatives, who shall assist the Contractor in checking, testing and demonstrating equipment.

PART 2 - PRODUCTS

2.1 NOT USED

PART 3 - EXECUTION

3.1 NOT USED

END OF SECTION

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SECTION 01 70 00 - EXECUTION REQUIREMENTS

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Requirements and limitations for cutting and patching of Work.
- B. Cleaning throughout the construction period.
- C. Project Record Documents.
- D. Closeout procedures.
- E. Adjusting
- F. Operation and maintenance data.
- G. Warranty and Guarantee.
- H. Spare parts and maintenance materials.
- I. Instruction to Owner's personnel.

1.2 EXISTING CONDITIONS

- A. Before beginning Work, investigate and verify the existence and location of mechanical, drainage, and electrical systems and other construction affecting Work, including underground utilities.
 - 1. Before construction, survey and record points of connection of utility services.
 - 2. Locate invert elevation at points of connection to existing sanitary- and storm drain, water-service piping, and underground electrical services.
 - 3. Employ a utility service locator company to locate underground utilities. Provide a camera inspection/survey of the existing sewer line from the building to the property line and provide a Report documenting any obstruction or deterioration of the existing sewer line.
 - 4. Verify Owner's Record Drawings.
 - 5. Furnish survey of existing utilities.

1.3 CUTTING AND PATCHING

- A. Where Work requires that particular existing building element such as partition, wall, paving, window, or similar element of existing building construction be removed, it is the intention of this Specification that such Work be part of the Demolition Section and not part of Cutting and Patching.
- B. New Work required to replace such removals is considered as part of separate sections of Specifications covering similar new construction.

- C. Where incidental cutting and patching is required for installation of a specific item or piece of equipment (including piping, ductwork, conduit, etc.), such cutting and patching is considered to be specified as part of that Section.
- D. Contractor shall verify and check areas to be cut and patched and shall coordinate Work of various trades involved.
- E. Where doubt exists as to size, location, or method of cutting concrete or any other structural element, including metal stud framing, Contractor shall contact Architect before proceeding.
- F. Where doubt exists, Contractor shall distinguish between "cutting" and "demolition".
- G. Unless specifically indicated otherwise, existing Work cut, altered, or revised to accommodate new Work shall be patched to duplicate undisturbed adjacent finishes, colors, textures, and profiles. New Work in existing portions shall also be finished to match adjacent existing Work unless noted otherwise.
- H. Submit written request in advance of cutting or alteration which affects any of the following.
 - 1. Structural integrity of any element of Project
 - 2. Integrity of weather-exposed or moisture-resistant element
 - 3. Efficiency, maintenance or safety of any operational element
 - 4. Visual qualities of sight exposed elements
 - 5. Work of Owner or separate Contractor'
 - 6. Coordinated Drawings in accordance with Division 01, General Requirements (Section 01 30 00).
- I. Include in request:
 - 1. Identification of Project.
 - 2. Location and description of affected Work.
 - 3. Necessity for cutting or alteration.
 - 4. Description of proposed Work and products to be used.
 - 5. Alternatives to cutting and patching.
 - 6. Effect on Work of Owner or separate Contractor.
 - 7. Written permission of affected separate Contractor.
 - 8. Date and time Work will be executed.

1.4 QUALITY ASSURANCE-CLEANING

- A. Inspection: Conduct daily inspection, and more often if necessary, to verify that requirements of cleanliness are being met.
- B. Codes and Standards: In addition to requirements specified herein, comply with pertinent requirements of authorities having jurisdiction.
- C. For final cleaning, use only professional cleaning company experienced in commercial cleaning.

1.5 PAYMENT WITHHELD - CLEANING

- A. Architect reserves right to withhold certification of payment requests for failure on part of Contractor to regularly clean Project in conformance with Requirements of this Section.

1.6 CLOSEOUT PROCEDURES

- A. Owner Occupancy:
 - 1. Conform to Part 1, Title 24, Section 4-336 CCR Requirements for Verified Reports and Closeout Procedures.
 - 2. In conjunction with Project Inspector, Contractor shall prepare list of items (Punchlist) to be completed or corrected. List may be developed by areas when approved by Architect.
 - 3. Within time specified in the Certificate for Substantial completion after receipt of list, Architect will inspect to determine status of completion.
 - 4. Should Architect determine that Work is not complete:
 - a. Architect will promptly notify Contractor in writing, giving reasons for his determination.
 - b. Contractor shall remedy deficiencies and notify Architect when Work is ready for re-inspection.
 - c. Architect will re-inspect Work.
 - 5. When Architect concurs, that Work is substantially complete and ready for occupancy.
 - a. Owner will prepare the Notice of Completion accompanied by Contractor's list (Punchlist) of items to be completed or corrected as verified by Architect.
 - b. The Certified Notice of Completion will be submitted to the Owner and to Contractor for their written acceptance of responsibilities assigned to them in such notice.
 - c. Contractor shall provide consent by insurer for Partial or Beneficial Occupancy.

- B. Final Completion:
1. Prepare and submit notice that Work is ready for final inspection and acceptance.
 2. Verify Work is complete.
 3. Clarify that:
 - a. Work has been inspected by all governing agencies and is in compliance with Contract Documents.
 - b. Work has been completed in accordance with Contract Documents.
 - c. Equipment and systems have been tested as required and are operational.
 - d. Work is completed and ready for final inspection.
 4. Architect will make an inspection to verify status of completion.
 5. Should Architect determine Work is incomplete or defective:
 - a. Architect will promptly notify Contractor in writing, listing incomplete or defective Work.
 - b. Contractor shall remedy deficiencies promptly and notify Architect when ready for re-inspection.
 6. When Architect determines Work is acceptable under the Contract Documents, he will request Contractor to make closeout submittals.
- C. Closeout Submittals include, but are not necessarily limited to:
1. Project Record Documents.
 2. Operation and maintenance data for items so listed in pertinent Sections of these Specifications and for other items when so approved by Architect.
 3. Warranties and Guarantees.
 4. Keys and keying schedule.
 5. Spare parts, materials, extra stock to be turned over to Owner.
 6. Evidence of payment and release of Stop Notices , when requested by Owner.
 7. List of subcontractors, service organizations and principal vendors, including names, addresses and telephone numbers, where they may be contacted for emergency service at all times, including nights, weekends and holidays.
 8. Notification of insurer for completion of Project.
- D. Final Payment:
1. Submit Final Payment Request, showing all adjustments to Contract Sum.

2. Retention will be released no sooner than 35 days after Notice of Completion has been recorded with County Recorder's Office.

1.7 ADJUSTING

- A. Adjust operating products and equipment to ensure smooth and unhindered operation.

1.8 PROJECT RECORD DOCUMENTS

- A. Record Documents: As-Built Drawings, Project Manual with Specifications including but not limited to the documents required herein.
- B. Owner will provide one set of drawings and one copy of Project Manual for use during construction to record changes made during construction.
- C. Record Documents: As-Built drawings and Project Manual, record in concise manner using industry-standard drafting techniques on drawings, on weekly basis all actual revisions to Work
 1. Changes made on Drawings, including Clarification Drawings.
 2. Changes made to Specifications.
 3. Changes made by Addenda.
 4. Changes made by Construction Change Directives/Instruction Bulletins, Architect's Supplemental Instructions, minor changes.
 5. Change Orders or other authorized Modifications to Contract.
 6. Revisions made to shop drawings, product data and samples.
- D. Store Record Documents separate from documents used for construction. Replace soiled or illegible documents.
- E. Record information concurrent with construction progress.
- F. Specifications: Legibly mark and record at each product Section description of actual products installed, including following:
 1. Manufacturer's name, trade name, product model and number and supplier.
 2. Authorized product substitutions or alternates utilized.
 3. Changes made by Addenda and Modifications.
- G. Record Documents and Shop Drawings: Legibly mark each item to record actual construction including:
 1. Measured depths of foundations in relation to finish first floor datum.

2. Measured horizontal and vertical locations of underground utilities and appurtenances referenced to permanent surface improvements. Identify drains and sewers by invert elevation.
 3. Measured locations of internal utilities and appurtenances concealed in construction referenced to visible and accessible features of Work. Identify ducts, dampers, valves, access doors and control equipment wiring.
 4. Field changes of dimension and detail.
 5. Details not on original drawings.
- H. Obtain Architect's signed certification that Record Documents have been fully updated prior to submitting monthly payment requests. Compliance is mandatory before payment will be made.
- I. Submit Record Documents certified by Inspector to Architect with claim for final Application for Payment. Fully completed Record Documents are a prerequisite to final payment.
- J. RECORD DRAWINGS: In addition to the As-Built Drawings required by this Section, upon completion of Work, incorporate all changes from the As-Built Drawings to the Record Drawing set, submit in computer-generated electronic files, Version Auto CAD 2005 with all changes as noted on As-Built Drawings. Include all Change Orders, Addenda, field orders and as-installed conditions. Submit to Owner two (2) sets in CD Rom format containing all As-Built information. Contractor may request to use the Architect's computer-generated drawings in electronic format in accordance with Section 01 30 00 Administrative Requirements.

1.9 OPERATION AND MAINTENANCE DATA

- A. Submit six (6) sets prior to final inspection, bound in 8-1/2 by 11-inch text pages, in binders with durable covers. Include operation and maintenance data for all items for which submittals are requested in individual Sections of Specifications?

1.10 WARRANTY AND GUARANTEE

- A. Contractor, manufacturer's warranties and guarantees notwithstanding, warrants entire Work against defects in materials and workmanship for twelve (12) months from date of Certified Notice of Completion. Warranties and guarantees between Contractor and manufacturers and Contractor and suppliers shall not affect warranties or guarantees between Contractor and Owner. Refer to General Conditions for additional requirements.
- B. Execute and assemble documents from subcontractors, suppliers and manufacturers.
- C. Submit prior to final Application for Payment.
- D. For items of Work delayed beyond date of Notice of Completion, provide updated submittal within ten days after acceptance, listing date of acceptance as start of Guarantee Period.

1.11 WARRANTIES - FORM OF SUBMITTALS

- A. Bind in commercial quality, 8-1/2 by 11 inch, three-ring side binders with hardback, cleanable, plastic covers.
- B. Label cover of each binder with typed or printed title WARRANTIES AND BONDS, with title of Project; name, address and telephone number of Contractor and equipment supplier; and name of responsible principal.
- C. Table of Contents: Neatly typed, in sequence of Table of Contents of Project Manual, with each item identified with number and title of Specification Section in which specified, and name of product or Work item.
- D. Separate each warranty or bond with index tab sheets keyed to Table of Contents listing. Provide full information, using separate typed sheets as necessary. List subcontractor, supplier, and manufacturer, with name, address, and telephone number of responsible principal.

1.12 WARRANTIES - PREPARATION OF SUBMITTALS

- A. Obtain warranties and bonds, executed in duplicate by responsible subcontractors, suppliers, and manufacturers, within ten days after completion of applicable item or Work. Except for items put into use with Owner's permission, leave date of beginning of time of warranty until date of Certified Notice of Completion is determined.
- B. Verify that documents are in proper form, contain full information, and are notarized.
- C. Co-execute submittals when required.
- D. Retain warranties and bonds until time specified for submittal.

1.13 WARRANTIES - TIME OF SUBMITTALS

- A. For equipment or component parts of equipment put into service during construction with Owner's permission submit documents within ten days after acceptance.
- B. Make other submittals within ten days after date of Certified Notice of Completion, prior to final Application for Payment.
- C. For items of Work when acceptance is delayed beyond date of Notice of Completion, submit within ten days after acceptance, listing date of acceptance as beginning of warranty period.

1.14 SPARE PARTS AND MAINTENANCE MATERIALS

- A. Provide products, spare parts, maintenance, and extra materials in quantities specified in individual Specification Sections.
- B. Deliver to project site location as directed by Owner.

1.15 INSTRUCTIONS TO OWNER'S PERSONNEL

- A. Instruct Owner's personnel in proper operation and maintenance of all systems, equipment and similar items which were provided as part of Work. Provide maintenance and inspection schedules that conform to manufacturer's recommendations.
- B. Contractor shall provide schedule to Owner for approval for each of instruction periods required.
- C. Instruction sessions will be held in Owner designated area on project site and at Owner's convenience.
- D. Prepare and submit to Architect a sign-in sheet with subject, date and time, signed by all participants for each session.
- E. Instructors shall be qualified by product manufacturer in subject matter presented at each session.

PART 2 - PRODUCTS

2.1 MATERIALS - CUTTING AND PATCHING

- A. Primary Products: Those required for original installation.

2.2 PRODUCTS FOR PATCHING AND EXTENDING WORK

- A. New Materials: As specified in product sections; match existing products and Work for patching and extending Work.
- B. Type and Quality of Existing Products: Determine by inspecting and testing products where necessary, referring to existing Work as standard.

2.3 CLEANING MATERIALS AND EQUIPMENT

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

2.4 COMPATIBILITY

- A. Use cleaning materials and equipment that are compatible with surfaces being cleaned, as recommended by manufacturer of material to be cleaned.

PART 3 - EXECUTION

3.1 EXAMINATION - CUTTING AND PATCHING

- A. Inspect existing conditions prior to commencing Work, including elements subject to damage or movement during cutting and patching. Confirm status and current warranties and guarantees.

- B. After uncovering existing Work, inspect conditions affecting performance of Work.
 - 1. Prior to cutting, boring or drilling through new or existing structural members or elements including reinforcing bars not specifically detailed, Contractor shall prepare detailed drawings for review and approval by Architect, Structural Engineer of Record and DSA Field Engineer. Approval by DSA is required prior to commencement of Work.
Agency approvals will be obtained by Architect not Contractor.
- C. Beginning of cutting or patching means acceptance of existing conditions.

3.2 PREPARATION - CUTTING AND PATCHING

- A. Provide temporary support to ensure structural integrity of Work. Provide devices and methods to protect other portions of Project from damage.
- B. Provide protection from elements for areas that may be exposed by uncovering Work.
- C. Maintain excavations free of water.

3.3 CUTTING AND PATCHING

- A. Execute cutting, fitting, and patching to complete Work.
- B. Fit products together, to integrate with other Work.
- C. Uncover Work to install ill-timed Work.
- D. Remove and replace defective non-conforming Work.
- E. Provide openings in Work for penetration of mechanical and electrical Work.

3.4 PERFORMANCE - CUTTING AND PATCHING

- A. Execute Work by methods to avoid damage to other Work and which will provide appropriate surfaces to receive patching and finish.
- B. Cut rigid materials using masonry saw or core drill. Pneumatic tools not allowed without prior approval. Torches or other flame cutting equipment shall not be used to cut metal studs without prior approval of the Architect.
- C. Restore Work with new products in accordance with requirements of Contract Documents.
- D. Fit Work airtight to pipes, sleeves, ducts, conduits and other penetrations through surfaces.
- E. At penetrations of fire-rated walls, partitions, ceiling or floor construction, completely seal voids with UL-approved fire-rated devices or material in accordance with Section 07 84 00, to full thickness of penetrated element.

- F. Refinish surfaces to match adjacent finish. For continuous surfaces, refinish to nearest intersection or natural break. For an assembly, refinish entire unit.
- G. Extend patching to point where patching is not evident unless directed otherwise by Architect.

3.5 SLEEVES AND HANGERS

- A. Provide conduit, outlets, piping sleeves, boxes, inserts or other materials or equipment necessary to be built into Work. Promptly furnish same and set such sleeves or other materials as construction program required.
- B. In event delays occur in delivery of sleeves or other materials, arrange to have boxes or other forms set at locations where piping or other material is to pass through or into slabs or other Work.
- C. Upon subsequent installation of sleeves or other material, install fill materials as required. Necessary expenditures incurred for boxing out or filling shall be without extra cost to Owner.

3.6 PROGRESS CLEANING

- A. General:
 - 1. Retain stored items in orderly arrangement allowing maximum access, not impeding drainage or traffic and providing required protection of materials.
 - 2. Do not allow accumulation of scrap, debris, waste material, and other items not required for construction of this Work.
 - 3. At least twice each month, and more often if necessary, remove scrap, debris, and waste material from jobsite.
 - 4. Provide adequate storage for items waiting removal from jobsite, observing requirements for fire protection and protection of ecology.
- B. Site:
 - 1. Daily, and more often if necessary, inspect site and pick up all scrap, debris, and waste material. Remove items to place designated for their storage.

Combustible waste shall be removed from site. Flammable waste shall be kept in sealed metal containers until removed from site.
 - 2. Weekly, and more often if necessary, inspect, arrangements of materials stored on site, re-stack, tidy, or otherwise service arrangements to meet requirements specified above.
 - 3. Maintain site in neat and orderly condition.

- C. Structures:
1. Weekly, and more often if necessary, inspect structures and pick up scrap, debris, and waste material. Remove items to place designated for their storage.
 2. Weekly, and more often if necessary, sweep interior spaces clean.
 - a. "Clean", for purpose of this subparagraph, shall be interpreted as meaning free from dust and other material capable of being removed by use of reasonable effort and handheld broom, i.e., "broom-clean".
 3. As required preparatory to installation of succeeding materials, clean structures of pertinent portions thereof to degree of cleanliness recommended by manufacturer of succeeding material, using equipment and materials required to achieve required cleanliness.
 4. Clean substrate; remove dirt, oil, grease, construction markings, and foreign matter that could adversely affect surface finish appearance or performance.
 5. Following installation of finish floor materials, clean finish floor daily, and more often if necessary, and while Work is being performed in space in which finish materials have been installed.
 - a. "Clean", for purpose of this subparagraph, shall be interpreted as meaning free from foreign materials which, in opinion of Architect, may be injurious to finish floor material, i.e., "vacuum clean".

3.7 FINAL CLEANING

- A. Definition: Except as otherwise specifically provided, "clean", for purpose of Article, shall be interpreted as meaning level of cleanliness generally provided by skilled cleaners using commercial quality building maintenance equipment and materials, i.e., "scrub and polish clean".
- B. General: Complete following cleaning operations before requesting inspection for certification of Notice of Completion.
1. Prior to completion of Work, remove from jobsite all tools, surplus materials, equipment, scrap, debris, and waste, conduct final progress cleaning as described above.
 2. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
 - a. Unless otherwise specifically directed by Architect, water and broom clean paved areas on site and public paved areas directly adjacent to site. Remove resultant debris.
 3. Rake grounds that are neither planted nor paved to smooth, even-textured surface.

4. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.

C. Structures:

1. Exterior: In areas affected by Work under this Contract, visually inspect exterior surfaces and remove traces of soils, waste material, smudges and other foreign matter. Remove traces of splashed material from adjacent surfaces. If necessary to achieve uniform degree of exterior cleanliness, hose down exterior of structure. In event of stubborn stains not removable with water, Architect may require light sandblasting or other cleaning at no additional cost to Owner.
2. Interior: In areas affected by Work under this Contract, visually inspect interior surfaces and remove traces of soil waste material, smudges, and other foreign matter. Remove traces of splashed materials from adjacent surfaces. Remove paint drippings, spots, stains, and dirt from finished surfaces. Use only cleaning materials and equipment instructed by manufacturer of surface material.
3. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Replace chipped or broken glass and other damaged transparent materials. Polish mirrors and glass, taking care not to scratch surfaces.
4. Polished Surfaces: On surfaces requiring routine application of buffed polish, apply polish recommended by manufacturer of material being polished. Glossy surfaces shall be cleaned and shined as intended by manufacturer.
5. Carpet: Use only dry-chemical method of cleaning. Steam cleaning or water based cleaning shall not be used on carpet. Use only dry-chemical materials and methods fully approved by carpet manufacturer, as instructed in manufacturer's published literature.
6. Touch up and otherwise repair and restore marred, exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration.
 - a. Do not paint over "UL" and similar labels, including mechanical and electrical nameplates.

D. Mechanical and Electrical Systems

1. Wipe surfaces of mechanical and electrical equipment, and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
2. Replace parts subject to unusual operating conditions.
3. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
4. Replace disposable air filters and clean permanent air filters. Clean exposed

surfaces of diffusers, registers, and grills.

5. Clean ducts, blowers, and coils if units were operated without filters during construction.
 6. Clean light fixtures, lamps, globes, and reflectors to function with full efficiency. Replace burned-out bulbs, and those noticeably dimmed by hours of use and defective and noisy starters in fluorescent and mercury vapor fixtures to comply with requirements for new fixtures.
- E. Timing: Schedule final cleaning acceptable to the Architect to enable Owner to accept completely clean project.

3.8 CLEANING DURING OWNER'S OCCUPANCY

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

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SECTION 01 74 19 - CONSTRUCTION WASTE MANAGEMENT

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes: Preparation and implementation, including reporting and documentation, of a Waste Management Plan for reusing, recycling, salvage or disposal of non-hazardous waste materials generated during demolition and/or new construction (Construction & Demolition (C&D) Waste), to foster material recovery and re-use and to minimize disposal in landfills.
- B. Related Sections
 - 1. Section 01 30 00 Administrative Requirements

1.2 REFERENCES

- A. California Integrated Waste Management Act of 1989 (AB 939)
- B. California Code of Regulations Title 14, Section 18700

1.3 ACTION SUBMITTALS

- A. Waste Management Plan (Appendix A): Within 10 calendar days after the Notice to Proceed and prior to any waste removal, submit the following to the Architect for review and approval. Update quarterly. Include:
 - 1. Materials to be recycled, reused or salvaged, either onsite or offsite.
 - 2. Estimates of construction waste quantity (in tons) by type of material. (If waste is measured by volume, give factors for conversion to weight in tons.)
 - 3. Procedures for recycling/ reuse program.
 - 4. Permit or license and location of Project waste-disposal areas.
 - 5. Site plan for placement of waste containers.
- B. Waste Management Monthly Progress Report (Appendix B): Summary of waste generated by Project, monthly with Application for Payment. Include:
 - 1. Firms accepting the recovered or waste materials.
 - 2. Type and location of accepting facilities (landfill, recovery facility, used materials yard, etc.). If materials are reused or recycled on the Project site, location should be designated as "on-site reuse/recycling".
 - 3. Type of materials and net weight (tons) of each.
 - 4. Value of the materials or disposal fee paid.
 - 5. Attach weigh bills and other documentation confirming amount and disposal location of waste materials.

- C. Waste Management Final Compliance Report: Final update of Waste Management Plan to provide summary of total waste generated by Project.

PART 2 - PRODUCTS

2.1 SYSTEM DESCRIPTION

- A. Collection and separation of all construction waste materials generated on-site, reuse or recycling on-site, transportation to approved recyclers or reuse organizations, or transportation to legally designated landfills, for the purpose of recycling salvaging and/or reusing a minimum of 75% of the construction waste generated.

PART 3 - EXECUTION

3.1 IMPLEMENTATION

- A. Implement approved Waste Management Plan including collecting, segregating, storing, transporting, and documenting each type of waste material generated, recycled or reused or disposed in landfills.
- B. Designate an on-site person to be responsible for instructing workers and overseeing the sorting and recording of waste/recyclable materials.
- C. Include waste management and recycling in worker orientation and as an agenda item for regular Project meetings.
- D. Recyclable and waste bin areas shall be limited to areas approved on the Waste Management Plan. Keep recycling and waste bins neat and clearly marked to avoid contamination of materials.

3.2 ATTACHMENTS

- A. Appendix A: Waste Management Plan
- B. Appendix B: Waste Management Monthly Progress Report

END OF SECTION

CONTRACTOR'S CONSTRUCTION WASTE AND RECYCLING PLAN

(Submit After Award of Contract and Prior to Start of Work)

Project Title:						
Contract or Work Order No.:						
Contractor's Name:						
Street Address:						
City:				State:		Zip:
Phone: ()				Fax: ()		
E-Mail Address:						
Prepared by: (Print Name)						
<hr/>						
Date Submitted:						
Project Period:		From:			TO:	
<hr/>						
Reuse, Recycling or Disposal Processes To Be Used						
Describe the types of recycling processes or disposal activities that will be used for material generated in the project. Indicate the type of process or activity by number, types of materials, and estimated quantities that will be recycled or disposed in the sections below:						
01 - Reuse of building materials or salvage items on site (i.e. crushed base or red clay brick)						
02 - Salvaging building materials or salvage items at an offsite salvage or re-use center (i.e. lighting, fixtures)						
03 - Recycling source separated materials on site (i.e. crushing asphalt/concrete for reuse or grinding for mulch)						
04 - Recycling source separated materials at an offsite recycling center (i.e. scrap metal or green materials)						
05 - Recycling commingled loads of C&D materials at an offsite mixed debris recycling center or transfer station						
06 - Recycling material as Alternative Daily Cover at landfills						
07 - Delivery of soils or mixed inerts to an inert landfill for disposal (inert fill).						
08 - Disposal at a landfill or transfer station.						
09 - Other (please describe) _____						
<hr/>						
Types of Material To Be Generated						
Use these codes to indicate the types of material that will be generated on the project						
A = Asphalt C = Concrete M = Metals I = Mixed Inert G = Green Materials						
D = Drywall P/C=Paper/Cardboard W/C = Wire/Cable S= Soils (Non Hazardous)						
M/C = Miscellaneous Construction Debris R = Reuse/Salvage W = Wood O = Other (describe)						
Facilities Used: Provide Name of Facility and Location (City)						
Total Truck Loads: Provide Number of Trucks Hauled from Site During Reporting Period						
Total Quantities: If scales are available at sites, report in tons. If not, quantify by cubic yards. For salvage/reuse items, quantify by estimated weight (or units).						
<hr/>						
SECTION I - RE-USED/RECYCLED MATERIALS						
Include all recycling activities for source separated or mixed material recycling centers where recycling will occur.						
Type of Material	Type of Activity	Facility to be Used/Location	Total Truck Loads	Total Quantities		
				Tons	Cubic YD	Other Wt.
(ex.) M	04	ABC Metals, Los Angeles	24	355		
a. Total Diversion						

CONTRACTOR'S CONSTRUCTION WASTE AND RECYCLING PLAN

Continued

SECTION II - DISPOSED MATERIALS						
Include all disposal activities for landfills, transfer stations, or inert landfills where no recycling will occur.						
Type of Material	Type of Activity	Facility to be Used/Location	Total Truck Loads	Total Quantities		
				Tons	Cubic YD	Other Wt.
(ex.) D	08	DEF Landfill, Los Angeles	2	35		
b. Total Disposal				0	0	0

SECTION III - TOTAL MATERIALS GENERATED			
This section calculates the total materials to be generated during the project period (Reuse/Recycle + Disposal = Generation)			
	Tons	Cubic YD	Other Wt.
a. Total Reused/Recycled	0	0	0
b. Total Disposed	0	0	0
c. Total Generated	0	0	0

SECTION IV - CONTRACTOR'S LANDFILL DIVERSION RATE CALCULATION			
Add totals from Section I + Section II			
	Tons	Cubic YD	Other Wt.
a. Materials Re-Used and Recycled	0		
b. Materials Disposed	0		
c. Total Materials Generated (a. + b. = c.)	0	0	0
d. Landfill Diversion Rate (Tonnage Only)*			

* Use tons only to calculate recycling percentages: Tons Reused/Recycled/Tons Generated = % Recycled

Contractor's Comments (Provide any additional information pertinent to planned reuse, recycling, or disposal activities):

- Notes:
- | | |
|---|--|
| 1. Suggested Conversion Factors: From Cubic Yards to Tons (Use when scales are not available) | c. Ferrous Metals: .22 (ex. 1000 CY Ferrous Metal = 220 tons) |
| a. Asphalt: .61 (ex. 1000 CY Asphalt = 610 tons. Applies to broken chunks of asphalt) | d. Non-Ferrous Metals: .10 (ex. 1000 CY Non-Ferrous Metals = 100 tons) |
| b. Concrete: .93 (ex. 1000 CY Concrete = 930 tons. Applies to broken chunks of concrete) | e. Drywall Scrap: .20 |
| | f. Wood Scrap: .16 |

CONTRACTOR'S REUSE, RECYCLING, AND DISPOSAL REPORT

(Submit With Each Progress Payment)

Project Title:						
Contract or Work Order No.:						
Contractor's Name:						
Street Address:						
City:				State:		Zip:
Phone: ()				Fax: ()		
E-Mail Address:						
Prepared by: (Print Name)						
Reuse, Recycling or Disposal Processes to Be Used						
Describe the types of recycling processes or disposal activities that will be used for material generated in the project. Indicate the type of process or activity by number, types of materials, and estimated quantities that will be recycled or disposed in the sections below:						
01 - Reuse of building materials or salvage items on site (i.e. crushed base or red clay brick)						
02 - Salvaging building materials or salvage items at an offsite salvage or re-use center (i.e. lighting, fixtures)						
03 - Recycling source separated materials on site (i.e. crushing asphalt/concrete for reuse or grinding for mulch)						
04 - Recycling source separated materials at an offsite recycling center (i.e. scrap metal or green materials)						
05 - Recycling commingled loads of C&D materials at an offsite mixed debris recycling center or transfer station						
06 - Recycling material as Alternative Daily Cover at landfills						
07 - Delivery of soils or mixed inerts to an inert landfill for disposal (inert fill).						
08 - Disposal at a landfill or transfer station.						
09 - Other (please describe) _____						
Types of Material To Be Generated						
Use these codes to indicate the types of material that will be generated on the project						
A = Asphalt C = Concrete M = Metals I = Mixed Inert G = Green Materials						
D = Drywall P/C=Paper/Cardboard W/C = Wire/Cable S= Soils (Non-Hazardous)						
M/C = Miscellaneous Construction Debris R = Reuse/Salvage W = Wood O = Other (describe)						
Facilities Used: Provide Name of Facility and Location (City)						
Total Truck Loads: Provide Number of Trucks Hauled from Site During Reporting Period						
Total Quantities: If scales are available at sites, report in tons. If not, quantify by cubic yards. For salvage/reuse items, quantify by estimated weight (or units).						
SECTION I - RE-USED/RECYCLED MATERIALS						
Include all recycling activities for source separated or mixed material recycling centers where recycling will occur.						
Type of Material	Type of Activity	Facility to be Used/Location	Total Truck Loads	Total Quantities		
				Tons	Cubic YD	Other Wt.
(ex.) M	04	ABC Metals, Los Angeles	24	355		
a. Total Diversion						

CONTRACTOR'S REUSE, RECYCLING, AND DISPOSAL REPORT

Continued

SECTION II - DISPOSED MATERIALS						
Include all disposal activities for landfills, transfer stations, or inert landfills where no recycling will occur.						
Type of Material	Type of Activity	Facility to be Used/Location	Total Truck Loads	Total Quantities		
				Tons	Cubic YD	Other Wt.
(ex.) D	08	DEF Landfill, Los Angeles	2	35		
b. Total Disposal						

SECTION III - TOTAL MATERIALS GENERATED			
This section calculates the total materials to be generated during the project period (Reuse/Recycle + Disposal = Generation)			
		Tons	Cubic YD
			Other Wt.
a. Total Reused/Recycled			
b. Total Disposed			
c. Total Generated			

SECTION IV - CONTRACTOR'S LANDFILL DIVERSION RATE CALCULATION			
Add totals from Section I + Section II			
		Tons	Cubic YD
			Other Wt.
a. Materials Re-Used and Recycled			
b. Materials Disposed			
c. Total Materials Generated (a. + b. = c.)			
d. Landfill Diversion Rate (Tonnage Only)*			

* Use tons only to calculate recycling percentages: Tons Reused/Recycled/Tons Generated = % Recycled

Contractor's Comments (Provide any additional information pertinent to planned reuse, recycling, or disposal activities):

- Notes:
- | | |
|---|--|
| 1. Suggested Conversion Factors: From Cubic Yards to Tons (Use when scales are not available) | c. Ferrous Metals: .22 (ex. 1000 CY Ferrous Metal = 220 tons) |
| a. Asphalt: .61 (ex. 1000 CY Asphalt = 610 tons. Applies to broken chunks of asphalt) | d. Non-Ferrous Metals: .10 (ex. 1000 CY Non-Ferrous Metals = 100 tons) |
| b. Concrete: .93 (ex. 1000 CY Concrete = 930 tons. Applies to broken chunks of concrete) | e. Drywall Scrap: .20 |
| | f. Wood Scrap: .16 |

CLOSEOUT PROCEDURES

SECTION 01 77 00 - CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
 - 1. Substantial Completion procedures.
 - 2. Final completion procedures.
 - 3. Warranties.
 - 4. Final cleaning.
 - 5. Repair of the Work.
- B. Related Requirements:
 - 1. Section 01 78 39 "Project Record Documents" for submitting Record Drawings, Record Specifications, and Record Product Data.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of cleaning agent.
- B. Contractor's List of Incomplete Items: Initial submittal at Substantial Completion.
- C. Certified List of Incomplete Items: Final submittal at final completion.

1.4 CLOSEOUT SUBMITTALS

- A. Certificates of Release: From authorities having jurisdiction.
- B. Certificate of Insurance: For continuing coverage.
- C. Field Report: For pest control inspection.

1.5 MAINTENANCE MATERIAL SUBMITTALS

- A. Schedule of Maintenance Material Items: For maintenance material submittal items specified in other Sections.

CLOSEOUT PROCEDURES

1.6 SUBSTANTIAL COMPLETION PROCEDURES

- A. Contractor's List of Incomplete Items: Prepare and submit a list of items to be completed and corrected (Contractor's punch list), indicating the value of each item on the list and reasons why the Work is incomplete.
- B. Submittals Prior to Substantial Completion: Complete the following a minimum of ten (10) days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.
 - 1. Certificates of Release: Obtain and submit releases from authorities having jurisdiction permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
 - 2. Submit closeout submittals specified in other Division 01 Sections, including project record documents, operation and maintenance manuals, damage or settlement surveys, property surveys, and similar final record information.
 - 3. Submit closeout submittals specified in individual Sections, including specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
 - 4. Submit maintenance material submittals specified in individual Sections, including tools, spare parts, extra materials, and similar items, and deliver to location designated by Architect. Label with manufacturer's name and model number.
 - a. Schedule of Maintenance Material Items: Prepare and submit schedule of maintenance material submittal items, including name and quantity of each item and name and number of related Specification Section. Obtain Architect's signature for receipt of submittals.
 - 5. Submit testing, adjusting, and balancing records.
 - 6. Submit sustainable design submittals not previously submitted.
 - 7. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.
- C. Procedures Prior to Substantial Completion: Complete the following a minimum of ten (10) days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.
 - 1. Advise Owner of pending insurance changeover requirements.
 - 2. Make final changeover of permanent locks and deliver keys to Owner. Advise Owner's personnel of changeover in security provisions.
 - 3. Complete startup and testing of systems and equipment.
 - 4. Perform preventive maintenance on equipment used prior to Substantial Completion.

CLOSEOUT PROCEDURES

5. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems. Submit demonstration and training video recordings.
 6. Advise Owner of changeover in utility services.
 7. Participate with Owner in conducting inspection and walkthrough with local emergency responders.
 8. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
 9. Complete final cleaning requirements.
 10. Touch up paint and otherwise repair and restore marred exposed finishes to eliminate visual defects.
- D. Inspection: Submit a written request for inspection to determine Substantial Completion a minimum of ten (10) days prior to date the Work will be completed and ready for final inspection and tests. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Architect, that must be completed or corrected before certificate will be issued.
1. Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
 2. Results of completed inspection will form the basis of requirements for final completion.

1.7 FINAL COMPLETION PROCEDURES

- A. Submittals Prior to Final Completion: Before requesting final inspection for determining final completion, complete the following:
1. Submit a final Application for Payment according to Section 01 20 00 "Payment Procedures."
 2. Certified List of Incomplete Items: Submit certified copy of Architect's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Architect. Certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
 3. Certificate of Insurance: Submit evidence of final, continuing insurance coverage complying with insurance requirements.
 4. Submit pest-control final inspection report.
 5. Submit final completion photographic documentation.

CLOSEOUT PROCEDURES

- B. Inspection: Submit a written request for final inspection to determine acceptance a minimum of 10 days prior to date the work will be completed and ready for final inspection and tests. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.
1. Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.

1.8 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

- A. Organization of List: Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.
1. Organize list of spaces in sequential order,
 2. Organize items applying to each space by major element, including categories for ceiling, individual walls, floors, equipment, and building systems.
 3. Include the following information at the top of each page:
 - a. Project name.
 - b. Date.
 - c. Name of Architect.
 - d. Name of Contractor.
 - e. Page number.
 4. Submit list of incomplete items in the following format:
 - a. MS Excel electronic file. Architect will return annotated file.
 - b. PDF electronic file. Architect will return annotated file.
 - c. Web-based project software upload. Utilize software feature for creating and updating list of incomplete items (punch list).
 - d. Three (3) paper copies. Architect will return two (2) copies.

1.9 SUBMITTAL OF PROJECT WARRANTIES

- A. Time of Submittal: Submit written warranties on request of Architect for designated portions of the Work where warranties are indicated to commence on dates other than date of Substantial Completion, or when delay in submittal of warranties might limit Owner's rights under warranty.
- B. Partial Occupancy: Submit properly executed warranties within fifteen (15) days of completion of designated portions of the Work that are completed and occupied or used by Owner during construction period by separate agreement with Contractor.
- C. Organize warranty documents into an orderly sequence based on the table of contents of Project Manual.

CLOSEOUT PROCEDURES

- D. Warranty Electronic File: Provide warranties and bonds in PDF format. Assemble complete warranty and bond submittal package into a single electronic PDF file with bookmarks enabling navigation to each item. Provide bookmarked table of contents at beginning of document.
1. Submit on digital media acceptable to Architect by email to Architect.
- E. Warranties in Paper Form:
1. Bind warranties and bonds in heavy-duty, three-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch paper.
 2. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.
 3. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.
- F. Provide additional copies of each warranty to include in operation and maintenance manuals.

PART 2 - PRODUCTS**2.1 MATERIALS**

- A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.
1. Use cleaning products that comply with Green Seal's GS-37, or if GS-37 is not applicable, use products that comply with the California Code of Regulations maximum allowable VOC levels.

PART 3 - EXECUTION**3.1 FINAL CLEANING**

- A. General: Perform final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.

CLOSEOUT PROCEDURES

1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a designated portion of Project:
 - a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
 - b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
 - c. Rake grounds that are not planted, mulched, or paved to a smooth, even-textured surface.
 - d. Remove tools, construction equipment, machinery, and surplus material from Project site.
 - e. Remove snow and ice to provide safe access to building.
 - f. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
 - g. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
 - h. Sweep concrete floors broom clean in unoccupied spaces.
 - i. Vacuum carpet and similar soft surfaces, removing debris and excess nap; clean according to manufacturer's recommendations if visible soil or stains remain.
 - j. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Polish mirrors and glass, taking care not to scratch surfaces.
 - k. Remove labels that are not permanent.
 - l. Wipe surfaces of mechanical and electrical equipment, and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
 - m. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
 - n. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.
 - o. Clean ducts, blowers, and coils if units were operated without filters during construction or that display contamination with particulate matter on inspection.
 - p. Clean luminaires, lamps, globes, and reflectors to function with full efficiency.
 - q. Leave Project clean and ready for occupancy.

- C. Pest Control: Comply with pest control requirements in Section 01 50 00 "Temporary Facilities and Controls." Prepare written report.

- D. Construction Waste Disposal: Comply with waste disposal requirements in Section 01 50 00 "Temporary Facilities and Controls." and Section 01 74 19 "Construction Waste Management and Disposal."

CLOSEOUT PROCEDURES

3.2 REPAIR OF THE WORK

- A. Complete repair and restoration operations before requesting inspection for determination of Substantial Completion.
- B. Repair, or remove and replace, defective construction. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment. Where damaged or worn items cannot be repaired or restored, provide replacements. Remove and replace operating components that cannot be repaired. Restore damaged construction and permanent facilities used during construction to specified condition.
 - 1. Remove and replace chipped, scratched, and broken glass, reflective surfaces, and other damaged transparent materials.
 - 2. Touch up and otherwise repair and restore marred or exposed finishes and surfaces. Replace finishes and surfaces that already show evidence of repair or restoration.
 - a. Do not paint over "UL" and other required labels and identification, including mechanical and electrical nameplates. Remove paint applied to required labels and identification.
 - 3. Replace parts subject to operating conditions during construction that may impede operation or reduce longevity.
 - 4. Replace burned-out bulbs, bulbs noticeably dimmed by hours of use, and defective and noisy starters in fluorescent and mercury vapor fixtures to comply with requirements for new fixtures.

END OF SECTION

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SECTION 01 78 00 – CLOSEOUT SUBMITTALS

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Project Record Documents.
- B. Operation and Maintenance Data.
- C. Warranties and bonds.

1.2 RELATED REQUIREMENTS

- A. Section Owner issued Bidding Instructions and General Conditions: Performance bond and labor and material payment bonds, warranty, and correction of work.
- B. Section 01 30 00 - Administrative Requirements: Submittals procedures, shop drawings, product data, and samples.
- C. Section 01 40 00 – Quality Requirements: Code Required Special Inspections & Procedures: Construction oversight procedures regarding the execution, approval, and closeout of this building project.
- D. Section 01 70 00 - Execution and Closeout Requirements: Contract closeout procedures.
- E. Individual Product Sections: Specific requirements for operation and maintenance data.
- F. Individual Product Sections: Warranties required for specific products or Work.
 - 1. Special Project warranty requirements for specific products or elements of the Work; commitments and agreements for continuing services to Owner.

1.3 DEFINITIONS

- A. Warranty: Assurance to Owner by Contractor, installer, supplier, manufacturer or other party responsible as warrantor, for the quantity, quality, performance and other representations of a product, system service of the Work, in whole or in part, for the duration of the specified period of time.
- B. Guarantee: Assurance to Owner by Contractor or product manufacturer or other specified party, as guarantor, that the specified warranty will be fulfilled by the guarantor in the event of default by the warrantor.
- C. Standard Product Warranty: Preprinted, written warranty published by product manufacturer for particular products and specifically endorsed by the manufacturer to the Owner.
- D. Special Project Warranty: Written warranty required by or incorporated into Contract Documents, to extend time limits provided by standard warranty or to provide greater rights for Owner.

- E. Correction Period: As defined in the Conditions of the Contract, Correction Period shall be synonymous with "warranty period", "guarantee period" and similar terms used in the Contract Specifications.

1.4 SUBMITTALS

- A. Advance Submittals: For equipment and systems, or component parts of systems, put into service during construction and operated by Owner, submit documents within ten days of start of operation by Owner.
- B. Final Completion Submittals: Prior to application for final payment, Contractor shall submit 3 copies the following:
 - 1. Agency Document Submittals: Submit to Owner all documents required by authorities having jurisdiction, including serving utilities and other agencies. Submit original versions of all permit cards, with final sign-off by inspectors. Submit all certifications of inspections and tests.
 - a. Contractor shall also complete all required contractor forms and obtain approval of these same forms. Comply with "Final Certification of Construction" per Title 24 Part 1 section 4-339.
 - 1) Form-6.C: Verified Report – Contractor: From each Contractor having a contract with the Owner.
 - 2. Final Specifications Submittals: Submit to Owner all documents and products required by Specifications to be submitted, including the following:
 - a. Project record drawings and specifications.
 - b. Operating and maintenance data.
 - c. Guarantees, warranties and bonds.
 - d. Spare parts and extra stock.
 - e. Test reports and certificates of compliance.
 - 3. Certificates of Compliance and Test Report Submittals: Submit to Owner certificates and reports as specified and as required by authorities having jurisdiction, including the following:
 - a. Sterilization of water systems.
 - b. Gas system tests.
 - c. Lighting, power and signal system tests.
 - d. Ventilation equipment and air balance tests.
 - e. Roofing inspections and tests.
 - 4. Lien and Bonding Company Releases: Submit to Owner, with copy to Architect, evidence of satisfaction of encumbrances on Project by completion and submission of The American Institute of Architects Forms:
 - a. G706 - Contractor's Affidavit of Payment of Debts and Claims;
 - b. G706A - Contractor's Affidavit of Release of Liens;
 - c. (if applicable) G707 - Consent of Surety;
 - d. or forms as as agreed to by the Owner.

- e. Comply also with other requirements of Owner, as directed.
 - f. All signatures shall be notarized.
5. Subcontractor List: Submit two copies to Owner and two copies to Architect of updated Subcontractor and Materials Supplier List.
6. Warranty Documents: Prepare and submit to Owner all warranties and bonds as specified in Contract General Conditions and this Section.
- C. Project Record Documents: Submit documents to Architect with claim for final Application for Payment.
- D. Operation and Maintenance Data:
- 1. Submit two copies of preliminary draft or proposed formats and outlines of contents before start of Work. Architect will review draft and return one copy with comments.
 - 2. For equipment, or component parts of equipment put into service during construction and operated by Owner, submit completed documents within ten days after acceptance.
 - 3. Submit one copy of completed documents 15 days prior to final inspection. This copy will be reviewed and returned after final inspection, with Architect comments. Revise content of all document sets as required prior to final submission.
 - 4. Submit two sets of revised final documents in final form within 10 days after final inspection.
- E. Warranties and Bonds:
- 1. For equipment or component parts of equipment put into service during construction with Owner's permission, submit documents within 10 days after acceptance.
 - 2. Make other submittals within 10 days after Date of Substantial Completion, prior to final Application for Payment.
 - 3. For items of Work for which acceptance is delayed beyond Date of Substantial Completion, submit within 10 days after acceptance, listing the date of acceptance as the beginning of the warranty period.

1.5 WARRANTIES AND GUARANTEES

- A. General:
- 1. Provide all warranties and guarantees with Owner named as beneficiary.
 - 2. For equipment and products, or components thereof, bearing a manufacturer's warranty or guarantee that extends for a period of time beyond the Contractor's warranty and guarantee, so state in the warranty or guarantee.
- B. Provisions for Special Warranties: Refer to Conditions of the Contract for terms of the Contractor's special warranty of workmanship and materials.

- C. General Warranty and Guarantee Requirements:
1. Warranty shall be an agreement to repair or replace, without cost and undue hardship to Owner, Work performed under the Contract which is found to be defective during the Correction Period (warranty or guarantee) period.
 2. Repairs and replacements due to improper maintenance or operation, or due to normal wear, usage and weathering are excluded from warranty requirements unless otherwise specified.
- D. Specific Warranty and Guarantee Requirements: Specific requirements are included in product Specifications Sections of Divisions 3 through 32, including content and limitations.
- E. Disclaimers and Limitations:
1. Manufacturer's disclaimers and limitations on product warranties and guarantees shall not relieve Contractor of responsibility for warranty and guarantee requirements.
 2. This applies to the Work that incorporates such products, nor shall they relieve suppliers, manufacturers, and installers required to countersign special warranties with Contractor.
- F. Related Damages and Losses: When correcting warranted Work that has been found defective, remove and replace other Work that has been damaged as a result of such defect or that must be removed and replaced to provide access for correction of warranted Work.
- G. Reinstatement of Warranty:
1. When Work covered by a warranty has been found defective and has been corrected by replacement or rebuilding, reinstate the warranty by written endorsement.
 2. The reinstated warranty shall be equal to the original warranty with an equitable adjustment for depreciation.
- H. Replacement Cost:
1. Upon determination that Work covered by a warranty has been found to be defective, replace or reconstruct the Work to a condition acceptable to Owner, complying with applicable requirements of the Contract Documents.
 2. Contractor shall be responsible for all costs for replacing or reconstructing defective Work regardless of whether Owner has benefited from use of the Work through a portion of its anticipated useful service life.
- I. Owner's Recourse:
1. Written warranties made to the Owner shall be in addition to implied warranties, and shall not limit the duties, obligations, rights and remedies otherwise available under law, nor shall warranty periods be interpreted as limitations on time in which the Owner can enforce such other duties, obligations, rights, or remedies.
 2. Rejection of Warranties:

- a. The Owner reserves the right to reject warranties and to limit selections to products with warranties not in conflict with requirements of the Contract Documents.
- J. Warranty as Condition of Acceptance:
- 1. Owner reserves the right to refuse to accept Work for the Project where a special warranty, certification, or similar commitment shall be required on such Work or part of the Work, until evidence is presented that entities required to countersign such commitments are willing to do so.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.1 PROJECT RECORD DOCUMENTS

- A. Record Documents are to be maintained and submitted in searchable live electronic format (PDF).
 - 1. Develop in compliance with Section 01 30 00 - Administrative Requirements.
 - 2. Acceptable markup software:
 - a. Adobe Acrobat Professional.
 - b. Bluebeam Revu.
- B. Maintain on site one set of the following record documents; record actual revisions to the Work:
 - 1. Contract Drawings.
 - 2. Project Manual with Specifications.
 - 3. Addenda.
 - 4. Change Orders and other modifications to the Contract.
 - 5. Reviewed shop drawings, product data, and samples.
 - 6. Manufacturer's instruction for assembly, installation, and adjusting.
- C. Ensure entries are complete and accurate, enabling future reference by Owner.
- D. Store record documents separate from documents used for construction.
- E. Record information concurrent with construction progress.
- F. Specifications: Legibly mark and record at each product section description of actual products installed, including the following:

1. Manufacturer's name and product model and number.
 2. Product substitutions or alternates utilized.
 3. Changes made by Addenda and modifications.
 4. Provide copies of all approved addenda, directives, corrections, and change orders affecting the associated project.
 - a. These copies shall be included with the "Bid Set" and/or "Record Set" listed above and formatted as detailed above.
- G. Record Drawings and Shop Drawings: Legibly mark each item to record actual construction including:
1. Reproducible set of Contract Drawings will be provided to Contractor by Owner through Architect.
 2. Measured depths of foundations in relation to finish first floor datum.
 3. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
 4. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.
 5. Field changes of dimension and detail.
 6. Details not on original Contract drawings.
 - a. Application of copies of details produced and provided by Architect during construction will be accepted.
- H. Submission: Submit Record Documents in searchable (live text and redlines mark-ups; not scanned) PDF format to Architect prior to final Application for Payment.
1. Maintain one additional paper copy and one in PDF format (on CD) of the fire suppression and fire protection detection system drawings and specifications at the building premises.
 - a. One copy is to be kept on site for a period of three years to comply with CFC section 901.6.2.

3.2 OPERATION AND MAINTENANCE DATA

- A. Source Data: For each product or system, list names, addresses and telephone numbers of Subcontractors and suppliers, including local source of supplies and replacement parts.
- B. Product Data: Mark each sheet to clearly identify specific products and component parts, and data applicable to installation. Delete inapplicable information.

- C. Drawings: Supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams. Do not use Project Record Documents as maintenance drawings.
- D. Typed Text: As required to supplement product data. Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions.

3.3 OPERATION AND MAINTENANCE DATA FOR MATERIALS AND FINISHES

- A. For Each Product, Applied Material, and Finish:
 - 1. Product data, with catalog number, size, composition, and color and texture designations.
 - 2. Information for re-ordering custom manufactured products.
- B. Instructions for Care and Maintenance: Manufacturer's recommendations for cleaning agents and methods, precautions against detrimental cleaning agents and methods, and recommended schedule for cleaning and maintenance.
- C. Moisture protection and weather-exposed products: Include product data listing applicable reference standards, chemical composition, and details of installation. Provide recommendations for inspections, maintenance, and repair.
- D. Additional information as specified in individual product specification sections.
- E. Where additional instructions are required, beyond the manufacturer's standard printed instructions, have instructions prepared by personnel experienced in the operation and maintenance of the specific products.

3.4 OPERATION AND MAINTENANCE DATA FOR EQUIPMENT AND SYSTEMS

- A. For Each Item of Equipment and Each System:
 - 1. Description of unit or system, and component parts.
 - 2. Identify function, normal operating characteristics, and limiting conditions.
 - 3. Include performance curves, with engineering data and tests.
 - 4. Complete nomenclature and model number of replaceable parts.
- B. Where additional instructions are required, beyond the manufacturer's standard printed instructions, have instructions prepared by personnel experienced in the operation and maintenance of the specific products.
- C. Panelboard Circuit Directories: Provide electrical service characteristics, controls, and communications; typed.
- D. Include color coded wiring diagrams as installed.

- E. Operating Procedures: Include start-up, break-in, and routine normal operating instructions and sequences. Include regulation, control, stopping, shut-down, and emergency instructions. Include summer, winter, and any special operating instructions.
- F. Maintenance Requirements: Include routine procedures and guide for preventative maintenance and trouble shooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.
- G. Provide servicing and lubrication schedule, and list of lubricants required.
- H. Include manufacturer's printed operation and maintenance instructions.
- I. Include sequence of operation by controls manufacturer.
- J. Provide original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.
- K. Provide control diagrams by controls manufacturer as installed.
- L. Provide Contractor's coordination drawings, with color coded piping diagrams as installed.
- M. Provide charts of valve tag numbers, with location and function of each valve, keyed to flow and control diagrams.
- N. Provide list of original manufacturer's spare parts, current prices, and recommended quantities to be maintained in storage.
 - 1. Parts Data:
 - a. Provide original manufacturer's parts list, illustrations, assembly drawings, and diagrams as necessary for service and maintenance.
 - b. Include complete nomenclature and catalog numbers for consumable and replacement parts.
 - c. Provide list of original manufacturer's spare parts, current prices, and recommended quantities to be maintained in stock by the Owner or operator.
- O. Include test and balancing reports.
- P. Additional Requirements: As specified in individual product specification sections.

3.5 ASSEMBLY OF OPERATION AND MAINTENANCE MANUALS

- A. Assemble operation and maintenance data into durable manuals for Owner's personnel use, with data arranged in the same sequence as, and identified by, the specification sections.
 - 1. Provide duplicate electronic formatted (PDF) versions of the O&M binder for record purposes. Organize the same as the printed versions.
- B. Where systems involve more than one specification section, provide separate tabbed divider for each system.

- C. Binders: Commercial quality, 8-1/2 by 11 inch three D side ring binders with durable plastic covers; 2 inch maximum ring size. When multiple binders are used, correlate data into related consistent groupings.
- D. Cover: Identify each binder with typed or printed title OPERATION AND MAINTENANCE INSTRUCTIONS; identify title of Project; identify subject matter of contents.
- E. Project Directory: Title and address of Project; names, addresses, and telephone numbers of Architect, Consultants, Contractor and subcontractors, with names of responsible parties.
- F. Tables of Contents: List every item separated by a divider, using the same identification as on the divider tab; where multiple volumes are required, include all volumes Tables of Contents in each volume, with the current volume clearly identified.
- G. Dividers: Provide tabbed dividers for each separate product and system; identify the contents on the divider tab; immediately following the divider tab include a description of product and major component parts of equipment.
- H. Text: Manufacturer's printed data, or typewritten data on 20 pound paper.
- I. Drawings: Provide with reinforced punched binder tab. Bind in with text; fold larger drawings to size of text pages.
- J. Arrangement of Contents: Organize each volume in parts as follows:
 - 1. Project Directory.
 - 2. Table of Contents, of all volumes, and of this volume.
 - 3. Operation and Maintenance Data: Arranged by system, then by product category.
 - a. Source data.
 - b. Product data, shop drawings, and other submittals.
 - c. Operation and maintenance data.
 - d. Field quality control data.
 - e. Photocopies of warranties and bonds.
 - 4. Design Data: To allow for addition of design data furnished by Architect or others, provide a tab labeled "Design Data" and provide a binder large enough to allow for insertion of at least 20 pages of typed text.

3.6 WARRANTIES AND BONDS

- A. Obtain warranties and bonds, executed in duplicate by responsible Subcontractors, suppliers, and manufacturers, within 10 days after completion of the applicable item of work. Except for items put into use with Owner's permission, leave date of beginning of time of warranty until Date of Substantial completion is determined.
- B. Project Warranty and Guarantee Forms:
 - 1. Example forms for special Project warranties and guarantees are included at the end of this Section.

2. Prepare written documents utilizing the appropriate form, ready for execution by the Contractor, or the Contractor and subcontractor, supplier or manufacturer.
 - a. Submit a draft to Owner through Architect for approval prior to final execution.
 3. Refer to product Specifications Sections specific content requirements, and particular requirements for submittal of special warranties.
 4. Prepare standard warranties and guarantees, excepting manufacturers' standard printed warranties and guarantees, on Contractor's, subcontractor's, material supplier's, or manufacturer's own letterhead, addressed to Owner.
 5. Warranty and guarantee letters shall be signed by all responsible parties and by Contractor in every case, with modifications only as approved in advance by Owner to suit the conditions pertaining to the warranty or guarantee.
- C. Manufacturer's Guarantee Form:
1. Manufacturer's guarantee form may be used in lieu of special Project form included at the end of this Section.
 2. Manufacturer's guarantee form shall contain appropriate terms and identification, ready for execution by the required parties.
 3. If proposed terms and conditions restrict guarantee coverage or require actions by Owner beyond those specified, submit draft of guarantee to Owner through Architect for review and acceptance before performance of the Work.
 4. In other cases, submit draft of guarantee to Owner through Architect for approval prior to final execution of guarantee.
- D. Signatures: Signatures shall be by person authorized to sign warranties, guarantees and bonds on behalf of entity providing such warranty, guarantee or bond.
- E. Co-Signature: All installer's warranties and bonds shall be co-signed by Contractor. Manufacturer's guarantees will not require co-signature.
- F. Verify that documents are in proper form, contain full information, and are notarized.
- G. Co-execute submittals when required.
- H. Retain warranties and bonds until time specified for submittal.
- I. Manual: Bind in commercial quality 8-1/2 by 11 inch three D side ring binders with durable plastic covers.
- J. Cover: Identify each binder with typed or printed title WARRANTIES AND BONDS, with title of Project; name, address and telephone number of Contractor and equipment supplier; and name of responsible company principal.
1. If more than one volume of warranties, guarantees and bonds is produced, identify volume number on binder.

- K. Table of Contents: Neatly typed, in the sequence of the Table of Contents of the Project Manual, with each item identified with the number and title of the specification section in which specified, and the name of product or work item.
- L. Separate each warranty or bond with index tab sheets keyed to the Table of Contents listing. Provide full information, using separate typed sheets as necessary. List Subcontractor, supplier, and manufacturer, with name, address, and telephone number of responsible principal.
- M. Form of Warranty and Bond Submittals:
 - 1. Prior to final Application and Certificate for Payment, compile two copies of each required warranty, guarantee and bond, properly executed by Contractor, or jointly by Contractor, subcontractor, supplier, or manufacturer.
 - 2. Collect and assemble all written warranties and guarantees into binders and deliver binders to Owner for final review and acceptance.
 - 3. Include Table of Contents for binder, neatly typed, following order and Section numbers and titles as used in the Project Manual.
 - 4. Provide heavy paper dividers with celluloid or plastic covered tabs for each separate warranty.
 - a. Mark tabs to identify products or installation, and Section number and title.
 - 5. Include on separate typed sheet, if information is not contained in warranty or guarantee form, a description of the product or installation, and the name, address, telephone number and responsible person for applicable installer, supplier and manufacturer.
 - 6. When operating and maintenance data manuals are required for warranted construction, include additional copies of each required warranty and guarantee in each required manual.
 - a. Coordinate with requirements listed in the prior articles for operating and maintenance data manuals.

3.7 TIME OF WARRANTY AND BOND SUBMITTALS

- A. Submission of Preliminary Copies:
 - 1. Unless otherwise specified, obtain preliminary copies of warranties, guarantees and bonds within ten days of completion of applicable item or Work.
 - 2. Prepare and submit preliminary copies for review as specified herein.
- B. Submission of Final Copies:
 - 1. Submit fully executed copies of warranties, guarantees and bonds within ten days of date identified in Certificate of Completion but no later than three days prior to date of final Application for Payment.

- C. Date of Warranties and Bonds:
1. Unless otherwise directed or specified, commencement date of warranty, guarantee and bond periods shall be the date established in the Certificate of Completion.
 2. Warranties for Work accepted in advance of date stated in Certificate of Completion:
 - a. When a designated system, equipment, component parts or other portion of the Work is completed and occupied or put to beneficial use by Owner:
 - 1) By separate agreement with Contractor, prior to completion date established in the Certificate of Completion, submit properly executed warranties to Owner within ten days of completion of that designated portion of the Work.
 - 2) List date of commencement of warranty, guarantee or bond period as the date established in the Certificate of Completion.
 3. Warranties for Work not accepted as of date established in the Certificate of Completion:
 - a. Submit documents within ten days after acceptance, listing date of acceptance as beginning of warranty, guarantee or bond period.
- D. Duration of Warranties and Guarantees:
1. Unless otherwise specified or prescribed by law, warranty and guarantee periods shall be not less than the Correction Period required by the Conditions of the Contract.
 2. In no case, the period is to be less than one year from the date established for completion of the Project in the Certificate of Completion.
 3. See product Specifications Sections of the Project Manual for extended warranty and guarantee beyond the minimum one year duration.

END OF SECTION

SECTION 01 78 39 - PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for project record documents, including the following:
1. Record Drawings.
 2. Record Specifications.
 3. Record Product Data.
 4. Miscellaneous record submittals.
- B. Related Requirements:
1. Section 01 70 00 "Execution" for final property survey.
 2. Section 01 77 00 "Closeout Procedures" for general closeout procedures.

1.3 CLOSEOUT SUBMITTALS

- A. Record Drawings: Comply with the following:
1. Number of Copies: Submit one (1) set of marked-up record prints.
 2. Number of Copies: Submit copies of record Drawings as follows:
 - a. Initial Submittal:
 - 1) Submit one (1) paper-copy set of marked-up record prints.
 - 2) Submit PDF electronic files of scanned record prints and one (1) of file prints.
 - 3) Submit record digital data files and one (1) set of plots.
 - 4) Architect will indicate whether general scope of changes, additional information recorded, and quality of drafting are acceptable.
 - b. Final Submittal:
 - 1) Submit three (3) paper-copy set(s) of marked-up record prints.
 - 2) Submit PDF electronic files of scanned record prints and three (3) set(s) of prints.

- 3) Print each drawing, whether or not changes and additional information were recorded.
- c. Final Submittal:
 - 1) Submit one (1) paper-copy set(s) of marked-up record prints.
 - 2) Submit record digital data files and three (3) set(s) of record digital data file plots.
 - 3) Plot each drawing file, whether or not changes and additional information were recorded.
- B. Record Specifications: Submit one (1) paper copy of Project's Specifications, including addenda and contract modifications.
- C. Record Product Data: Submit one (1) paper copy of each submittal.
 1. Where record Product Data are required as part of operation and maintenance manuals, submit duplicate marked-up Product Data as a component of manual.
- D. Miscellaneous Record Submittals: See other Specification Sections for miscellaneous record-keeping requirements and submittals in connection with various construction activities. Submit one (1) paper copy of each submittal.
- E. Reports: Submit written report weekly indicating items incorporated into project record documents concurrent with progress of the Work, including revisions, concealed conditions, field changes, product selections, and other notations incorporated.

1.4 RECORD DRAWINGS

- A. Record Prints: Maintain one set of marked-up paper copies of the Contract Drawings and Shop Drawings, incorporating new and revised drawings as modifications are issued.
 1. Preparation: Mark record prints to show the actual installation where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is Installer, subcontractor, or similar entity, to provide information for preparation of corresponding marked-up record prints.
 - a. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.
 - b. Accurately record information in an acceptable drawing technique.
 - c. Record data as soon as possible after obtaining it.
 - d. Record and check the markup before enclosing concealed installations.
 - e. Cross-reference record prints to corresponding photographic documentation.
 2. Content: Types of items requiring marking include, but are not limited to, the following:
 - a. Dimensional changes to Drawings.
 - b. Revisions to details shown on Drawings.
 - c. Depths of foundations.
 - d. Locations and depths of underground utilities.

- e. Revisions to routing of piping and conduits.
 - f. Revisions to electrical circuitry.
 - g. Actual equipment locations.
 - h. Duct size and routing.
 - i. Locations of concealed internal utilities.
 - j. Changes made by Change Order or Construction Change Directive.
 - k. Changes made following Architect's written orders.
 - l. Details not on the original Contract Drawings.
 - m. Field records for variable and concealed conditions.
 - n. Record information on the Work that is shown only schematically.
3. Mark the Contract Drawings and Shop Drawings completely and accurately. Use personnel proficient at recording graphic information in production of marked-up record prints.
 4. Mark record sets with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at same location.
 5. Mark important additional information that was either shown schematically or omitted from original Drawings.
 6. Note Construction Change Directive numbers, alternate numbers, Change Order numbers, and similar identification, where applicable.
- B. Record Digital Data Files: Immediately before inspection for Certificate of Substantial Completion, review marked-up record prints with Architect and Construction Manager. When authorized, prepare a full set of corrected digital data files of the Contract Drawings, as follows:
1. Format: Same digital data software program, version, and operating system as the original Contract Drawings.
 2. Format: Annotated PDF electronic file with comment function enabled.
 3. Incorporate changes and additional information previously marked on record prints. Delete, redraw, and add details and notations where applicable.
 4. Refer instances of uncertainty to Architect for resolution.
 5. Architect will furnish Contractor with one set of digital data files of the Contract Drawings for use in recording information.
 - a. See Section 01 30 00 "Administrative Requirements" for requirements related to use of Architect's digital data files.
 - b. Architect will provide data file layer information. Record markups in separate layers.
- C. Format: Identify and date each record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location.
1. Record Prints: Organize record prints into manageable sets. Bind each set with durable paper cover sheets. Include identification on cover sheets.

2. Format: Annotated PDF electronic file.
3. Record Digital Data Files: Organize digital data information into separate electronic files that correspond to each sheet of the Contract Drawings. Name each file with the sheet identification. Include identification in each digital data file.
4. Identification: As follows:
 - a. Project name.
 - b. Date.
 - c. Designation "PROJECT RECORD DRAWINGS."
 - d. Name of Architect.
 - e. Name of Contractor.

1.5 RECORD SPECIFICATIONS

- A. Preparation: Mark Specifications to indicate the actual product installation where installation varies from that indicated in Specifications, addenda, and contract modifications.
 1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 2. Mark copy with the proprietary name and model number of products, materials, and equipment furnished, including substitutions and product options selected.
 3. Record the name of manufacturer, supplier, Installer, and other information necessary to provide a record of selections made.
 4. For each principal product, indicate whether record Product Data has been submitted in operation and maintenance manuals instead of submitted as record Product Data.
 5. Note related Change Orders, record Product Data, and record Drawings where applicable.
- B. Format: Submit record Specifications as annotated PDF electronic file.

1.6 RECORD PRODUCT DATA

- A. Recording: Maintain one copy of each submittal during the construction period for project record document purposes. Post changes and revisions to project record documents as they occur; do not wait until end of Project.
- B. Preparation: Mark Product Data to indicate the actual product installation where installation varies substantially from that indicated in Product Data submittal.
 1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.

2. Include significant changes in the product delivered to Project site and changes in manufacturer's written instructions for installation.
 3. Note related Change Orders, record Specifications, and record Drawings where applicable.
- C. Format: Submit record Product Data as annotated PDF electronic file.
1. Include record Product Data directory organized by Specification Section number and title, electronically linked to each item of record Product Data.

1.7 MISCELLANEOUS RECORD SUBMITTALS

- A. Assemble miscellaneous records required by other Specification Sections for miscellaneous record keeping and submittal in connection with actual performance of the Work. Bind or file miscellaneous records and identify each, ready for continued use and reference.
- B. Format: Submit miscellaneous record submittals as PDF electronic file.
1. Include miscellaneous record submittals directory organized by Specification Section number and title, electronically linked to each item of miscellaneous record submittals.

1.8 MAINTENANCE OF RECORD DOCUMENTS

- A. Maintenance of Record Documents: Store record documents in the field office apart from the Contract Documents used for construction. Do not use project record documents for construction purposes. Maintain record documents in good order and in a clean, dry, legible condition, protected from deterioration and loss. Provide access to project record documents for Architect's reference during normal working hours.

PART 2 - PRODUCTS

2.1 Not used

PART 3 - EXECUTION

3.1 Not Used

END OF SECTION

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SECTION 02 41 19 - SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Remove designated building equipment, fixtures, components and utilities to permit installation of new construction.
- B. Include Work required to demolish and remove elements of existing construction including sitework, sitework utilities and similar elements of existing building construction, all as noted on Drawings or as required to permit installation of new construction.
- C. Comply with Title 24, Part 9, California Fire Code, Chapter 33 Fire Safety During Construction and Demolition, during all Phases of project.

1.2 REFERENCE STANDARDS

- A. Conform to current adopted reference standards by date of issue of the current code cycle and the date of the Contract Documents.
- B. CBC - 2019 California Building Code
 - 1. CBC-19A - CBC Chapter 19A, Concrete.
 - 2. CBC-33 - CBC Chapter 33, Safeguards During Construction
- C. CCR - California Code of Regulations
 - 1. CCR-8.4 - Title 8, Subchapter 4, Construction Safety Orders
- D. CFC - 2019 California Fire Code
 - 1. CFC-5 - CFC Chapter 5, Fire Service Features
 - 2. CFC-7, CFC Chapter 7, Fire-Resistance-Rated Construction
 - 3. CFC-9 - CFC Chapter 9, Fire Protection Systems
 - 4. CFC-33 - CFC Chapter 33, Fire Safety During Construction and Demolition
- E. ICRI - International Concrete Repair Institute.
- F. NFPA - National Fire Protection Association
 - 1. NFPA 241- Safeguarding Construction, Alteration and Demolition Operations

1.3 ADMINISTRATIVE REQUIREMENTS

- A. Pre-Demolition Conference: Conduct conference at Project site.
- B. Contractor shall schedule meeting after Notice of Award to review demolition operations.

- C. Attendance Required: Owner, Architect, Contractor, Demolition Subcontractors, Project Inspector.
- D. Construction Process:
 - 1. Contractor shall discuss overview of demolition procedures.
 - 2. Contractor shall identify items to be selected by Owner for salvage.
 - 3. Contractor shall review special requirements for equipment, safety, and noise.
- E. Architect will record minutes and distribute copies within seven days after meeting to participants and those affected by decisions made.
- F. Regulatory Requirements: Secure demolition permit from the Local Air Quality Management District for renovations involving the removal of 100 square feet/linear feet or greater of demolition, per District Regulations. Notify the AQMD at least 10 working days prior to commencement of demolition/renovation.

1.4 SUBMITTALS

- A. Project Record Documents accurately record actual locations of capped utilities.
- B. Pre-demolition Photographs or Video: Show existing conditions of adjoining construction, including finish surfaces, that might be misconstrued as damage caused by demolition operations.

1.5 EXISTING CONDITIONS

- A. Before beginning Work, investigate and verify existence and location of mechanical, drainage, and electrical systems and other construction affecting Work, including underground utilities.
 - 1. Before construction, survey and record points of connection of utility services.
 - 2. Locate invert elevation at points of connection to existing sanitary - and storm drain, water-service piping, and underground electrical services.
 - 3. Employ a utility service locator company to locate underground utilities.
 - 4. Verify Owner's Record Drawings.
 - 5. Furnish survey of existing utilities.

PART 2 - PRODUCTS

- 2.1 NOT USED.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Disconnect, remove and cap designated utility services within demolition areas. Notify Owner 48 hours in advance of any utility shut-down.
- B. Prior to commencement of demolition operations, notify Underground Service Alert of Southern California (800) 422-4133, Monday through Friday, 7:00 A.M. to 5:00 P.M.
- C. Protection:
 - 1. Protect existing items that are not indicated to be altered.
 - 2. Adequately protect staff and public from harm and accident during demolition operations by the erection of proper barricades, signs, lighting, guard rails or other safety precautions. Conform to Title 8, Subchapter 4, CCR and NFPA 241.
 - 3. Protective Devices: Install substantial enclosures, weatherproof and dust-proof shields, protective covers, screens and similar devices. Erect and move when necessary to permit use of existing rooms, areas or facilities. Remove entirely when their use is no longer essential. Patch or repair all areas where devices have been removed.
- D. Survey of Existing Conditions: Record existing conditions by use of measured drawings and preconstruction photographs or video.
 - 1. Inventory and record the condition of items to be removed and salvaged. Provide photographs or video of conditions that might be misconstrued as damage caused by salvage operations.

3.2 TEMPORARY MEASURES - LIFE SAFETY

- A. Emergency Exits: No enclosure, shield or protective covering shall interfere with use of emergency exits in existing facilities at any time. Rated egress systems shall provide temporary rated egress.
- B. Maintain fully charged certified compliant fire extinguishers and water hoses readily available during demolition operations, per Section 906 CBC. Test electrical conductors for disconnection prior to removing.
- C. Provide temporary, but equivalent, fire alarm, detection or suppression systems when any system is impaired by Work of this Section. Temporary systems shall be inspected and tested monthly or at other more frequent intervals as required by Owner.
- D. Impairment of fire protection systems, Section 3308.6: Impairments to any fire protection system shall be in accordance with Section 901.
 - 1. Systems out of Service: Per requirement of Section 901.7 through 901.7.6, California Fire Code.

- E. Maintain free and unobstructed access to emergency services per Title 19, CFC 503.1; 503.1.1, 503.4; and Appendix D, CFC Chapter 33 Sections 3310.1; 3312.1 and when required by Owner.
- F. Post NO SMOKING signs in English and Spanish, in number and location as approved by Architect.
- G. Reduce flammable and combustible fire load to minimum by daily removal of debris.
- H. Instruct construction personnel in fire safety and fire drill policies appropriate for areas where demolition operations occur.
- I. Deployment, disposition, administration and implementation of any and all safety measures shall be sole responsibility of Contractor.

3.3 EXECUTION

- A. Demolish in orderly and careful manner. Maintain protected egress and access at all times.
- B. Except where noted otherwise, immediately remove demolished materials from site and dispose legally. Do not utilize Owner's disposal system.
- C. Remove materials to be re-installed or retained in manner to prevent damage. Store and protect until re-installation.
- D. Do not burn or bury materials on site.
- E. Upon completion of Work, leave areas of Work in clean condition.

3.4 SELECTIVE DEMOLITION, REPAIR AND ALTERATIONS WORK

- A. New and existing Work that is cut into, altered, damaged, relocated or reinstalled shall be restored to original conditions. Workmanship and materials to conform to applicable provisions of other applicable Sections of Specifications.
- B. Cutting Equipment: Jackhammers and vibratory cutting equipment may be utilized under following conditions:
 - 1. Approval by Owner.
 - 2. Time of day and duration of Work on each given day shall be coordinated with Project Inspector and Owner. Minimum of 24 hours advance notice required.
 - 3. Compressors shall be well muffled.
 - 4. Every consideration shall be exercised toward comfort of staff and public. Excessive noise or vibrations will constitute just cause for immediate stoppage of Work.

- C. Cutting:
 - 1. Concrete: Cut with saws or other approved method, but do not overcut openings. Reinforcing bars, except where bonded into new concrete, shall be cut off and ends painted with bituminous paint before being enclosed.
 - 2. Structural Members: Cut only when authorized by Architect and approved by Structural engineer of Record.
- D. Asphalt Paving: remove AC paving including sub-base where indicated in drawings and disposed in legal dumpsites, crushing operations on site and re-use of pulverized AC not permitted.
- E. Remove AC striping, lettering, [game lines] and markings by wet sandblasting machine with sufficient sand, water, and air capacity to completely remove existing striping, [game lines] or markings. Machine shall meet all requirements of air pollution control district having jurisdiction. Conform to Section 310-5.6.3 Standard Specifications for Public Works Construction.
- F. Removal of concrete flatwork: remove concrete paving (panel) to the nearest expansion joint or contraction joint and provide matching concrete surface to abut to new work at same finish levels unless noted otherwise.
- G. Holes required through existing stud wall, concrete or masonry construction to accommodate new electrical conduits and piping and ductwork shall be provided as specified in Division 22, Plumbing; Division 23, Heating Ventilating and Air Conditioning; Division 26, Electrical and Division 27 Communications. Provide proposed routing of utilities
- H. Holes required through concrete or masonry Work required for structural purposes shall be neatly drilled as required to accommodate specific items. Coring shall be performed with approval of Architect and in accordance with details on Drawings.
- I. Work shall be fully coordinated to ensure proper sequence, limits, methods and time of performance. Arrange Work so as to impose a minimum of hardship on present operation of facilities.
- J. Remove such existing ceilings, floors, walls, finish materials or equipment as required to complete Work. Restore such surfaces to their original condition after Work is completed.
- K. Provide adequate ventilation during all operations to prevent accumulation of dust, fumes, vapors or gases.
- L. Miscellaneous Removal Items: Items not specifically mentioned shall be removed as indicated on drawings.

- M. Miscellaneous Work: Items not specifically mentioned shall be repaired, patched or finished like new Work or to match existing adjoining surfaces as approved. Surfaces damaged shall be restored to original condition.

3.5 SALVAGE AND DISPOSAL

- A. Disposal: Removed material, other than items directed to be salvaged or indicated to be reused, become Contractor's property upon removal, and shall be removed from site. Debris shall be picked up and disposed of, off site, by Contractor promptly and continuously as Work progresses, and not allowed to accumulate. Sprinkle the debris to prevent dust nuisance. Secure and pay for required hauling permits and pay dumping fees and charges. Contractor shall make every reasonable effort to divert debris to recycling or reuse facilities.

END OF SECTION

SECTION 03 10 00 - CONCRETE FORMING AND ACCESSORIES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Form-facing material for cast-in-place concrete.
 - 2. Shoring, bracing, and anchoring.

1.2 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.

1.3 ACTION SUBMITTALS

- A. Product Data: For each of the following:
 - 1. Exposed surface form-facing material.
 - 2. Concealed surface form-facing material.
 - 3. Form ties.
 - 4. Waterstops.
 - 5. Form-release agent.
- B. Shop Drawings: Prepared by, and signed and sealed by, a qualified professional engineer responsible for their preparation, detailing fabrication, assembly, and support of forms.
 - 1. For exposed vertical concrete walls, indicate dimensions and form tie locations.
 - 2. Indicate dimension and locations of construction and movement joints required to construct the structure in accordance with ACI 301.
 - a. Location of construction joints is subject to approval of the Architect.

1.4 INFORMATIONAL SUBMITTALS

- A. Field quality-control reports.
- B. Minutes of preinstallation conference.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Concrete Formwork: Design, engineer, erect, shore, brace, and maintain formwork, shores, and reshores in accordance with ACI 301, to support vertical, lateral, static, and dynamic loads, and construction loads that might be applied, until structure can support such loads, so that resulting concrete conforms to the required shapes, lines, and dimensions.
 - 1. Design wood panel forms in accordance with APA's "Concrete Forming Design/Construction Guide."
 - 2. Design formwork to limit deflection of form-facing material to 1/240 of center-to-center spacing of supports.

2.2 FORM-FACING MATERIALS

- A. As-Cast Surface Form-Facing Material:
 - 1. Provide continuous, true, and smooth concrete surfaces.
 - 2. Furnish in largest practicable sizes to minimize number of joints.
 - 3. Acceptable Materials: As required to comply with Surface Finish designations specified in Section 03 30 00 "Cast-In-Place Concrete, and as follows:
 - a. Plywood, metal, or other approved panel materials.
 - b. Exterior-grade plywood panels, suitable for concrete forms, complying with DOC PS 1, and as follows:
 - 1) APA HDO (high-density overlay).
 - 2) APA MDO (medium-density overlay); mill-release agent treated and edge sealed.
 - 3) APA Structural 1 Plyform, B-B or better; mill oiled and edge sealed.
 - 4) APA Plyform Class I, B-B or better; mill oiled and edge sealed.
- B. Concealed Surface Form-Facing Material: Lumber, plywood, metal, plastic, or another approved material.
 - 1. Provide lumber dressed on at least two edges and one side for tight fit.

2.3 WATERSTOPS

- A. Flexible Rubber Waterstops: U.S. Army Corps of Engineers CRD-C 513, with factory-installed metal eyelets, for embedding in concrete to prevent passage of fluids through joints, with factory fabricate corners, intersections, and directional changes.
 - 1. Profile: Flat dumbbell with center bulb
 - 2. Dimensions: 4 inches by 3/16 inch thick

2.4 RELATED MATERIALS

- A. Reglets: Fabricate reglets of not less than 0.022-inch- thick, galvanized-steel sheet. Temporarily fill or cover face opening of reglet to prevent intrusion of concrete or debris.
- B. Chamfer Strips: Wood, metal, PVC, or rubber strips, 3/4 by 3/4 inch, minimum.
- C. Form-Release Agent: Commercially formulated form-release agent that does not bond with, stain, or adversely affect concrete surfaces and does not impair subsequent treatments of concrete surfaces.
 - 1. Formulate form-release agent with rust inhibitor for steel form-facing materials.
 - 2. Form release agent for form liners shall be acceptable to form liner manufacturer.
- D. Form Ties: Factory-fabricated, removable or snap-off, glass-fiber-reinforced plastic or metal form ties designed to resist lateral pressure of fresh concrete on forms and to prevent spalling of concrete on removal.
 - 1. Furnish units that leave no corrodible metal closer than 1 inch to the plane of exposed concrete surface.
 - 2. Furnish ties that, when removed, leave holes no larger than 1 inch in diameter in concrete surface.
 - 3. Furnish ties with integral water-barrier plates to walls indicated to receive dampproofing or waterproofing.

PART 3 - EXECUTION

3.1 INSTALLATION OF FORMWORK

- A. Comply with ACI 301.
- B. Construct formwork, so concrete members and structures are of size, shape, alignment, elevation, and position indicated, within tolerance limits of ACI 117 and to comply with the Surface Finish designations specified in Section 03 30 00 "Cast-In-Place Concrete" for as-cast finishes.
- C. Limit concrete surface irregularities as follows:
 - 1. Surface Finish-1.0: ACI 117 Class D, 1 inch.
 - 2. Surface Finish-2.0: ACI 117 Class B, 1/4 inch.
 - 3. Surface Finish-3.0: ACI 117 Class A, 1/8 inch.
- D. Construct forms tight enough to prevent loss of concrete mortar.
 - 1. Minimize joints.

2. Exposed Concrete: Symmetrically align joints in forms.
- E. Construct removable forms for easy removal without hammering or prying against concrete surfaces.
 1. Provide crush or wrecking plates where stripping may damage cast-concrete surfaces.
 2. Provide top forms for inclined surfaces steeper than 1.5 horizontal to 1 vertical.
 3. Install keyways, reglets, recesses, and other accessories, for easy removal.
- F. Do not use rust-stained, steel, form-facing material.
- G. Set edge forms, bulkheads, and intermediate screed strips for slabs to achieve required elevations and slopes in finished concrete surfaces.
 1. Provide and secure units to support screed strips.
 2. Use strike-off templates or compacting-type screeds.
- H. Provide temporary openings for cleanouts and inspection ports where interior area of formwork is inaccessible.
 1. Close openings with panels tightly fitted to forms and securely braced to prevent loss of concrete mortar.
 2. Locate temporary openings in forms at inconspicuous locations.
- I. Chamfer exterior corners and edges of permanently exposed concrete.
- J. At construction joints, overlap forms onto previously placed concrete not less than 12 inches
- K. Form openings, chases, offsets, sinkages, keyways, reglets, blocking, screeds, and bulkheads required in the Work.
 1. Determine sizes and locations from trades providing such items.
 2. Obtain written approval of Architect prior to forming openings not indicated on Drawings.
- L. Construction and Movement Joints:
 1. Construct joints true to line with faces perpendicular to surface plane of concrete.
 2. Install so strength and appearance of concrete are not impaired, at locations indicated or as approved by Architect.
 3. Place joints perpendicular to main reinforcement.

4. Locate joints for beams, slabs, joists, and girders in the middle third of spans.
 - a. Offset joints in girders a minimum distance of twice the beam width from a beam-girder intersection.
5. Locate horizontal joints in walls and columns at underside of floors, slabs, beams, and girders and at the top of footings or floor slabs.
6. Space vertical joints in walls as indicated on Drawings.
 - a. Locate joints beside piers integral with walls, near corners, and in concealed locations where possible.
- M. Provide temporary ports or openings in formwork where required to facilitate cleaning and inspection.
 1. Locate ports and openings in bottom of vertical forms, in inconspicuous location, to allow flushing water to drain.
 2. Close temporary ports and openings with tight-fitting panels, flush with inside face of form, and neatly fitted, so joints will not be apparent in exposed concrete surfaces.
- N. Clean forms and adjacent surfaces to receive concrete. Remove chips, wood, sawdust, dirt, and other debris just before placing concrete.
- O. Retighten forms and bracing before placing concrete, as required, to prevent mortar leaks and maintain proper alignment.
- P. Coat contact surfaces of forms with form-release agent, according to manufacturer's written instructions, before placing reinforcement.

3.2 INSTALLATION OF EMBEDDED ITEMS

- A. Place and secure anchorage devices and other embedded items required for adjoining work that is attached to or supported by cast-in-place concrete.
 1. Use setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.
 2. Install anchor rods, accurately located, to elevations required and complying with tolerances in Section 7.5 of AISC 303.
 3. Install reglets to receive waterproofing and to receive through-wall flashings in outer face of concrete frame at exterior walls, where flashing is shown at lintels, shelf angles, and other conditions.
 4. Install dovetail anchor slots in concrete structures, as indicated on Drawings.
 5. Clean embedded items immediately prior to concrete placement.

3.3 INSTALLATION OF WATERSTOPS

- A. Flexible Waterstops: Install in construction joints and at other joints indicated to form a continuous diaphragm.
 - 1. Install in longest lengths practicable.
 - 2. Locate waterstops in center of joint unless otherwise indicated on Drawings.
 - 3. Allow clearance between waterstop and reinforcing steel of not less than 2 times the largest concrete aggregate size specified in Section 033000 "Cast-In-Place Concrete."
 - 4. Secure waterstops in correct position at 12 inches on center.
 - 5. Field fabricate joints in accordance with manufacturer's instructions using heat welding.
 - a. Miter corners, intersections, and directional changes in waterstops.
 - b. Align center bulbs.
 - 6. Clean waterstops immediately prior to placement of concrete.
 - 7. Support and protect exposed waterstops during progress of the Work.
- B. Self-Expanding Strip Waterstops: Install in construction joints and at other locations indicated on Drawings, according to manufacturer's written instructions, by adhesive bonding, mechanically fastening, and firmly pressing into place.
 - 1. Install in longest lengths practicable.
 - 2. Locate waterstops in center of joint unless otherwise indicated on Drawings.
 - 3. Protect exposed waterstops during progress of the Work.

3.4 SHORING AND RESHORING INSTALLATION

- A. Comply with ACI 318 and ACI 301 for design, installation, and removal of shoring and reshoring.
 - 1. Do not remove shoring or reshoring until measurement of slab tolerances is complete.
- B. In multistory construction, extend shoring or reshoring over a sufficient number of stories to distribute loads in such a manner that no floor or member will be excessively loaded or will induce tensile stress in concrete members without sufficient steel reinforcement.
- C. Plan sequence of removal of shores and reshore to avoid damage to concrete. Locate and provide adequate reshoring to support construction without excessive stress or deflection.

3.5 FIELD QUALITY CONTROL

- A. Special Inspections: Owner will engage a special inspector and qualified testing and inspecting agency to perform field tests and inspections and prepare test reports.
- B. Testing Agency: Engage a qualified testing and inspecting agency to perform tests and inspections and to submit reports.
- C. Inspections:
 - 1. Inspect formwork for shape, location, and dimensions of the concrete member being formed.

END OF SECTION

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SECTION 03 20 00 – CONCRETE REINFORCING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Steel reinforcement bars.

1.2 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.

1.3 ACTION SUBMITTALS

- A. Product Data: For the following:
 - 1. Each type of steel reinforcement.
 - 2. Bar supports.
 - 3. Mechanical splice couplers.
- B. Shop Drawings: Comply with ACI SP-066:
 - 1. Include placing drawings that detail fabrication, bending, and placement.
 - 2. Include bar sizes, lengths, materials, grades, bar schedules, stirrup spacing, bent bar diagrams, bar arrangement, location of splices, lengths of lap splices, details of mechanical splice couplers, details of welding splices, tie spacing, hoop spacing, and supports for concrete reinforcement.
- C. Construction Joint Layout: Indicate proposed construction joints required to build the structure.
 - 1. Location of construction joints is subject to approval of Architect.

1.4 INFORMATIONAL SUBMITTALS

- A. Welding certificates.
 - 1. Reinforcement to Be Welded: Welding procedure specification in accordance with AWS D1.4/D1.4M.
- B. Material Test Reports: For the following, from a qualified testing agency:
 - 1. Steel Reinforcement: For #5 rebar and above.

- a. For reinforcement to be welded, mill test analysis for chemical composition and carbon equivalent of the steel in accordance with ASTM A706/A706M.
- C. Field quality-control reports.
- D. Minutes of preinstallation conference.

1.5 QUALITY ASSURANCE

- A. Welding Qualifications: Qualify procedures and personnel in accordance with AWS D1.4/D 1.4M.

PART 2 - PRODUCTS

2.1 STEEL REINFORCEMENT

- A. Reinforcing Bars: ASTM A615/A615M, Grade 60, deformed.
- B. Low-Alloy Steel Reinforcing Bars: ASTM A706/A706M, deformed.
- C. Headed-Steel Reinforcing Bars: ASTM A970/A970M.
- D. Plain-Steel Welded-Wire Reinforcement: ASTM A1064/A1064M, plain, fabricated from as-drawn steel wire into flat sheets.

2.2 REINFORCEMENT ACCESSORIES

- A. Bar Supports: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars and welded-wire reinforcement in place.
 - 1. Manufacture bar supports from steel wire, plastic, or precast concrete in accordance with CRSI's "Manual of Standard Practice," of greater compressive strength than concrete and as follows:
 - a. For concrete surfaces exposed to view, where legs of wire bar supports contact forms, use CRSI Class 1 plastic-protected steel wire, all-plastic bar supports, or CRSI Class 2 stainless steel bar supports.
- B. Steel Tie Wire: ASTM A1064/A1064M, annealed steel, not less than 0.0508 inch in diameter.
 - 1. Finish: Plain, ASTM A884/A884M, Class A, Type 1, epoxy coated, with less than 2 percent damaged coating in each 12-inch wire length.

2.3 FABRICATING REINFORCEMENT

- A. Fabricate steel reinforcement according to CRSI's "Manual of Standard Practice."

PART 3 - EXECUTION

3.1 PREPARATION

- A. Protection of In-Place Conditions:
 - 1. Do not cut or puncture vapor retarder.
 - 2. Repair damage and reseal vapor retarder before placing concrete.
- B. Clean reinforcement of loose rust and mill scale, earth, ice, and other foreign materials that reduce bond to concrete.

3.2 INSTALLATION OF STEEL REINFORCEMENT

- A. Comply with CRSI's "Manual of Standard Practice" for placing and supporting reinforcement.
- B. Accurately position, support, and secure reinforcement against displacement.
 - 1. Locate and support reinforcement with bar supports to maintain minimum concrete cover.
 - 2. Do not tack weld crossing reinforcing bars.
- C. Preserve clearance between bars of not less than 1 inch, not less than one bar diameter, or not less than 1-1/3 times size of large aggregate, whichever is greater.
- D. Provide concrete coverage in accordance with ACI 318.
- E. Set wire ties with ends directed into concrete, not toward exposed concrete surfaces.
- F. Splices: Lap splices as indicated on Drawings.
 - 1. Bars indicated to be continuous, and all vertical bars to be lapped not less than 36 bar diameters at splices, or 24 inches, whichever is greater.
 - 2. Stagger splices in accordance with ACI 318.

3.3 JOINTS

- A. Construction Joints: Install so strength and appearance of concrete are not impaired, at locations indicated or as approved by Architect.
 - 1. Place joints perpendicular to main reinforcement.
 - 2. Continue reinforcement across construction joints unless otherwise indicated.
 - 3. Do not continue reinforcement through sides of strip placements of floors and slabs.

3.4 INSTALLATION TOLERANCES

- A. Comply with ACI 117.

3.5 FIELD QUALITY CONTROL

- A. Special Inspections: Owner will engage a special inspector and qualified testing and inspecting agency to perform field tests and inspections and prepare test reports.
- B. Testing Agency: Engage a qualified testing and inspecting agency to perform tests and inspections and to submit reports.
- C. Inspections:
 - 1. Steel-reinforcement placement.
 - 2. Steel-reinforcement mechanical splice couplers.
 - 3. Steel-reinforcement welding.

END OF SECTION

SECTION 03 30 00 - CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Cast-in-place concrete, including concrete materials, mixture design, placement procedures, and finishes.
- B. Related Requirements:
 - 1. Section 03 10 00 "Concrete Forming and Accessories" for form-facing materials, form liners, insulating concrete forms, and waterstops.
 - 2. Section 03 20 00 "Concrete Reinforcing" for steel reinforcing bars and welded-wire reinforcement.

1.2 DEFINITIONS

- A. Cementitious Materials: Portland cement alone or in combination with one or more of the following: blended hydraulic cement, fly ash, slag cement, and other pozzolans materials subject to compliance with requirements.
- B. Water/Cement Ratio (w/cm): The ratio by weight of water to cementitious materials.

1.3 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.

1.4 ACTION SUBMITTALS

- A. Product Data: For each of the following.
 - 1. Portland cement.
 - 2. Fly ash.
 - 3. Slag cement.
 - 4. Blended hydraulic cement.
 - 5. Aggregates.
 - 6. Admixtures:
 - a. Include limitations of use, including restrictions on cementitious materials, supplementary cementitious materials, air entrainment, aggregates,

temperature at time of concrete placement, relative humidity at time of concrete placement, curing conditions, and use of other admixtures.

7. Vapor retarders.
 8. Liquid floor treatments.
 9. Curing materials.
 10. Joint fillers.
- B. Design Mixtures: For each concrete mixture, include the following:
1. Mixture identification.
 2. Minimum 28-day compressive strength.
 3. Durability exposure class.
 4. Maximum w/cm.
 5. Calculated equilibrium unit weight, for lightweight concrete.
 6. Slump limit.
 7. Air content.
 8. Nominal maximum aggregate size.
 9. Indicate amounts of mixing water to be withheld for later addition at Project site if permitted.
 10. Intended placement method.
 11. Submit alternate design mixtures when characteristics of materials, Project conditions, weather, test results, or other circumstances warrant adjustments.
- C. Shop Drawings:
1. Construction Joint Layout: Indicate proposed construction joints required to construct the structure.
 - a. Location of construction joints is subject to approval of the Architect.
- D. Concrete Schedule: For each location of each Class of concrete indicated in "Concrete Mixtures" Article, including the following:
1. Concrete Class designation.
 2. Location within Project.

3. Exposure Class designation.
4. Formed Surface Finish designation and final finish.
5. Final finish for floors.
6. Curing process.
7. Floor treatment if any.

1.5 INFORMATIONAL SUBMITTALS

- A. Material Certificates: For each of the following, signed by manufacturers:
 1. Cementitious materials.
 2. Admixtures.
 3. Curing compounds.
 4. Vapor retarders.
 5. Joint-filler strips.
- B. Material Test Reports: For the following, from a qualified testing agency:
 1. Portland cement.
 2. Fly ash.
 3. Slag cement.
 4. Blended hydraulic cement.
 5. Aggregates.
 6. Admixtures:
- C. Research Reports: For concrete admixtures in accordance with ICC's Acceptance Criteria AC198.
- D. Preconstruction Test Reports: For each mix design.
- E. Field quality-control reports.
- F. Minutes of preinstallation conference.

1.6 QUALITY ASSURANCE

- A. Ready-Mixed Concrete Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C94/C94M requirements for production facilities and equipment.
 - 1. Manufacturer certified in accordance with NRMCA's "Certification of Ready Mixed Concrete Production Facilities."

1.7 PRECONSTRUCTION TESTING

- A. Preconstruction Testing Service: Engage a qualified testing agency to perform preconstruction testing on each concrete mixture.
 - 1. Include the following information in each test report:
 - a. Admixture dosage rates.
 - b. Slump.
 - c. Air content.
 - d. Seven-day compressive strength.
 - e. 28-day compressive strength.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Comply with ASTM C94/C94M and ACI 301.

1.9 FIELD CONDITIONS

- A. Cold-Weather Placement: Comply with ACI 301 and ACI 306.1.
- B. Hot-Weather Placement: Comply with ACI 301 and ACI 305.1.

PART 2 - PRODUCTS

2.1 CONCRETE, GENERAL

- A. ACI Publications: Comply with ACI 301 unless modified by requirements in the Contract Documents.

2.2 CONCRETE MATERIALS

- A. Cementitious Materials:
 - 1. Portland Cement: ASTM C150/C150M, Type I.
 - 2. Fly Ash: ASTM C618, Class C or F.
 - 3. Slag Cement: ASTM C989/C989M, Grade 100 or 120.
 - 4. Blended Hydraulic Cement: ASTM C595/C595M, Type IS, portland blast-furnace slag cement.

- B. Normal-Weight Aggregates: ASTM C33/C33M, Class 1N coarse aggregate or better, graded. Provide aggregates from a single source.
 - 1. Maximum Coarse-Aggregate Size: 3/4 inch nominal.
- C. Chemical Admixtures: Certified by manufacturer to be compatible with other admixtures that do not contribute water-soluble chloride ions exceeding those permitted in hardened concrete. Do not use calcium chloride or admixtures containing calcium chloride in steel-reinforced concrete.
 - 1. Water-Reducing Admixture: ASTM C494/C494M, Type A.

2.3 CURING MATERIALS

- A. Clear, Waterborne, Membrane-Forming, Curing and Sealing Compound: ASTM C1315, Type 1, Class A.

2.4 RELATED MATERIALS

- A. Expansion- and Isolation-Joint-Filler Strips: ASTM D1751, asphalt-saturated cellulosic fiber or ASTM D1752, cork or self-expanding cork.

2.5 CONCRETE MIXTURES, GENERAL

- A. Prepare design mixtures for each type and strength of concrete, proportioned on the basis of laboratory trial mixture or field test data, or both, in accordance with ACI 301.
 - 1. Cementitious Use a qualified testing agency for preparing and reporting proposed mixture designs, based on laboratory trial mixtures.
- B. Materials: Limit percentage, by weight, of cementitious materials other than portland cement in concrete as follows:
 - 1. Fly Ash or Other Pozzolans: 25 percent by mass.
 - 2. Slag Cement: 50 percent by mass.
 - 3. Total of Fly Ash or Other Pozzolans, Slag Cement: 50 percent by mass, with fly ash or pozzolans not exceeding 25 percent by mass.
 - 4. Total of Fly Ash or Other Pozzolans: 35 percent by mass with fly ash or pozzolans not exceeding 25 percent by mass.
- C. Admixtures: Use admixtures in accordance with manufacturer's written instructions.
 - 1. Contractor to propose in mix design as they see fit for architects review.

2.6 CONCRETE MIXTURES

- A. Class A : Normal-weight concrete used for footings, grade beams, and tie beams.
 - 1. Minimum Compressive Strength: 3500 psi at 28 days.
 - 2. Maximum w/cm: 0.50.
 - 3. Slump Limit: 4 inches.
 - a. Percent, plus or minus 1.5 percent at point of delivery for concrete containing 1-1/2-inch nominal maximum aggregate size].

2.7 CONCRETE MIXING

- A. Ready-Mixed Concrete: Measure, batch, mix, and deliver concrete in accordance with ASTM C94/C94M[and ASTM C1116/C1116M], and furnish batch ticket information.
- B. Project-Site Mixing: Measure, batch, and mix concrete materials and concrete in accordance with ASTM C94/C94M. Mix concrete materials in appropriate drum-type batch machine mixer.
 - 1. For mixer capacity of 1 cu. yd. or smaller, continue mixing at least 1-1/2 minutes, but not more than five minutes after ingredients are in mixer, before any part of batch is released.
 - 2. For mixer capacity larger than 1 cu. yd., increase mixing time by 15 seconds for each additional 1 cu. yd.
 - 3. Provide batch ticket for each batch discharged and used in the Work, indicating Project identification name and number, date, mixture type, mixture time, quantity, and amount of water added. Record approximate location of final deposit in structure.

PART 3 - EXECUTION

3.1 JOINTS

- A. Construct joints true to line, with faces perpendicular to surface plane of concrete.
- B. Construction Joints: Coordinate with floor slab pattern and concrete placement sequence.
 - 1. Install so strength and appearance of concrete are not impaired, at locations indicated on Drawings or as approved by Architect.
 - 2. Place joints perpendicular to main reinforcement.
 - a. Continue reinforcement across construction joints unless otherwise indicated.
 - b. Do not continue reinforcement through sides of strip placements of floors and slabs.
 - 3. Space vertical joints in walls as indicated on Drawings]

- C. Control Joints in Slabs-on-Ground: Form weakened-plane control joints, sectioning concrete into areas as indicated. Construct control joints for a depth equal to at least one-fourth of concrete thickness as follows:
1. Grooved Joints: Form control joints after initial floating by grooving and finishing each edge of joint to a radius of 1/8 inch Repeat grooving of control joints after applying surface finishes. Eliminate groover tool marks on concrete surfaces.
 2. Sawed Joints: Form control joints with power saws equipped with shatterproof abrasive or diamond-rimmed blades. Cut 1/8-inch- wide joints into concrete when cutting action does not tear, abrade, or otherwise damage surface and before concrete develops random cracks.
- D. Isolation Joints in Slabs-on-Ground: After removing formwork, install joint-filler strips at slab junctions with vertical surfaces, such as column pedestals, foundation walls, grade beams, and other locations, as indicated.
1. Extend joint-filler strips full width and depth of joint, terminating flush with finished concrete surface unless otherwise indicated on Drawings.
 2. Terminate full-width joint-filler strips not less than 1/2 inch or more than 1 inch below finished concrete surface, where joint sealants, specified in Section 07 92 00 "Joint Sealants," are indicated.
 3. Install joint-filler strips in lengths as long as practicable. Where more than one length is required, lace or clip sections together.
- E. Doweled Joints:
1. Install dowel bars and support assemblies at joints where indicated on Drawings.
 2. Lubricate or asphalt coat one-half of dowel bar length to prevent concrete bonding to one side of joint.

3.2 CONCRETE PLACEMENT

- A. Before placing concrete, verify that installation of formwork, reinforcement, embedded items, and vapor retarder is complete and that required inspections are completed.
1. Provide continuous inspection of vapor retarder during concrete placement and make necessary repairs to damaged areas as Work progresses.
- B. Notify Architect and testing and inspection agencies 24 hours prior to commencement of concrete placement.
- C. Do not add water to concrete during delivery, at Project site, or during placement unless approved by Architect in writing, but not to exceed the amount indicated on the concrete delivery ticket.
1. Do not add water to concrete after adding high-range water-reducing admixtures to mixture.

- D. Before test sampling and placing concrete, water may be added at Project site, subject to limitations of ACI 301, but not to exceed the amount indicated on the concrete delivery ticket.
1. Do not add water to concrete after adding high-range water-reducing admixtures to mixture.
- E. Deposit concrete continuously in one layer or in horizontal layers of such thickness that no new concrete is placed on concrete that has hardened enough to cause seams or planes of weakness.
1. If a section cannot be placed continuously, provide construction joints as indicated.
 2. Deposit concrete to avoid segregation.
 3. Deposit concrete in horizontal layers of depth not to exceed formwork design pressures and in a manner to avoid inclined construction joints.
 4. Consolidate placed concrete with mechanical vibrating equipment in accordance with ACI 301.
 - a. Do not use vibrators to transport concrete inside forms.
 - b. Insert and withdraw vibrators vertically at uniformly spaced locations to rapidly penetrate placed layer and at least 6 inches into preceding layer.
 - c. Do not insert vibrators into lower layers of concrete that have begun to lose plasticity.
 - d. At each insertion, limit duration of vibration to time necessary to consolidate concrete, and complete embedment of reinforcement and other embedded items without causing mixture constituents to segregate.
- F. Deposit and consolidate concrete for floors and slabs in a continuous operation, within limits of construction joints, until placement of a panel or section is complete.
1. Do not place concrete floors and slabs in a checkerboard sequence.
 2. Consolidate concrete during placement operations, so concrete is thoroughly worked around reinforcement and other embedded items and into corners.
 3. Maintain reinforcement in position on chairs during concrete placement.
 4. Scream slab surfaces with a straightedge and strike off to correct elevations.
 5. Level concrete, cut high areas, and fill low areas.
 6. Slope surfaces uniformly to drains where required.
 7. Begin initial floating using bull floats or darbies to form a uniform and open-textured surface plane, before excess bleedwater appears on the surface.
 8. Do not further disturb slab surfaces before starting finishing operations.

3.3 FINISHING FORMED SURFACES

- A. As-Cast Surface Finishes:
1. ACI 301 Surface Finish SF-1.0: As-cast concrete texture imparted by form-facing material.
 - a. Patch voids larger than 1-1/2 inches wide or 1/2 inch deep.
 - b. Remove projections larger than 1 inch.
 - c. Tie holes do not require patching.
 - d. Surface Tolerance: ACI 117 Class D.
 - e. Apply to concrete surfaces not exposed to public view.
 2. ACI 301 Surface Finish SF-2.0: As-cast concrete texture imparted by form-facing material, arranged in an orderly and symmetrical manner with a minimum of seams.
 - a. Patch voids larger than 3/4 inch wide or 1/2 inch deep.
 - b. Remove projections larger than 1/4 inch.
 - c. Patch tie holes.
 - d. Surface Tolerance: ACI 117 Class B.
 - e. Locations: Apply to concrete surfaces exposed to public view, to receive a rubbed finish.
 3. ACI 301 Surface Finish SF-3.0:
 - a. Patch voids larger than 3/4 inch wide or 1/2 inch deep.
 - b. Remove projections larger than 1/8 inch.
 - c. Patch tie holes.
 - d. Surface Tolerance: ACI 117 Class A.
- B. Related Unformed Surfaces:
1. At tops of walls, horizontal offsets, and similar unformed surfaces adjacent to formed surfaces, strike off smooth and finish with a color and texture matching adjacent formed surfaces.
 2. Continue final surface treatment of formed surfaces uniformly across adjacent unformed surfaces unless otherwise indicated.

3.4 FINISHING FLOORS AND SLABS

- A. Comply with ACI 302.1R recommendations for screeding, restraightening, and finishing operations for concrete surfaces. Do not wet concrete surfaces.
- B. Scratch Finish:
1. While still plastic, texture concrete surface that has been screeded and bull-floated or darbied.
 2. Use stiff brushes, brooms, or rakes to produce a profile depth of 1/4 inch (6 mm) in one direction.

- C. Float Finish:
1. When bleedwater sheen has disappeared and concrete surface has stiffened sufficiently to permit operation of specific float apparatus, consolidate concrete surface with power-driven floats or by hand floating if area is small or inaccessible to power-driven floats.
 2. Repeat float passes and restraightening until surface is left with a uniform, smooth, granular texture and complies with ACI 117 tolerances for conventional concrete.
- D. Trowel Finish:
1. After applying float finish, apply first troweling and consolidate concrete by hand or power-driven trowel.
 2. Continue troweling passes and restraighten until surface is free of trowel marks and uniform in texture and appearance.
 3. Grind smooth any surface defects that would telegraph through applied coatings or floor coverings.
 4. Do not add water to concrete surface.
 5. Do not apply hard-troweled finish to concrete, which has a total air content greater than 3 percent.
- E. Broom Finish: Apply a broom finish to exterior concrete platforms, steps, ramps, and locations indicated on Drawings.
1. Immediately after float finishing, slightly roughen trafficked surface by brooming with fiber-bristle broom perpendicular to main traffic route.
 2. Coordinate required final finish with Architect before application.

3.5 INSTALLATION OF MISCELLANEOUS CONCRETE ITEMS

- A. Filling In:
1. Fill in holes and openings left in concrete structures after Work of other trades is in place unless otherwise indicated.
 2. Mix, place, and cure concrete, as specified, to blend with in-place construction.
 3. Provide other miscellaneous concrete filling indicated or required to complete the Work.
- B. Curbs: Provide monolithic finish to interior curbs by stripping forms while concrete is still green and by steel-troweling surfaces to a hard, dense finish with corners, intersections, and terminations slightly rounded.

3.6 CONCRETE CURING

- A. Protect freshly placed concrete from premature drying and excessive cold or hot temperatures.
 - 1. Comply with ACI 301 and ACI 306.1 for cold weather protection during curing.
 - 2. Comply with ACI 301 and ACI 305.1 for hot-weather protection during curing.
 - 3. Maintain moisture loss no more than 0.2 lb/sq. ft. x h, calculated in accordance with ACI 305.1, before and during finishing operations.

- B. Curing Formed Surfaces: Comply with ACI 308.1 as follows:
 - 1. Cure formed concrete surfaces, including underside of beams, supported slabs, and other similar surfaces.
 - 2. Cure concrete containing color pigments in accordance with color pigment manufacturer's instructions.
 - 3. If forms remain during curing period, moist cure after loosening forms.
 - 4. If removing forms before end of curing period, continue curing for remainder of curing period, as follows:
 - a. Continuous Fogging: Maintain standing water on concrete surface until final setting of concrete.
 - b. Continuous Sprinkling: Maintain concrete surface continuously wet.
 - c. Absorptive Cover: Pre-dampen absorptive material before application; apply additional water to absorptive material to maintain concrete surface continuously wet.
 - d. Water-Retention Sheeting Materials: Cover exposed concrete surfaces with sheeting material, taping, or lapping seams.
 - e. Membrane-Forming Curing Compound: Apply uniformly in continuous operation by power spray or roller in accordance with manufacturer's written instructions.
 - 1) Recoat areas subject to heavy rainfall within three hours after initial application.
 - 2) Maintain continuity of coating and repair damage during curing period.

- C. Curing Unformed Surfaces: Comply with ACI 308.1 as follows:
 - 1. Begin curing immediately after finishing concrete.
 - 2. Interior Concrete Floors:
 - a. Floors to Receive Curing Compound:

- 1) Apply uniformly in continuous operation by power spray or roller in accordance with manufacturer's written instructions.
- 2) Recoat areas subjected to heavy rainfall within three hours after initial application.
- 3) Maintain continuity of coating, and repair damage during curing period.

3.7 TOLERANCES

- A. Conform to ACI 117.

3.8 APPLICATION OF LIQUID FLOOR TREATMENTS

- A. Sealing Coat: Uniformly apply a continuous sealing coat of curing and sealing compound to hardened concrete by power spray or roller in accordance with manufacturer's written instructions.

3.9 FIELD QUALITY CONTROL

- A. Special Inspections: Owner will engage a special inspector to perform field tests and inspections and prepare testing and inspection reports.
- B. Testing Agency: Owner will engage a qualified testing and inspecting agency to perform tests and inspections and to submit reports.
1. Testing agency to be responsible for providing curing container for composite samples on Site and verifying that field-cured composite samples are cured in accordance with ASTM C31/C31M.
 2. Testing agency to immediately report to Architect, Contractor, and concrete manufacturer any failure of Work to comply with Contract Documents.
 3. Testing agency shall report results of tests and inspections, in writing, to Owner, Architect, Contractor, and concrete manufacturer within 48 hours of inspections and tests.
 - a. Test reports to include reporting requirements of ASTM C31/C31M, ASTM C39/C39M, and ACI 301, including the following as applicable to each test and inspection:
 - 1) Project name.
 - 2) Name of testing agency.
 - 3) Names and certification numbers of field and laboratory technicians performing inspections and testing.
 - 4) Name of concrete manufacturer.
 - 5) Date and time of inspection, sampling, and field testing.
 - 6) Date and time of concrete placement.
 - 7) Location in Work of concrete represented by samples.
 - 8) Date and time sample was obtained.
 - 9) Truck and batch ticket numbers.
 - 10) Design compressive strength at 28 days.

- 11) Concrete mixture designation, proportions, and materials.
 - 12) Field test results.
 - 13) Information on storage and curing of samples before testing, including curing method and maximum and minimum temperatures during initial curing period.
 - 14) Type of fracture and compressive break strengths at seven days and 28 days.
- C. Batch Tickets: For each load delivered, submit three copies of batch delivery ticket to testing agency, indicating quantity, mix identification, admixtures, design strength, aggregate size, design air content, design slump at time of batching, and amount of water that can be added at Project site.
- D. Inspections:
1. Headed bolts and studs.
 2. Verification of use of required design mixture.
 3. Concrete placement, including conveying and depositing.
 4. Curing procedures and maintenance of curing temperature.
 5. Verification of concrete strength before removal of shores and forms from beams and slabs.
 6. Batch Plant Inspections: On a random basis, as determined by Architect.
- E. Concrete Tests: Testing of composite samples of fresh concrete obtained in accordance with ASTM C 172/C 172M shall be performed in accordance with the following requirements:
1. Testing Frequency: Obtain one composite sample for each day's pour of each concrete mixture exceeding 5 cu. yd., but less than 25 cu. yd., plus one set for each additional 50 cu. yd. or fraction thereof.
 - a. When frequency of testing provides fewer than five compressive-strength tests for each concrete mixture, testing to be conducted from at least five randomly selected batches or from each batch if fewer than five are used.
 2. Slump: ASTM C143/C143M:
 - a. One test at point of placement for each composite sample, but not less than one test for each day's pour of each concrete mixture.
 - b. Perform additional tests when concrete consistency appears to change.
 3. Compressive-Strength Tests: ASTM C39/C39M.
 - a. Test one set of two laboratory-cured specimens at seven days and one set of two specimens at 28 days.

3.10 PROTECTION

- A. Protect concrete surfaces as follows:
1. Protect from petroleum stains.
 2. Diaper hydraulic equipment used over concrete surfaces.
 3. Prohibit vehicles from interior concrete slabs.
 4. Prohibit use of pipe-cutting machinery over concrete surfaces.
 5. Prohibit placement of steel items on concrete surfaces.
 6. Prohibit use of acids or acidic detergents over concrete surfaces.
 7. Protect liquid floor treatment from damage and wear during the remainder of construction period. Use protective methods and materials, including temporary covering, recommended in writing by liquid floor treatments installer.
 8. Protect concrete surfaces scheduled to receive surface hardener or polished concrete finish using Floor Slab Protective Covering.

END OF SECTION

SECTION 05 52 00 – HANDRAILS AND RAILINGS

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Shop fabricated ferrous metal items, galvanized and prime painted.
- B. Related Sections
 - 1. Section 05 52 00, Handrails and Railings.
 - 2. Section 09 90 00, Painting.

1.2 REFERENCE STANDARDS

- A. Conform to current adopted reference standards by date of issue of the current code cycle and the date of the Contract Documents.
- B. American Society of Mechanical Engineers (ASME)
 - 1. ASME B18-Fasteners
- C. ASTM International
 - 1. ASTM A36/A36M Carbon Structural Steel
 - 2. ASTM A48/A48M Gray Iron Castings
 - 3. ASTM A53 Pipe, Steel, Black and Hot-Dipped, Zinc-coated Welded and Seamless
 - 4. ASTM A123 Zinc (Hot-Dip Galvanized) on Coatings on Iron and Steel Products
 - 5. ASTM A153 Zinc Coating (Hot-Dip) on Iron and Steel Hardware
 - 6. ASTM A283/A 283M Low and Intermediate Tensile Strength Carbon Steel Plates
 - 7. ASTM A307 - Carbon Steel Bolts and Studs, 60,000 psi Tensile Strength
 - 8. ASTM A325 - Structural Bolts, Steel, Heat Treated, 120/105ksi Minimum Tensile Strength
 - 9. ASTM A500 - Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Round and Shapes
 - 10. ASTM A513 - Electric-Resistance-Welded Carbon and Alloy Steel Mechanical Tubing
 - 11. ASTM A563 - Carbon and Alloy Steel Nuts
 - 12. ASTM A653/A 653M Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process
 - 13. ASTM A780 - Repair of Damaged and Uncoated Areas of Hot-Dip Galvanized Coatings.

14. ASTM A786/A 786M Rolled Steel Floor Plates
 15. ASTM A992 Structural Steel Shapes
 16. ASTM B633 - Electrodeposited Coatings of Zinc on Iron and Steel
 17. ASTM C1107 - Packaged Dry Hydraulic - Cement Grout (Non-Shrink)
 18. ASTM D520 ASTM D520 - Zinc Dust Pigment
 19. ASTM F1554 - Anchor Bolts, Steel, 36, 55, and 105-ksi Yield Strength
- D. American Welding Society (AWS)
1. AWS A2.4 - Standard Symbols for Welding, Brazing and Non-Destructive Examination
 2. AWS A5.1 - Carbon Steel Covered Arc-Welding Electrodes
- E. ASCE/SEI 7-16 - American Society of Civil Engineers, Structural Engineers Institute, ASCE Standard.
- F. California Code of Regulations (CCR)
1. Title 8, Chapter 3.2
 2. Title 8, Division 1, Subchapter 7, Group 1, Article 4, Section 3277, Fixed Ladders
 3. Cal/OSHA, Subchapter 4 Construction Safety Orders
 4. Title 24, Part 2, 2019 California Building Code (CBC), Chapter 22A.
 5. Title 24, California Fire Code Chapter 35 Welding and Other Hot Work.
- G. National Ornamental & Miscellaneous Metals Association (NOMMA)
1. NOMMA Guidelines - Guideline 1 Joint Finishes
- H. SSPC - The Society for Protective Coatings
1. Paint 20 - Zinc-Rich Coating (Type 1 Inorganic and Type II Organic)
 2. SP-2 - Steel Preparation
- I. MIL - Military Specifications, United States Department of Defense
1. P-21035 - Paint, High Zinc Dust Content, Galvanizing Repair
- J. MPI - Master Painters Institute Approved Products List
1. 18 - Primer, Zinc Rich, Organic
 2. 19 - Primer, Zinc Rich, Inorganic

1.3 SUBMITTALS

- A. Shop Drawings. Indicate profiles, sizes, connection attachments, reinforcing, anchorage, size and type of fasteners and accessories. Include erection drawings, elevations and details where applicable. Indicate welded connections using standard AWS A2.4 Welding Symbols. Indicate net weld lengths.
- B. Welder Certifications.
- C. Manufacturer's Certificates certifying welders employed on the work have been AWS qualified within the previous 12 months, in accordance with AWS-WHB-1.
- D. Written Welding Procedure Specification (WPS)

1.4 QUALITY ASSURANCE

- A. Welding: Qualify procedures and personnel according to the following
 - 1. AWS D1.1, Structural Welding Code-Steel.
 - 2. AWS D1.3, Structural Welding Code-Sheet Steel.
 - 3. AWS D1.8, Structural Welding Code - Seismic Supplement.
 - 4. AWS Certified welders.
 - 5. AWS - American Welding Society
 - 6. AWS A2.4 Standard Symbols for Welding, Brazing and Non-Destructive Examination
- B. Coating applicator - Galvanized Metal Fabrications: Company specializing in hot-dip galvanizing after fabrication and following the procedures in the Quality Assurance Manual of the American Galvanizers Association.

1.5 FIELD MEASUREMENTS

- A. Verify field measurements.

PART 2 - PRODUCTS

2.1 METALS, GENERAL

- A. Metal Surfaces, General: Provide materials with smooth, flat surfaces, unless otherwise indicated. For metal fabrications exposed to view in completed Work, provide materials without seam marks, roller marks, rolled trade names, or blemishes.

2.2 FERROUS METALS

- A. Steel Sections: ASTM A992 for W-Shape sections and ASTM A36 for all other members.
- B. Steel Plates, Shapes, and Bars: ASTM A36/A36M.
- C. Bending or cold-formed steel: ASTM A283, Grade C.

- D. Floor/Stair Plate: ASTM A786, Pattern No. 5, medium pattern, raised lug pattern, 12 gauge. Steel ASTM A36 or ASTM A283 Mild Steel, Grade C or D.
- E. Steel Round Structural Tubing: ASTM A500, Grade C, minimum yield strength, 46 ksi.
- F. Structural Tubing: Hollow Structural Sections (HSS), ASTM A500, Grade B, minimum yield strength, 42 ksi.
- G. Pipe: ASTM A53, Grade B, Type E or S, Schedule 40, galvanized unless noted painted.
- H. Mechanical Tubing: ASTM A 513 hot- or cold-rolled carbon steel for non-structural tubing, electric welded tubing.
- I. Abrasive-Surface: for stair rungs, floor plate, with abrasive material metallurgically bonded to steel by a proprietary process, OSHA compliant.

2.3 FASTENERS

- A. General: Provide Type 304 or 316 stainless-steel fasteners for exterior use and zinc-plated fasteners with coating complying with ASTM B 633, Class Fe/Zn 5, where built into exterior walls. Select fasteners for type, grade, and class required.
- B. Bolts and Nuts: Regular hexagon-head bolts, ASTM A307, Grade A; with hex nuts, ASTM A563 and ANSI B18.2.1; and, where indicated, flat washers and ASTM A325 as indicated on drawings.
- C. High Strength Bolts ASTM A325.
- D. Anchor Bolts ASTM F1554, Grade 36.
- E. Machine Screws ASME B18.6.3.
- F. Lag Bolts ASME B18.2.1.
- G. Wood Screws Flat head, carbon steel, ASME B18.6.1.
- H. Plain Washers Round, carbon steel, ASME B18.22.1.
- I. Lock Washers Helical, spring type, carbon steel, ASME B18.21.1.
- J. Eyebolts: for wood, steel or concrete construction, Stainless steel Type 304. 1/4" shoulder pattern rated 500 lbs. minimum. Epoxied in Concrete where indicated.
- K. Threaded rods, steel yokes and plates.
- L. Self-drilling, self-tapping screws, ASTM C954, galvanized, minimum #10 unless noted otherwise on drawings. By Buildex/Tomarco or equal.
- M. Anchorage Devices, Drilled Expansion Anchors Minimum 5/8-inch diameter with 3 inch embedment unless noted otherwise on drawings. Allowable shear and tension values as permitted in ICC-ES, ESR-1917 Hilti Kwik Bolt TZ Concrete Anchor or Hilti Kwik Bolt 3, ESR-1385 for masonry anchors, by Hilti Inc., Tulsa, OK, or in ICC-ES 2502, DeWalt Power-Stud+SD2 concrete anchor or DeWalt Power-Stud+ SD1, ESR-2966 for masonry anchors, by Dewalt, Towson, MD.

2.4 MISCELLANEOUS MATERIALS

- A. Shop Primer: Fabricator's rust inhibitive primer suitable for finish scheduled in Section 09 90 00 equal to L69 Hi Build Epoxoline II @ 3-4 mils DFT primer, red color, air dried, by Tnemec.
- B. Galvanizing Repair Compound: ASTM D520 Type III, MIL-P-21035, SSPC-Paint 20, or MPI #18 or 19. Touch-Up products for Galvanized Surfaces Ready mixed Zinc rich galvanizing compound, 95% zinc.
 - 1. Finish: Galvilite by ZRC Products Company, Marshfield, MA or equal. Reflective Metallic Sheen for exposed galvanized finish.
 - 2. Finish: ZRC Products Company, Marshfield, MA or equal. Primer for repaired galvanized to receive a painting finish.
- C. Welding Rods and Bare Electrodes: Select according to AWS specifications for metal alloy welded.
- D. Grout ASTM C1107, Non-shrink type, pre-mixed compound consisting of non-metallic aggregate, cement, water reducing and plasticizing additives, capable of developing a minimum compressive strength of 8,000 psi at 7 days; of consistency suitable for application and a 30 minute working time.
- E. Safety Stair Nosings Cast-in-Place, Style B-41A, extruded aluminum, 4 inches wide manufactured by Barrycraft Pattern and Foundry, Inc., Birmingham, AL, or equal. Provide 2" strip contrasting colors (70% contrasting) full width of step, 1" maximum from edge of nosing of each exterior tread and top landing (upper approach), and top and bottom steps of interior stairs unless nosing are indicated at all steps on drawings, CBC Section 11B-504. Colors to be selected by Architect.

2.5 FABRICATION

- A. Fit and shop assemble in largest practical sections for delivery to site.
- B. Ease exposed edges to small uniform radius.
- C. Fabricate items with joints tightly fitted and secured.
- D. Welded Joints. Seal joined members by continuous welds. Dress welded joints, leaving no burrs, or sharp or abrasive corners, edges or surfaces.
 - 1. Where exposed to view, dress welds in accordance with NOMMA Guidelines for Finish 1.
 - 2. Where concealed, dress welds in accordance with NOMMA Guidelines for Finish 3.
- E. Exposed Mechanically Fastened Joints. Make exposed, mechanically fastened joints hairline-tight, flush, butt joints. Secure with flush-mount, countersunk, screws or bolts; unobtrusively located; consistent with design of component, except where specifically indicated otherwise.

- F. Provide components required for anchorage of fabrications. Fabricate anchors and related components of same material and finish as related metal fabrication, unless expressly indicated otherwise.

2.6 FINISHES

- A. Steel and Iron
 1. Clean surfaces of rust, scale, grease and foreign matter prior to finishing. Prepare in accordance with SSPC SP-2.
 2. Galvanize steel items to zinc coating thickness in accordance with ASTM A123, minimum Coating Grade 80 (1.9 oz/sq. ft.). Surfaces shall be free of icicles, spangles and puddling. Provide venting holes at all enclosed sections, "V" notch, and drilled holes are acceptable. Locate to prevent rainwater from entering enclosed sections at exterior galvanized items. For sheet steel items, galvanize per ASTM A653 G60 Coating Designation.
 3. Galvanized items to be painted: Do not use quenching solutions or treatments immediately after galvanizing. Refer to individual sections for galvanized items to be painted and to Section 09 90 00.
 4. Do not prime surfaces in direct contact with concrete or where field welding is required.
 5. For painted surfaces, prime items with two coats in accordance with requirements of primer specified herein.
 6. Color Coated with Finish Special Coatings in accordance with Section 09 90 00 Painting for exposed surfaces.
- B. Apply two coats of bituminous paint to concealed aluminum and steel surfaces in contact with cementitious materials or between dissimilar metals. Bituminous Paint: Cold-applied asphalt emulsion complying with ASTM D 1187/D 1187M.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that field conditions are acceptable and are ready to receive work.
- B. Do not begin installation until unsatisfactory conditions are corrected. Beginning installation means acceptance of existing conditions including the preparatory work of others, if any.

3.2 PREPARATION

- A. Clean and strip primed steel items to bare metal where site welding is required.
- B. Supply items required to be cast into concrete or embedded in masonry with setting templates to appropriate sections.

3.3 INSTALLATION

- A. Install items plumb and level, accurately fitted, free from distortion or defects.
- B. Allow for erection loads and for sufficient temporary bracing to maintain true alignment until completion of erection and installation of permanent attachments.
- C. Field weld components indicated on shop drawings.
 - 1. Weld joints using shielded metal-arc welding (SMAW) method. Use coated welded rods, not fluxed, or type recommended by manufacturer for use with parent metal. Use only certified welders for structural construction.
 - 2. Grinding: Grind welds on surfaces subject to traffic or contact to smooth flush joints.
 - 3. Peening: Remove flux and weld spatter as necessary to eliminate unsightly conditions and grind off sharp projections.
 - 4. Permanently Concealed Welds: No treatment required other than preparation for painting or galvanizing.
- D. Perform field welding in accordance with AWS standards and procedures for metal alloy welded.
- E. Obtain Architect approval prior to site cutting or making adjustments not scheduled.
- F. After erection, prime welds, abrasions and surfaces not shop primed except surfaces to be in contact with concrete.
- G. Repair of Galvanized Surfaces: Ready mixed, zinc-rich galvanizing compound, ASTM A780 - A2. Repair Using Paints Containing Zinc Dust, minimum thickness 5 mils.
- H. Corrosion Protection: Coat concealed surfaces of aluminum that come into contact with grout, concrete, masonry, wood, or dissimilar metals with the following:
 - 1. Cast Aluminum: Heavy coat of alkali-resistant bituminous paint.
 - 2. Extruded Aluminum: Two coats of clear lacquer.

3.4 ERECTION TOLERANCE

- A. Maximum Variation from Plumb 1/4 inch per story, non-cumulative.
- B. Maximum Offset From True Alignment 1/4 inch.

3.5 FINISHES

- A. Paint with Gloss Polyurethane High Performance Coatings in Special Coatings per Section 09 90 00 Painting.

3.6 SCHEDULE

- A. Refer to Drawing details for items.

- B. Fasteners: Provide fasteners and connectors of approved types, whether indicated or not.
- C. Hot-Deep Galvanized in accordance with ASTM A 123 for steel and iron products:
 - 1. ASTM A 153 for steel and iron hardware.
 - 2. Coating Grades Shall be as follows:
 - a. Exterior Railing schedule for exposed galvanized finish; G85.
 - b. Interior railing schedule for exposed galvanized finish: G60.
 - 3. Galvanized after fabrication in largest partial sections; omit galvanizing at areas to be field welded.
- E. Summary of the change: Revised the finish on the handrails from a Gloss Polyurethane High Performance Coating to an Exposed Galvanized Finish as noted above.

END OF SECTION

SECTION 07 92 00 - JOINT SEALANTS

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Preparing substrate surfaces.
- B. Sealant and joint backing.
- C. Related Section:
 - 1. Section 07 84 00, Firestopping. For fire-rated assemblies.

1.2 REFERENCE STANDARDS

- A. Conform to current adopted reference standards by date of issue of the current code cycle and the date of the Contract Documents.
- B. ASTM C834 - Latex Sealing Compounds.
- C. ASTM C881 - Epoxy-Resin Base Bonding Systems for Concrete.
- D. ASTM C919 - Use of Sealants in Acoustical Applications.
- E. ASTM C920 - Elastomeric Joint Sealants.
- F. ASTM D1056 - Flexible Cellular Materials - Sponge or Expanded Rubber.
- G. ASTM C1184 - Structural Silicone Sealant.
- H. ASTM C1193 - Standard Guide for Use of Joint Sealants.
- I. ASTM C1311 - Solvent Release Sealants. Butyl and acrylic base polymer.
- J. ASTM C1330 - Cylindrical Sealant Backing for Use with Cold Liquid-Applied Sealants.
- K. ASTM C1635 Standard Test Method to Evaluate Adhesion/Cohesion Properties of a Sealant at Fixed Extensions
- L. SWRI (Sealant, Waterproofing and Restoration Institute) - Sealant and Caulking Guide Specification (www.SWRIONLINE.org).
- M. GANA: Glass Association of North America Sealant Manual, 2008.
- N. SCAQMD - South Coast Air Quality Management District Regulations Rule 1168
Adhesive and Sealant Applications

1.3 SUBMITTALS

- A. Product Data: Provide data indicating sealant chemical characteristics, performance criteria, substrate preparation, limitations, and color availability.
- B. Manufacturer's installation Instructions: Indicate special procedures, surface preparation, and perimeter conditions requiring special attention.

1.4 QUALITY ASSURANCE

- A. Perform Work in accordance with sealant manufacturer's requirements for preparation of surfaces and material installation instructions.
- B. Perform acoustical sealant application work in accordance with ASTM C919.
- C. Prepare sample joints in the construction to demonstrate to the Architect the quality of the Work to be performed. Accepted sample joints will be used to judge the quality of the Work.
- D. Qualifications
 - 1. Manufacturer: Company specializing in manufacturing the Products specified in this Section with minimum three years' experience.
 - 2. Applicator:
 - a. Pre-qualified applicator specializing in performing Work of this Section with minimum three years' experience and approved by manufacturer.
 - b. This applicator shall be licensed joint sealing specialty Contractor.
 - c. Submit list of completed local projects of similar sealant applications.
- E. Comply with Air Quality regulations, California Regulations:
 - 1. SCAQMD Rule 1168 compliant VOC limit of 250.

1.5 ENVIRONMENTAL REQUIREMENTS

- A. Maintain temperature and humidity recommended by the sealant manufacturer during and after installation.

1.6 COORDINATION

- A. Coordinate the Work with all Sections referencing this Section.

1.7 WARRANTY

- A. Provide five-year product warranty.
- B. Provide two-year installer's warranty.
- C. Warranty: Include coverage for installed sealants and accessories which fail to achieve air tight seal, water tight seal, exhibit loss of adhesion or cohesion, or do not cure.
- D. Upon written notification of failure due to defective materials or application, repair or replace failure to the approval of the Architect and at no cost to Owner.

PART 2 - PRODUCTS

2.1 SEALANT AND MATERIAL MANUFACTURERS

- A. Following is list of acceptable manufacturers of sealants and sealant materials. Inclusion in this list is not intended to imply that all manufacturers make all products. Products made by listed manufacturers must comply with all specified requirements.
1. Bostik Construction Products.
 2. Dow Corning Corporation (www.dowcorning.com/construction)
 3. Sika Corporation.
 4. General Electric Company.
 5. W.R. Meadows, Inc.
 6. Pecora Corporation.
 7. Mameco International.
 8. Tremco/Vulkem.
 9. Sonneborn, ChemRex Inc.
 10. Hilti
 11. 3M Company
- B. Substitutions: As approved.

2.2 SEALANT TYPES

- A. Single-Component Urethane: ASTM C 920, Type S, Grade NS, Class 35, Use NT, A, M, and O; USDA and FDA status.
- B. Single-Component Urethane (Self-Leveling): ASTM C 920, Type S, Grade P, Class 35, Use T, A, M.
- C. Multi-Component Urethane (Gun-Grade): ASTM C 920, Type M, Grade NS, Class 35, Use NT, A, M, and O.
- D. Multi-Component Polyurethane (Gun-Grade): ASTM C 920, Type M, Grade NS, Class 35, Use T, A, M, and O.
- E. Multi-Component Urethane (Self-Leveling): ASTM C 920, Type M, Grade P, Class 25, Use T, A, M, and O.
- F. Single-component sealant, Silicone (Neutral-curing): ASTM C 920, Type S, Grade NS, Class 35, Use NT, G, A, M, and O; USDA, NSF and FDA 21 CFR 177.2600 approved.
- G. Single-component sealant, Silicone (Neutral-curing,): ASTM C 920, Type S, Class

100/50, Grade P, Use T, and O.

- H. Single-component, modified silicone polymer (silyl-terminated polyether resin - STPe), elastomeric sealant with plus-100-percent to minus-50-percent movement and complying with ASTM C-920, Type S, Grade NS, Uses NT, G, M, A, and O.
 - 1. Acceptable Product: BASF, Sonolastic 150 Tint Base, or equal. Color shall be as selected by the Architect from the manufacturer's full range of available colors.
- I. Acrylic-Latex Caulk: ASTM C 834, Type OP or C, Grade 18 deg. C.
- J. Bedding Compound: For installation of thresholds and similar items indicated to be bedded in sealant, use a preformed butyl-polyisobutylene sealant tape. Size of tape as required for the specific application.
- K. Adhesives: Type that complies with Mil. Spec. MIL-A-46146
 - 1. Product: Dow Corning 3145 Silicone Adhesive
 - 2. Color: Clear or Translucent.
 - 3. Peel Strength: 75
- L. Acoustical Sealant - gunnable type, non-drying, non-hardening permanently flexible, ASTM C919, ASTM C834, ASTM C920.
 - 1. Manufacturers: Tremco Acoustical Sealant, U.S. Gypsum Sheetrock Acoustical Sealant, Pecora Corp. BA-98 or equal.
- M. Fire-Rated Sealants: Per Section 07 84 00 Firestopping.
- N. Butyl Sealants: Butyl rubber sealant, BC-158 by Pecora or equal in compliance with VOC regulations of local Air Quality Districts.

2.3 JOINT AND SURFACE TYPES

- A. Pedestrian and Vehicle Traffic Joints - Provide one of the following for each joint type:
 - 1. Multi-component urethane (self-leveling)
 - 2. Single-component urethane (self-leveling)
 - 3. Single-component sealant, silicone (neutral curing)
- B. Non-Traffic Deck Joints - Provide one of the following for each joint type:
 - 1. Multi-component urethane (gun-grade)
 - 2. Single-component urethane
 - 3. Single-component sealant, silicone
- C. Concrete Surfaces exceeding 20 square feet.
 - 1. Single-Component Silicone (Neutral-curing): ASTM C 920 Class 25, Type S, Grade P, Use T, and O (self-leveling).

- D. Vertical Joints - Provide one of the following for each joint type:
1. Multi-component urethane (gun-grade)
 2. Single-component sealant, silicone (neutral cure)
- E. Expansion, Control, and Perimeter Joints - Provide one of the following for each joint type:
1. Multi-component urethane (self-leveling)
 2. Single-component urethane; use only where dynamic movement will not exceed 50 percent of joint width - above or below grade
 3. Single-component urethane (self-leveling)
 4. Single-component sealant, silicone.
- F. Curtainwalls, storefronts, entrances, and Related Assemblies - Provide one of the following for each joint type or installation at perimeter of aluminum-framed systems:
1. Single-component silicone (neutral-curing)
 2. Non-Moving Joints, Interior and Exterior: Single-component sealant, silicone neutral cure),-ASTM C920.
- G. Water-Immersion Areas - Provide one of the following for each joint type, ASTM C920, Class 25, Use I, T, NT, M, and O.:
1. Multi-component urethane (self-leveling)
 2. Single-component urethane (self-leveling)
 3. Multi-component polysulfide (self-leveling)
 4. Multi-component polysulfide (non-sag)
- H. Glazing - Provide one of the following for each joint type:
1. Single-component sealant, silicone (neutral-curing).
 2. Structural silicone sealant for Structural Glazing.
- I. Acoustical Sealant - gunnable, provide the following:
1. Non-drying, non-hardening, non-skinning sealant type, ASTM C919.
 2. Acrylic-latex caulk, Type OP opaque or Type C clear at visual locations, ASTM C834.
 3. Chemically curing Sealant, for interior sound reduction application, ASTM C920.
- J. Acoustical Putty Pads - QuietPutty 380 by Quiet Rock or equal.
1. Thickness: 1/8"
 2. Width: 7"

3. Length: 7"
 4. Surface Burning Characteristics: Class A
- K. Smoke and Acoustical Sealant: ASTM C834, Hilti CP 506 (openings), CP 572 (joints), STI SpecSeal "Smoke 'N' Sound Acoustical Spray".
- L. Toilet and Bath Areas: Sealant containing a fungicide for mildew resistance - Provide one of the following for each joint type:
1. Single-component silicone (neutral-curing)
 2. Single-component silicone (acid cure)
- M. Exterior Doors and Windows: Sealant used for exterior joints or butyl rubber.
1. Fire-rated sealant at fire-rated assemblies per Section 07 84 00.
- N. Interior Doors and Windows - Provide one of the following for each joint type:
1. Single-component sealant, silicone (neutral cure)
 2. Fire-rated sealant at fire-rated assemblies per Section 07 84 00.
- O. Built-In Cabinet Work: In kitchen, toilet, and bath areas, as specified for those areas. In other areas, single-component silicone (neutral-curing) or acrylic-latex caulk.
- P. Rated Walls: Fire-rated Sealant, per UL Systems classification and in accordance with Section 07 84 00.
1. Fire-rated sealant between rated walls or ceilings and their adjoining rated materials and construction, including but limited to door and window frames.
- Q. Miscellaneous locations: Butyl rubber at all gaps, holes, openings, under wood sills, penetrations or channel metal track in exterior envelope of building not identified herein. Install as directed by the Architect.
- R. Seal all cutouts and penetrations: For electrical, mechanical, plumbing and structural framing cutouts and penetration at interior surfaces with acoustical sealant and fire-rated sealant for rated walls per section 07 84 00, or butyl rubber for exterior surfaces including walls.

2.4 SEALANT COLORS

- A. Provide materials matching colors indicated or if no color is indicated, matching the color samples selected from those submitted to the Architect.
1. Sealant between walls and door, window, and louver frames to match adjacent wall color.

2.5 ACCESSORIES

- A. Primer: Non-staining type, recommended by sealant manufacturer to suit application.

- B. Joint Cleaner: Non-corrosive and non-staining type, recommended by sealant manufacturer; compatible with joint forming materials.
- C. Joint Backing Rod: ASTM C1330 Class C, closed cell polyethylene cylindrical backer rod; oversized 30 to 50 percent larger than joint width, Green Rod by Nomaco Inc., Zebulon, NC, Backer Rod Mfg. Denver, CO or equal.
- D. Elastomeric Tubing Sealant Backing: ASTM D1056 - Flexible Cellular Materials - Sponge or Expanded Rubber.
- E. Bond Breaker: Pressure sensitive tape recommended by sealant manufacturer to suit application.
- F. Filler: Mineral fiber board; ASTM C612, Class I, thickness same as joint, depth to fill void completely behind backer-up rod.
- G. Tape Sealants; pressure sensitive, 100% solid, sealing tape with a release paper backing. Provide permanent elastic, non-sagging, non-toxic, non-staining tape sealant. Schnee-Morehead Inc. "Tacky Tape" SM5227, 3/32" or 1/2" wide x 3/8" thick x 45' long, or equal.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that substrate surfaces and joint openings are ready to receive Work.
- B. Verify that joint backing and release tapes are compatible with sealant.

3.2 PREPARATION

- A. Remove loose materials and foreign matter which might impair adhesion of sealant.
- B. Clean and prime joints in accordance with manufacturer's instructions.
- C. Perform preparation in accordance with manufacturer's instructions.
- D. Protect elements surrounding the Work of this Section from damage or disfiguration.
- E. At deep joints install filler material to fill space behind the back-up rod and position the rod at proper depth.

3.3 INSTALLATION

- A. Do not proceed with sealant Work until the sample joints specified in Part 1 of this Section have been prepared and accepted by the Architect.
- B. Install sealant in accordance with manufacturer's instructions and ASTM C1193.
- C. Apply sealant per ASTM C919 at gypsum board framed sound walls, side of runners in metal framing and miscellaneous openings and cutouts.

- D. Measure joint dimensions and size materials to achieve required 2:1 width/depth ratios.
- E. Install joint backing to achieve a neck dimension no greater than 1 /3 of the joint width.
- F. Install bond breaker where joint backing is not used.
- G. Install sealant free of air pockets, foreign embedded matter, ridges, and sags.
- H. Apply sealant within recommended application temperature ranges. Consult manufacturer when sealant cannot be applied within these temperature ranges.
- I. Tool joints concave unless detailed otherwise.

3.4 CLEANING

- A. Clean adjacent soiled surfaces.

3.5 PROTECTION OF FINISHED WORK

- A. Protect finished installation.
- B. Protect sealants until cured.

END OF SECTION

SECTION 08 12 13 - HOLLOW METAL FRAMES

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Non-rated and Fire-rated Welded steel frames for doors.
- B. Related Sections
 - 1. Section 06 20 00, Finish Carpentry - Installation of Doors.

1.2 REFERENCE STANDARDS

- A. Conform to reference standards by date of issue current on date of Contract Documents.
- B. SDI - Steel Door Institute.
 - 1. SDI 100 - Recommended Specifications for Standard Steel Doors and Frames, Latest Edition.
 - 2. SDI 111 - Recommended Standard Details Steel Doors and Frames.
 - 3. SDI 117 - Manufacturing Tolerances Standard Steel Doors and Frames.
 - 4. SDI 118 - Basic Fire Door Requirements.
- C. ANSI - American National Standards Institute
 - 1. ANSI A250.4 and A450.5 - Test Procedure / Acceptance Criteria for Physical Conformance.
 - 2. ANSI A250.6- Hardware on Steel Doors (Reinforcement Applications).
 - 3. ANSI A250.8/SDI-100 - Recommended Specifications for Standard Steel Doors and Frames, Latest Edition.
 - 4. ANSI A250.10 - Test Procedure and Acceptance Criteria for Prime Steel Surfaces for Steel Doors and Frames.
 - 5. ANSI A250.11/SDI-105 - Recommended Erection Instructions for Steel Frames.
- D. ASTM - American Society for Testing and Materials
 - 1. ASTM A653 - Sheet Steel, Zinc-Coated (Galvanized) or Zinc - Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
 - 2. ASTM A924 - General Requirements for Steel Sheet, Metallic-Coated by the Hot-Dip Process.
 - 3. ASTM A1008 - Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy and High-Strength Low-Alloy with Improved Formability.
 - 4. ASTM D6386 - Preparation of Hot-Dipped Galvanized Coated Iron and Steel and

Hardware Surfaces for Painting.

- E. ADA - Americans with Disabilities Act of 1990, as amended.
 - 1. ADA Standards - ADA Title II Regulations and the 2010 ADA Standards for Accessible Design.
- F. CBC - 2019 California Building Code.
- G. CRSC - California Referenced Standards Code (CCR Title 24, Part 12)
 - 1. CRSC-7A.4 - Standard 12-7A-4 Fire Resistive Standards, Fire Door Assemble Tests
 - 2. CRSC-10.2 - Standard 12-10-2 Single Point Latching or Locking Devices
 - 3. CRSC-10.3 - Standard 12-10-3 Emergency Exit and Panic Hardware
- H. NFPA - National Fire Protection Association
 - 1. NFPA 80 - Fire Doors and Windows
- I. UL - Underwriters Laboratories, Inc.
 - 1. UL-1 OB - Fire Test of Door Assemblies
 - 2. UL 10C - Positive Pressure Fire Tests of Door Assemblies
- J. Standard 12-7-4 Fire Resistive Standards, Fire Door Test Assembly Tests - California Referenced Standards Code, CCR Title 24, Part 12.
- K. AWS - American Welding Society
 - 1. AWS A2.4 - Standard Symbols for Welding, Brazing and Non Destructive Examination
 - 2. AWS A5.1 - Carbon Steel Electrodes for Shielded Metal Arc-Welding
 - 3. AWS A5.5 - Low Alloy Steel Electrodes for Shielded Metal Arc-Welding
 - 4. AWS B2.1 - Welding Procedure and Performance Qualification
 - 5. AWS D1.1 - Structural Welding Code, Steel
 - 6. AWS D1.3 - Structural Welding Code, Sheet Steel

1.3 SUBMITTALS

- A. Shop drawings indicating frame configuration, anchor types and spacing, location of cutouts for hardware, reinforcement, and finish.
- B. Product data.
- C. Manufacturer's installation instructions.
- D. Job Closeout: provide one complete manufacturer's catalog to Owner's lock shop or Authorized Representative.

1.4 QUALITY ASSURANCE

- A. Manufacture frames to conform to SDI standards except where exceeded by this Specification.
- B. Comply with ANSI/SDI A250.4 Level A, one million cycle swing test performance for 3070 door frames.
- C. Manufacturer: Company specializing in manufacturing products specified in this Section having minimum five (5) years experience.
- D. Installer: Firm with minimum five (5) years experience in installation of metal doors and frames.

1.5 DELIVERY, STORAGE AND PROTECTION

- A. Deliver and protect frames with manufacturer's shipping safeguards.
- B. Attach spreader bars on welded frames to preclude warping or bending during delivery and storage.
- C. Storage: Store in dry secure location. Place units on minimum 4 inch high wood blocking. Avoid non-vented plastic or canvas shelters. Provide 1/4 inch wide spaces between stacked units.

1.6 WARRANTY

- A. One-year warranty against defects in materials and workmanship. Warranty to commence at Date of Certified Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Products of following manufacturers form basis for design and quality intended.
 - 1. SteelCraft, an Allegion Brand, Dublin, Ireland
 - 2. Ceco Door, Milan, TN.
 - 3. Curries Company, Mason City, IA.
 - 4. Door Components, Inc., Fontana, CA.
 - 5. Mesker Doors, Huntsville, AL.
 - 6. Republic Doors and Frames, McKenzie, TN.
- B. Or an approved equal.

2.2 WELDED FRAMES

- A. Type: ANSI A250.8/SDI-100, Level 1 Standard Duty frames, with integral stop and flat trim, double rabbet, profiles as indicated on Drawings, cold rolled steel, Commercial Steel, ASTM A1008, galvanized steel ASTM A653 and ASTMA924 for exterior applications. Minimum: 16 gauge.
1. Drywall: Provide backbend returns.
 2. Plaster: Keyed-in-frame backbends.
- B. Anchors: Provide two anchors at head for openings up to 48 inches, three if wider, maximum 30 inches on centers. Provide three at jamb for doors up to 84 inches in height, additional anchors at maximum 30 inches on centers for higher doors.
1. Provide appropriate type of anchors consistent with type of wall construction for each installation and in conformance with SDI 111 and ANSI 250.11.
- C. Floor Attachment: Provide adjustable base anchor with extension for expansion anchor attachment to concrete floor. Extension factory welded. Minimum thickness: 14 gauge.
1. Wedge Type: KWIK Bolt TZ, 3/8 to 3/4 inch diameter, ICC ESR-1917, by Hilti Inc., Tulsa, OK.
 2. Monolithic Concrete Slabs: Clip-type anchors, with holes to receive fasteners.
- D. Hardware Attachment: Mortise, reinforce, drill and tap at factory to receive specified hardware. Install minimum 10 gauge reinforcing welded to frame for surface mounted hardware, except install 7 gauge reinforcing for hinges. Tap to templates.
1. Install reinforcing for closers, both sides of frames, on all frames, single and pairs, labeled and non-labeled.
 2. Use 10 Gauge reinforcing for locks, panics, closers, and hold-open arms.
- E. Silencers: Make provision for minimum three rubber silencers at strike jamb of all doors except fire-rated doors, and one at head of each leaf of double doors, except fire-rated doors.
- F. Fire-Rated Frames:
1. Construct as tested and rated in accordance with SDI 118.
 2. Conform to Standard 12-7-4 Fire Resistive Standards, Fire Door Test Assembly Tests - California Referenced Standards Code, CCR Title 24, Part 12 and NFPA 80.
 3. Attach UL or WH label to frame.
 4. Refer to drawings for rating requirements.

2.3 PROTECTIVE COATINGS

- A. Interior Frames:
 - 1. Metallic coating protection not required.
 - 2. Pretreat and shop prime, air-dried, conforming to ANSI A250.10
 - 3. Prime and paint frames under Section 09 90 00 Painting, colors as indicated on drawings.
- B. On surfaces where metallic coating has been damaged or removed during fabrication, frames shall be touched-up with factory-applied primer.

2.4 FABRICATION

- A. Fabricate interior welded steel door frames as machine-mitered face-welded unit type. Weld and grind smooth.
- BC. Where cross mullions or T intersections occur, frames shall be fabricated as butted and face-welded assembly joints. At mullion-to-base intersections extend mullion to floor and face weld. Where butted joints are exposed to weather, seal intersection as specified in Section 07 92 00.
- C. Machine mitered faces and butt-joined integral stops permitted with continuous welds.
- D. Fabricate frames with hardware reinforcement plates welded in place.
- E. Fabricate frames to accept anchors as described in SDI-111 for type of wall construction.
- F. Reinforce frames for door closers on both sides of frames.
- G. Apply primer to all surfaces of frames, in accordance with requirements of ANSI A250.10. Metallic-coated protected surfaces shall be pretreated prior to application of primer.
- H. Attach fire-rated label to each fire-rated door frame.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install frames in accordance with ANSI A250.11/SDI-105.
 - 1. Installation of jamb anchors to steel framing: weld to studs.
 - 2. Install Floor anchors, 1 clip angle per jamb with expansion wedge type anchor.
 - 3. Check plumb, squareness, and twist of frames as walls are constructed. Shim as necessary to comply with installation tolerances.

- B. Fire doors frames shall be installed in accordance with their listing, Standard 12-7-4 Fire Resistive Standards, Fire Door Assembly Tests - California Referenced Standards Code, CCR Title 24, Part 12, and NFPA No. 80, and the manufacturer's instructions.
- C. Install insulation behind frames, unless noted otherwise.
- D. Coordinate anchor placement with type of wall construction.
- E. Prime and Paint frames under Section 09 90 00, Painting, colors as indicated on drawings.

3.2 TOLERANCES

- A. Conform to standard of tolerances as required in SDI-117.

END OF SECTION

SECTION 08 13 13 - HOLLOW METAL DOORS

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Non-rated and Fire-rated rolled-steel doors.
- B. Glass stops.
- C. Related Sections:
 - 1. Section 06 20 00, Finish Carpentry - Installation of Doors.

1.2 REFERENCE STANDARDS

- A. Conform to reference standards by date of issue current on date of Contract Documents.
- B. ADA - Americans with Disabilities Act of 1990, as amended.
 - 1. ADA Standards - ADA Title II Regulations and the 2010 ADA Standards for Accessible Design.
- C. SDI - Steel Door Institute.
 - 1. SDI 100 - Recommended Specifications for Standard Steel Doors and Frames, Latest Edition.
 - 2. SDI 118 - Basic Fire Door Requirements.
 - 3. SDI 111 - Standard Details Steel Doors and Frames .
 - 4. SDI 117 - Manufacturing Tolerances Standard Steel Doors and Frames.
- D. ANSI - American National Standards Institute
 - 1. ANSI A250.4 - Test Procedures and Acceptance Criteria for Physical Endurance for Steel Doors and Hardware Reinforcings.
 - 2. ANSI A250.5 - Accelerated Physical Endurance Test Procedure for Steel Doors, Frames, and Frame Anchors.
 - 3. ANSI A250.8/SDI 100 - Recommended Specifications for Standard Steel Doors and Frames.
 - 4. ANSI A250.10 - Test Procedure and Acceptance Criteria for Prime Painted Steel Surfaces for Steel Doors and Frames.
 - 5. ANSI A250.11/105 - Recommended Erection Instructions for Steel Frames.
- E. ASTM - American Society for Testing and Materials

1. ASTM A653 - Standard Specification for Sheet Steel, Zinc-Coated (Galvanized) or Zinc-Iron Alloy Coated (Galvannealed) by the Hot-Dip Process.
 2. ASTM A924 - General Requirements for Steel Sheet, Metallic-Coated by the Hot-Dip Process.
 3. ASTM A1008 - Standard Specifications for Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy and High-Strength Low-Alloy with Improved Formability.
 4. ASTM A568 - General Requirements for Steel, Sheet, Carbon, and High-Strength, Low-Alloy, Hot-Rolled and Cold-Rolled.
- F. CBC - 2019 California Building Code
1. CBC-10 - CBC Chapter 10, Means of Egress
 2. CBC-11 - CBC Chapter 11B, Accessibility to Public Buildings, Public Accommodations, Commercial Facilities and Publicly Funded Housing
- G. CRSC - California Referenced Standards Code (CCR Title 24, Part 12)
1. CRSC-7A.4 - Standard 12-7-4 Fire Resistive Standards, Fire Door Assemble Tests
 2. CRSC-7A.2 - Standard 12-7A-2, Exterior Windows
 3. CRSC-10.2 - Standard 12-10-2 Single Point Latching or Locking Devices
 4. CRSC-10.3 - Standard 12-10-3 Emergency Exit and Panic Hardware
- H. NFPA - National Fire Protection Association
1. NFPA 80 - Fire Doors and Windows
 2. NFPA 105 - Installation of Smoke Door Assemblies
 3. NFPA 252 - Standard Methods of Fire Tests of Door Assemblies
- I. UL - Underwriters Laboratories, Inc.
1. UL 10C - Positive Pressure Fire Tests of Door Assemblies
 2. UL 1784 - Air Leakage Test for Door Assemblies
- J. ITS-WH - Intertek Testing Services-Warnock-Hersey.

1.3 SUBMITTALS

- A. Shop drawings indicating core material, location of cutouts for hardware, reinforcement and finish.
- B. Product data.

- C. Manufacturer's installation instructions.

1.4 QUALITY ASSURANCE

- A. Manufacture doors to conform to SDI standards except where exceeded by this Specification.
- B. Comply with ANSI/SDI A250.4 Test Procedure and Acceptance Criteria for - Physical Endurance for Steel Doors and Hardware Reinforcing. Level A, one million cycle swing test performance.
- C. ADA-The Americans with Disabilities Act - Title II-Uniform Federal Accessibility Standards.

1.5 DELIVERY, STORAGE AND PROTECTION

- A. Deliver and protect doors with manufacturer's shipping safeguards.
- B. Storage: Store in dry secure location. Place units on minimum 4-inch high wood blocking. Avoid non-vented plastic or canvas shelters. Provide 1 /4-inch wide spaces between stacked doors.

1.6 WARRANTY

- A. One-year warranty against defects in materials and workmanship. Warranty to commence at Date of Certified Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Products of following manufacturers form the basis for design and quality intended.
 - 1. Ceco Door, Milan, TN.
 - 2. Curries Company, Mason City, IA.
 - 3. Door Components, Inc., Fontana, CA.
 - 4. Mesker Doors, Huntsville, AL.
 - 5. Republic Doors and Frames, McKenzie, TN.
 - 6. SteelCraft, an Allegion Brand, Dublin, Ireland.
- B. Or an approved equal.

2.2 DOORS

- A. Interior Doors: ANSI A250.8/SDI-100, Level 2, Heavy-Duty, Physical Performance Level B, 1-3/4 inches thick, Model 2 Seamless, 18 gauge cold-rolled face sheets, ASTM A1008, seamless continuously welded seam dressed smooth, hollow-steel construction, Close top and bottom with flush end closure, beveled edge profile, sizes as scheduled on drawings, prime coated only. .
- B. End Closures: Minimum 18 gauge.

- C. Fire Rated Doors Assembly: Test in accordance with NFPA 252. CRSC California Referenced Standards Code, Standard 12-7-4, Fire Door Assembly Tests.
- D. Fire Rated Doors: Label "S" for smoke assembly requirements, NFPA 80, NFPA 105.

2.3 DOOR CORE

- A. Performance Test Procedures Requirements: Conform to ANSI A250.4
- B. Core for non-fire-rated doors:
 - 1. Core for exterior doors:
 - a. Thermal-Rated (Insulated) doors: minimum polystyrene 1 lb/cu ft. density of U-factor 0.21 minimum and R-Factor of 5 minimum, full thickness of cavities.
 - 2. Core for interior doors:
 - a. Rigid polystyrene foam board 1 lb/cu.ft. minimum density. Compressive strength 1750 psf and shear strength minimum 18 psi.
 - 3. Core construction shall conform to requirements of the grade of door specified in accordance with ANSI A250.8/SDI-100, Sections 2.3.2 and 1.4.
- C. Core for Fire-Rated Doors: mineral core 16-20 lb. density (incombustible); Conform to Door Schedule for fire rating required.
- D. Frames for Fire-Rated Doors: Conform to CRSC California Referenced Standards Code, Standard 12-7-4, fire door tests, Label "S" for smoke assembly requirements NFPA 105 and Section 08 12 13.

2.4 ACCESSORIES

- A. Glass Lite Trim Kit: Complete glass and frame factory installed Glass Lite Trim Kit 24" wide x 60" high.
- B. Glass Stop: Unit frame, model FGS-75 manufactured by Anemostat Products Division, Carson, CA, or an approved equal, for fire-rated and non-fire rated doors.
 - 1. Frame: 18 gauge.
 - 2. Finish: Factory primed. Field painted under Section 09 90 00.
 - 3. Unit shall have UL or WH label and State Fire Marshal approval number.
 - 4. Fire Rated Glass: As specified in Section 08 80 00. Refer to CBC Chapters 7 Section 716.5.7, and 716.6.
 - a. TGP FireLite NT: 3/16" thick: Fire-rated Glass-Ceramic Glazing, per Section 08 80 00, not to exceed 1296 square inches per unit for 45 minutes or 100 sq. in. for 60 min. Install with UL Listed glazing tape.
 - b. Wire glass: maximum rating: 20 minutes and 45 minutes, 1296 square

inches maximum. For 60 and 90 minutes door frames, 100 square inches maximum.

5. Mounting: Countersunk, one-way vandal-resistant heads, through-bolts <or one side mounting sheet metal screws from inside>.
6. Exterior Doors: Unit shall be hot-dip galvanized after fabrication.
7. GL-2 Safety Glass: ASTM C1048, Kind FT Fully tempered, as specified in section 08 80 00.
8. GL-1 Insulating Glass Units, Low-E Coated, as specified in section 08 80 00.

2.5 PROTECTIVE COATINGS

- A. Interior Doors:
 1. Metallic-coating protection not required.
 2. Pre-treat and shop prime with modified alkyd, air-dried, conforming to ANSI A250.10.
- B. On surfaces where zinc has been damaged or removed during fabrication, doors shall be touched-up with factory-applied primer.

2.6 FABRICATION

- A. Fabricate doors from cold-rolled steel conforming to ASTM A1008/A1008M or ASTM A924. Stretcher-leveled standard of flatness for face sheets.
- B. Manufacturing tolerances per SDI 117 - Manufacturing Tolerances Standard Steel Doors and Frames,
- C. Fabricate doors with cutouts sized for hardware and openings as indicated. Non-handed doors using hinge fillers are not permitted.
- D. Reinforce, drill and tap doors to receive mortise hinges, locks, latches, flush bolts and closer. Use reinforcing gauges as listed in Table 4 of ANSI A250.8/SDI-100. Channel or plate reinforcing only.
- E. Locate hardware according to Table 5, ANSI A250.8/SDI-100, CBC 11 B-404.2.7.
- F. Apply primer to all surfaces of doors in accordance with requirements of ANSI A250.10. Metallic-coated surfaces shall be pre-treated prior to application of primer.
- G. Attach fire-rated label to hinge-stile of each fire-rated door unit and frames.
- H. Hardware Enclosures: Provide enclosures and junction boxes within doors for electrically operated door hardware, interconnected with UL-approved, 1/2-inch-diameter conduit and connectors.

Delete subparagraph below if not required. Where indicated for installation of wiring, provide access plates to junction boxes, fabricated from same material and thickness as face sheet and fastened with at least 4 security fasteners spaced not more than 6 inches on centers.

PART 3 - EXECUTION

3.1 INSTALLATION OF HOLLOW METAL DOORS

- A. Install doors in accordance with SDI ANSI A250.11/105 and SDI 122 recommendations.
- B. Install doors under Section 06 20 00 Finish Carpentry - Installation of Doors.
- C. Coordinate installation of glass or louvers where indicated.
3.02 ADJUSTING AND CLEANING
- D. Adjust for smooth and balanced door movement.
- E. Prime and Paint doors under Section 09 90 00, colors as indicated on Drawings.
- F. On surfaces where zinc has been damaged or removed during fabrication, doors shall be touched-up with factory-applied primer.

2.6 FABRICATION

- A. Fabricate doors from cold-rolled steel conforming to ASTM A1008/A1008M or ASTM A924. Stretcher-leveled standard of flatness for face sheets.
- B. Manufacturing tolerances per SDI 117 - Manufacturing Tolerances Standard Steel Doors and Frames,
- C. Fabricate doors with cutouts sized for hardware and openings as indicated. Non-handed doors using hinge fillers are not permitted.
- D. Reinforce, drill and tap doors to receive mortise hinges, locks, latches, flush bolts and closer. Use reinforcing gauges as listed in Table 4 of ANSI A250.8/SDI-100. Channel or plate reinforcing only.
- E. Locate hardware according to Table 5, ANSI A250.8/SDI-100, CBC 11 B-404.2.7.
- F. Apply primer to all surfaces of doors in accordance with requirements of ANSI A250.10. Metallic-coated surfaces shall be pre-treated prior to application of primer.
- G. Attach fire-rated label to hinge-stile of each fire-rated door unit and frames.
- H. Hardware Enclosures: Provide enclosures and junction boxes within doors for electrically operated door hardware, interconnected with UL-approved, 1/2-inch-diameter conduit and connectors. Delete subparagraph below if not required. Where indicated for installation of wiring, provide access plates to junction boxes, fabricated

from same material and thickness as face sheet and fastened with at least 4 security fasteners spaced not more than 6 inches on centers.

PART 3 - EXECUTION

3.1 INSTALLATION OF HOLLOW METAL DOORS

- A. Install doors in accordance with SDI ANSI A250.11/105 and SDI 122 recommendations.
- B. Install doors under Section 06 20 00 Finish Carpentry - Installation of Doors.
- C. Coordinate installation of glass or louvers where indicated.

3.2 ADJUSTING AND CLEANING

- A. Adjust for smooth and balanced door movement.
- B. Prime and Paint doors under Section 09 90 00, colors as indicated on Drawings.

END OF SECTION

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SECTION 08 71 00 – DOOR HARDWARE

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Door hardware.
 - 2. Allowance for Best brand cores and keys.
- B. Related Divisions:
 - 1. Division 06 – door hardware installation
 - 2. Division 07 – sealant at exterior thresholds
 - 3. Division 08 – metal doors and frames.
- C. Allowances:
 - 1. Procure scheduled Best brand temporary and permanent cylinder cores and keys from (Owner's lock shop / Owner's Physical Plant Maintenance Dept). Allow \$45 per core and \$7.50 per key. Owner's agent will purchase the cores and keys directly from Best Access Systems or provide the units from Owner's attic stock.

1.2 REFERENCES

- A. Use date of standard in effect as of Bid date.
 - 1. American National Standards Institute
 - a) ANSI 156.18 – Materials and Finishes.
 - b) ICC/ANSI A117.1 - 1998 – Specifications for making buildings and facilities usable by physically handicapped people.
 - 2. BHMA – Builders Hardware Manufacturers Association
 - 3. 2022 California Building Code
 - a) Chapter 11B – Accessibility To Public Buildings, Public Accommodations, Commercial Buildings and Public Housing
 - 4. DHI – Door and Hardware Institute
 - 5. WHI – Warnock Hersey Incorporated State of California Building Code
 - 6. Local applicable codes
 - 7. SDI – Steel Door Institute
 - 8. NAAMM – National Association of Architectural Metal Manufacturers
- B. Abbreviations
 - 1. Manufacturers: see table at 2.1.A of this section.

2. Finishes: see 2.7 of this section.

1.3 SUBMITTALS & SUBSTITUTIONS

- A. SUBMITTALS: Submit one pdf copy of door. Only submittals printed one sided will be accepted and reviewed. Organize vertically formatted schedule into "Hardware Sets" with index of doors and headings, indicating complete designations of every item required for each door or opening. Minimum 10pt font size. Include following information:
 1. Type, style, function, size, quantity and finish of hardware items.
 2. Use BHMA Finish codes per ANSI A156.18.
 3. Name, part number and manufacturer of each item.
 4. Fastenings and other pertinent information.
 5. Location of hardware set coordinated with floor plans and door schedule.
 6. Explanation of abbreviations, symbols, and codes contained in schedule.
 7. Mounting locations for hardware.
 8. Door and frame sizes, materials and degrees of swing.
 9. List of manufacturers used and their nearest representative with address and phone number.
 10. Catalog cuts.
 11. Point-to-point wiring diagrams.
 12. Manufacturer's technical data and installation instructions for electronic hardware.
- B. Bid and submit manufacturer's updated/improved item if scheduled item is discontinued.
- C. Deviations: Highlight, encircle or otherwise identify deviations from "Schedule of Finish Hardware" on submittal with notations clearly designating those portions as deviating from this section.
- D. If discrepancy between drawings and scheduled material in this section, bid the more expensive of the two choices, note the discrepancy in the submittal and request direction from Architect for resolution.
- E. Substitution: Include product data and indicate benefit to the Project. Furnish operating samples on request.
- F. Items listed with no substitute manufacturers have been requested by Owner to meet existing standard.
- G. Furnish as-built/as-installed schedule with closeout documents, including keying schedule, riser and point-to-point wiring diagrams, manufacturers' installation, adjustment and maintenance information, and supplier's final inspection report.

1.4 QUALITY ASSURANCE

- A. Qualifications:
 - 1. Hardware supplier: direct factory contract supplier who employs a certified architectural hardware consultant (AHC), available at reasonable times during course of work for project hardware consultation to Owner, Architect and Contractor.
 - a) Responsible for detailing, scheduling and ordering of finish hardware. Detailing implies that the submitted schedule of hardware is correct and complete for the intended function and performance of the openings.
- B. Hardware: Free of defects, blemishes and excessive play. Obtain each kind of hardware (latch and locksets, exit devices, hinges and closers) from one manufacturer.
- C. Furnish hardware items required to complete the work in accordance with specified performance level and design intent, complying with manufacturers' instructions and code requirements.

1.5 DELIVERY, STORAGE AND HANDLING

- A. Delivery: coordinate delivery to appropriate locations (shop or field).
 - 1. Permanent keys and cores: secured delivery direct to Owner's representative.
- B. Acceptance at Site: Items individually packaged in manufacturers' original containers, complete with proper fasteners and related pieces. Clearly mark packages to indicate contents, locations in hardware schedule and door numbers.
- C. Storage: Provide securely locked storage area for hardware, protect from moisture, sunlight, paint, chemicals, dust, excessive heat and cold, etc.

1.6 PROJECT CONDITIONS AND COORDINATION

- A. Where exact types of hardware specified are not adaptable to finished shape or size of members requiring hardware, provide suitable types having as nearly as practical the same operation and quality as type specified, subject to Architect's approval.
- B. Coordination: Coordinate hardware with other work. Furnish hardware items of proper design for use on doors and frames of the thickness, profile, swing, security and similar requirements indicated, as necessary for proper installation and function, regardless of omissions or conflicts in the information on the Contract Documents. Furnish related trades with the following information:
 - 1. Location of embedded and attached items to concrete.
 - 2. Location of wall-mounted hardware, including wall stops.
 - 3. Location of finish floor materials and floor-mounted hardware.

4. At masonry construction, coordinate with the anchoring and hollow metal supplier prior to frame installation by placing a strip of insulation, wood, or foam, on the back of the hollow metal frame behind the rabbet section for continuous hinges, as well as at rim panic hardware strike locations, silencers, coordinators, and door closer arm locations. When the frame is grouted in place, the backing will allow drilling and tapping without dulling or breaking the installer's bits.
 5. Coordinate: flush top rails of doors at out swinging exteriors, and throughout where adhesive-mounted seals occur.
 6. Manufacturers' templates to door and frame fabricators.
- C. Check Shop Drawings for doors and entrances to confirm that adequate provisions will be made for proper hardware installation.
- D. Environmental considerations: segregate unused recyclable paper and paper product packaging, uninstalled metals, and plastics, and have these sent to a recycling center.

1.7 WARRANTY

- E. Part of respective manufacturers' regular terms of sale. Provide manufacturers' written warranties.
- F. Include factory order numbers with close-out documents to validate warranty information, required for Owner in making future warranty claims:
- G. Minimum warranties:
- | | |
|----------------|-------------------------|
| Locksets: | Five years |
| Exit Devices: | Three years mechanical |
| Closers: | Thirty years mechanical |
| Hinges: | One year |
| Other Hardware | Two years |

1.8 REGULATORY REQUIREMENTS

- A. Locate latching hardware between 34 inches to 44 inches above the finished floor, per 2022 California Building Code, Section 11B-404.2.7.
- B. Handles, pull, latches, locks, other operable parts:
1. Readily openable from egress side with one hand and without tight grasping, tight pinching, or twisting of the wrist to operate. 2019 California Building Code Section 11B-309.4.
 2. Force required to activate the operable parts: 5.0 pounds maximum, per 2022 California Building Code Section 11B-309.4.
- C. Adjust doors to open with not more than 5.0-pounds pressure to open at exterior doors and 5.0-pounds at interior doors. As allowed per 2022 California Building Code Section 11B-404.2.9, local authority may increase the allowable pressure for fire doors to achieve positive latching, but not to exceed 15-pounds.

1. Exception: exterior doors' pressure-to-open may be increased to 8.5-pounds if: at a single location, and one of a bank of eight leafs or fraction of eight, and one leaf of this bank is fitted with a low- or high-energy operator.
- D. Adjust door closer sweep periods so that from an open position of 90 degrees, the door will take at least 5 seconds to move to a point 12 degrees from the latch, measured to the landing side of the door, per 2022 California Building Code Section 11B-404.2.7.
- E. Smooth surfaces at bottom 10 inches of push sides of doors, facilitating push-open with wheelchair footrests, per 2022 California Building Code Section 11B-404.2.10.
 1. Applied kickplates and armor plates: bevel the left and right edges; free of sharp or abrasive edges.
 2. Tempered glass doors without stiles: bottom rail may be less than 10 inches if top leading edge is tapered 60 degrees minimum.
- F. Door opening clear width no less than 32 inches, measured from face of frame stop, or edge of inactive leaf of pair of doors, to door face with door opened to 90 degrees. Hardware projection not a factor in clear width if located above 30 inches and below 80 inches, and the hardware projects no more than 4 inches. 2022 California Building Code Section 11B-404.2.3.
 1. Exception: doors not requiring full passage through the opening, that is, to spaces less than 24 inches in depth, may have the clear opening width reduced to 20 inches. Example: shallow closets.
 2. Door closers and overhead stops: not less than 78 inches above the finished floor or ground, per 2022 California Building Code 11B-307.4.
- G. Thresholds: floor or landing no more than 0.50 inches below the top of the threshold of the doorway, per 2022 California Building Code Section 11B-404.2.5. Vertical rise no more than 0.25 inches, change in level between 0.25 inches and 0.50 inches: beveled to slope no greater than 1:2 (50 percent slope). 2022 California Building Code Section 11B-303.2 & ~.3.
- H. Floor stops: Do not locate in path of travel. Locate no more than 4 inches from walls.
- I. Door and door hardware encroachment: when door is swung fully-open into means-of-egress path, the doo may not encroach/project more than 7 inches into the required exit width, with the exception of door release hardware such as lockset levers or panic hardware. These hardware items must be located no less than 34-inches and no more than 48-inches above the floor/ground. 2022 California Building Code, Section 1005.7.1.

PART 2 - PRODUCTS

2.1 MANUFACTURERS:

- A. Listed acceptable alternate manufacturers: these will be considered; submit for review products with equivalent function and features of scheduled products.

ITEM:	MANUFACTURER:	ACCEPTABLE ALTERNATE:
Hinges	(IVE) Ives	Bommer
Key System	(BES) Best	District standard
Mechanical Locks	(BES) Best	District standard
Silencers	(IVE) Ives	Rockwood, Trimco
Push & Pull Plates	(IVE) Ives	Rockwood, Trimco
Stops & Holders	(IVE) Ives	Rockwood, Trimco
Thresholds	(ZER) Zero	NGP, Pemko
Seals & Bottoms	(ZER) Zero	NGP, Pemko

2.2 HINGING METHODS:

- A. Drawings typically depict doors at 90 degrees, doors will actually swing to maximum allowable. Use wide-throw conventional or continuous hinges as needed up to 8 inches in width to allow door to stand parallel to wall for true 180-degree opening. Advise architect if 8-inch width is insufficient.
- B. Conform to manufacturer’s published hinge selection standard for door dimensions, weight and frequency, and to hinge selection as scheduled. Where manufacturer’s standard exceeds the scheduled product, furnish the heavier of the two choices, notify Architect of deviation from scheduled hardware.
- C. Conventional Hinges: Steel or stainless-steel pins and approved bearings. Hinge open widths minimum, but of sufficient throw to permit maximum door swing.
 - 1. Outswinging exterior doors: non-ferrous with non-removable (NRP) pins.
 - 2. Non-ferrous material exteriors and at doors subject to corrosive atmospheric conditions.

2.3 LOCKSETS, LATCHSETS, DEADBOLTS:

- A. Mortise Type Locks and Latches:
 - 1. Tested and approved by BHMA for ANSI A156.13, Series 1000, Operational Grade 1, Extra- Heavy Duty, Security Grade 2 and be UL10C
 - 2. Fit ANSI A115.1 door preparation
 - 3. Functions and design as indicated in the hardware groups

4. Solid, one-piece, 3/4-inch (19mm) throw, anti-friction latchbolt made of self-lubricating stainless steel
5. Deadbolt functions shall have 1 inch (25mm) throw bolt made of hardened stainless steel
6. Latchbolt and Deadbolt are to extend into the case a minimum of 3/8 inch (9.5mm) when fully extended
7. Auxiliary deadlatch to be made of one-piece stainless steel, permanently lubricated.
8. Provide curved-lip strike with dust box for each latch or lock bolt, with lip extended to protect frame, finished to match door hardware set, unless otherwise indicated.
9. Lever handles must be of forged or cast brass, bronze or stainless-steel construction and conform to ANSI A117.1. Levers that contain a hollow cavity are not acceptable
10. Lock shall have self-aligning, thru-bolted trim
11. Levers to operate a roller bearing spindle hub mechanism
12. Mortise cylinders of lock shall have a concealed internal setscrew for securing the cylinder to the lockset. The internal setscrew will be accessible only by removing the core, with the control key, from the cylinder body
 - a. Spindle to be designed to prevent forced entry from attacking of lever
 - b. Provide locksets with 7-pin removable and interchangeable core cylinders
 - c. Each lever to have independent spring mechanism controlling it
 - d. Core face must be the same finish as the lockset

2.4 OTHER HARDWARE

- A. Kick Plates: Four beveled edges, .050 inches minimum thickness, height and width as scheduled. Sheet-metal screws of bronze or stainless steel to match other hardware.
- B. Door Stops: Provide stops to protect walls, casework or other hardware.
 1. Locate overhead stops for maximum possible opening. Consult with Owner for furniture locations. Minimum: 90deg stop / 95deg deadstop. Note degree of opening in submittal.
- C. Thresholds: As scheduled and per details. Comply with CBC 2019 11B-404.2.5. Substitute products: certify that the products equal or exceed specified material's thickness. Proposed substitutions: submit for approval.
 1. Saddle thresholds: 0.125 inches minimum thickness.
 2. Exteriors: Seal perimeter to exclude water and vermin. Use sealant complying with requirements in Division 7 "Thermal and Moisture Protection". Minimum 0.25 inch diameter fasteners and lead expansion shield anchors, or Red-Head #SFS-1420 (or approved equivalent) Flat Head Sleeve Anchors. National Guard Products' "COMBO" or Pemko Manufacturing's "FHSL".

3. Plastic plugs with wood or sheet metal screws are not an acceptable substitute for specified fastening methods.
 4. Fasteners: Generally, exposed screws to be Phillips or Robertson drive. Pinned TORX drive at high security areas. Flat head sleeve anchors (FHSL) may be slotted drive. Sheet metal and wood screws: full-thread. Sleeve nuts: full length to prevent door compression.
- D. Through-bolts: Do not use. Coordinate with wood doors; ensure provision of proper blocking to support wood screws for mounting panic hardware and door closers. Coordinate with metal doors and frames; ensure provision of proper reinforcement to support machine screws for mounting panic hardware and door closers.
- E. Silencers: Interior hollow metal frames, 3 for single doors, 4 for pairs of doors. Leave no unfilled/uncovered pre-punched silencer holes. Intent: door bears against silencers, seals make minimal contact with minimal compression – only enough to effect a seal.

2.7 FINISH

- A. Generally: BHMA 626 Satin Chromium.
1. Areas using BHMA 626: furnish push-plates, pulls and protection plates of BHMA 630, Satin Stainless Steel, unless otherwise scheduled.

2.8 KEYING REQUIREMENTS

- A. Key System: existing Best Access Systems small format interchangeable core system, procured per Allowances in 1.1.C. Owner's agent will install the cores prior to Substantial Completion. Initiate and conduct meeting(s) with Owner to determine system structure and keybow styles, furnish Owner's written approval of the system; do not order keys or cylinders without written confirmation of actual requirements from the Owner. Owner will order and supply permanent cylinders/cores.
- B. Interchangeable Cores: 7-pin solid brass construction.
- C. Permanent cores: furnish factory-keyed.

PART 3 - EXECUTION

3.1 ACCEPTABLE INSTALLERS

- A. Can read and understand manufacturers' templates, suppliers' hardware schedule and printed installation instructions. Can readily distinguish drywall screws from manufacturers' furnished fasteners. Available to meet with manufacturers' representatives and related trades to discuss installation of hardware.

3.2 PREPARATION

- A. Ensure that walls and frames are square and plumb before hardware installation. Make corrections before commencing hardware installation. Installation denotes acceptance of wall/frame condition.
- A. Locate hardware per SDI-100 and applicable building, fire, life-safety, accessibility, and security codes.
1. Notify Architect of code conflicts before ordering material.

2. Locate latching hardware between 34 inches to 44 inches above the finished floor, per 2022 California Building Code, Section 1010.1.9.2 and 11B-404.2.7.
3. Where new hardware is to be installed near existing doors/hardware scheduled to remain, match locations of existing hardware.

3.3 INSTALLATION

- A. Install hardware per manufacturer's instructions and recommendations. Do not install surface-mounted items until finishes have been completed on substrate. Set units level, plumb and true to line and location. Adjust and reinforce attachment substrate for proper installation and operation. Remove and reinstall or replace work deemed defective by Architect.
 1. Gaskets: install jamb-applied gaskets before closers, overhead stops, rim strikes, etc; fasten hardware over and through these seals. Install sweeps across bottoms of doors before astragals, cope sweeps around bottom pivots, trim astragals to tops of sweeps.
 2. When hardware is to be attached to existing metal surface and insufficient reinforcement exists, use RivNuts, NutSerts or similar anchoring device for screws.
 3. Use manufacturers' fasteners furnished with hardware items, or submit Request for Substitution with Architect.
 4. Replace fasteners damaged by power-driven tools.
- B. Locate overhead stops for minimum 90 degrees at rest and for maximum allowable degree of swing.
- C. Drill pilot holes for fasteners in wood doors and/or frames.
- D. Lubricate and adjust existing hardware scheduled to remain. Carefully remove and give to Owner items not scheduled for reuse.

3.4. ADJUSTING

- A. Adjust and check for proper operation and function. Replace units, which cannot be adjusted to operate freely and smoothly.
 1. Hardware damaged by improper installation or adjustment methods: repair or replace to Owner's satisfaction.
- B. Final inspection: Installer to provide letter to Owner that upon completion installer has visited the Project and has accomplished the following:
 1. Has re-adjusted hardware.
 2. Has evaluated maintenance procedures and recommend changes or additions and instructed Owner's personnel.
 3. Has identified items that have deteriorated or failed.

4. Has submitted written report identifying problems.

3.5 PROTECTION/CLEANING

- A. Cover installed hardware, protect from paint, cleaning agents, weathering, carts/barrows, etc. Remove covering materials and clean hardware just prior to substantial completion.
- B. Clean adjacent wall, frame and door surfaces soiled from installation / reinstallation process.

3.7 SCHEDULE OF FINISH HARDWARE

- A. See door schedule in drawings for hardware set assignments.
- B. Do not order material until submittal has been reviewed, stamped, and signed by Architect's door hardware consultant.

3.8 DOOR HARDWARE SETS

DOOR 001:

3	EA	HINGES	IVES 5BB1-626 (SIZE 3.5x3.5)
1	EA	T-SERIES TUBULAR DEADBOLT	8TD3B-7-E2151-8TS1-626
1	EA	PULL PLATE	8302 (3.5"x 15")
		DOOR SILENCERS	SR64
1	EA	WALL MOUNTED DOOR STOP	WS33X
		SEALS AND BOTTOM	8303AA, 8144S-BK, 8198AA
1	EA	THRESHOLD	655A

END OF SECTION

SECTION 09 24 00 – CEMENT PLASTERING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Metal lath.
 - 2. Base-coat cement plaster.
 - 3. Cement plaster finish coats.
 - 4. Accessories.

1.2 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Shop Drawings: Show locations and installation of control and expansion joints, including plans, elevations, sections, details of components, and attachments to other work.
- C. Samples: For each type of factory-prepared finish coat and for each color and texture specified.
- D. Samples for Initial Selection: For each type of factory-prepared finish coat and for each color and texture specified.
- E. Samples for Verification: For each type of factory-prepared finish coat and for each color and texture specified, 12 by 12 inches, and prepared on rigid backing.

1.4 MOCKUPS

- A. Not required.

1.5 DELIVERY, STORAGE AND HANDLING

- A. Store materials inside under cover, and keep them dry and protected against damage from weather, moisture, direct sunlight, surface contamination, corrosion, construction traffic, and other causes.

1.6 FIELD CONDITIONS

- A. Comply with ASTM C926 requirements.
- B. Exterior Plasterwork:

1. Apply and cure plaster to prevent plaster drying out during curing period. Use procedures required by climatic conditions, including moist curing, providing coverings, and providing barriers to deflect sunlight and wind.
2. Apply plaster when ambient temperature is greater than 40 deg F.
3. Protect plaster coats from freezing for not less than 48 hours after set of plaster coat has occurred.

PART 2 - PRODUCTS

2.1 SOURCE LIMITATIONS

- A. Obtain plaster materials from single source from single manufacturer.

2.2 PERFORMANCE REQUIREMENTS

- A. Fire-Resistance Ratings: Where indicated, provide cement plaster assemblies identical to those of assemblies tested for fire resistance according to ASTM E119 by a qualified testing agency.

2.3 METAL LATH

- A. Expanded-Metal Lath: ASTM C847, cold-rolled carbon-steel sheet with ASTM A653/A653M, G60, hot-dip galvanized-zinc coating.
 1. Diamond-Mesh Lath: Self-furring, 3.4 lb/sq. yd.
- B. Wire-Fabric Lath:
 1. Welded-Wire Lath: ASTM C933; self-furring, 1.4 lb/sq. yd.
 2. Woven-Wire Lath: ASTM C1032; self-furring, with stiffener wire backing, 1.4 lb/sq. yd.
- C. Paper Backing: FS UU-B-790a, Type I, Grade B, Style 1a vapor-retardant paper.
 1. Provide paper-backed lath at exterior locations.

2.4 BASE-COAT CEMENT PLASTER

- A. General: Comply with ASTM C926 for applications indicated.
- B. Base-Coat Mixes for Use over Metal Lath: Scratch and brown coats for three-coat plasterwork as follows:
 1. Portland Cement Mixes:
 - a. Scratch Coat: For cementitious material, mix 1 part portland cement and 0 to 3/4 parts lime. Use 2-1/2 to 4 parts aggregate per part of cementitious material.

- b. Brown Coat: For cementitious material, mix 1 part portland cement and **0 to 3/4** parts lime. Use 3 to 5 parts aggregate per part of cementitious material, but not less than volume of aggregate used in scratch coat.
2. Portland and Plastic Cement Mixes:
 - a. Scratch Coat: For cementitious material, mix 1 part plastic cement and 1 part portland cement. Use 2-1/2 to 4 parts aggregate per part of cementitious material.
 - b. Brown Coat: For cementitious material, mix 1 part plastic cement and 1 part portland cement. Use 3 to 5 parts aggregate per part of cementitious material, but not less than volume of aggregate used in scratch coat.

2.5 CEMENT PLASTER FINISH COATS

- A. Job-Mixed Finish-Coat Mixes:
 1. Portland Cement Mix: For cementitious materials, mix 1 part portland cement and 3/4 to 1-1/2 parts lime. Use 1-1/2 to 3 parts aggregate per part of cementitious material.
 2. Masonry Cement Mix: Use 1 part masonry cement and 1-1/2 to 3 parts aggregate.
 3. Portland and Masonry Cement Mix: For cementitious materials, mix 1 part portland cement and 1 part masonry cement. Use 1-1/2 to 3 parts aggregate per part of cementitious material.
 4. Plastic Cement Mix: Use 1 part plastic cement and 1-1/2 to 3 parts aggregate.

or
- B. Ready-Mixed Finish-Coat Plaster: Mill-mixed portland cement, aggregates, coloring agents, and proprietary ingredients.
 1. Color: Match existing building color.

or
- C. Acrylic-Based Finish Coatings: Factory-mixed acrylic-emulsion coating systems formulated with colorfast mineral pigments and fine aggregates; for use over cement plaster base coats. Include manufacturer's recommended primers and sealing topcoats for acrylic-based finishes.
 1. Color: Match existing building color.

2.6 ACCESSORIES

- A. General: Comply with ASTM C1063, and coordinate depth of trim and accessories with thicknesses and number of plaster coats required.
- B. Metal Accessories:

1. Foundation Weep Screenshot: Fabricated from hot-dip galvanized-steel sheet, ASTM A653/A653M, G60 zinc coating.
 2. Cornerite: Fabricated from metal lath with ASTM A653/A653M, G60, hot-dip galvanized-zinc coating.
 3. External- (Outside-) Corner Reinforcement: Fabricated from metal lath with ASTM A653/A653M, G60, hot-dip galvanized-zinc coating.
 4. Cornerbeads: Fabricated from zinc.
 5. Retain applicable descriptions of cornerbeads in first four subparagraphs below. If more than one type is required and locations do not fit descriptions below, indicate locations on Drawings or by inserting requirements.
 - a. Smallnose cornerbead with expanded flanges; use unless otherwise indicated.
 - b. Smallnose cornerbead with perforated flanges; use on curved corners.
 - c. Smallnose cornerbead with expanded flanges reinforced by perforated stiffening rib; use on columns and for finishing unit masonry corners.
 - d. Bullnose cornerbead, radius 3/4 inch minimum, with expanded flanges; use at locations indicated on Drawings.
 6. Casing Beads: Fabricated from zinc or zinc-coated (galvanized) steel.; square-edged style; with expanded flanges.
 7. Control Joints: Fabricated from zinc or zinc-coated (galvanized) steel; one-piece-type, folded pair of unperforated screeds in M-shaped configuration; with perforated flanges and removable protective tape on plaster face of control joint.
 8. Expansion Joints: Fabricated from zinc or zinc-coated (galvanized) steel; folded pair of unperforated screeds in M-shaped configuration; with expanded flanges.
 9. Two-Piece Expansion Joints: Fabricated from zinc or zinc-coated (galvanized) steel; formed to produce slip-joint and square-edged reveal that is adjustable from 1/4 to 5/8 inch wide; with perforated flanges.
- C. Water for Mixing and Finishing Plaster: Potable and free of substances capable of affecting plaster set or of damaging plaster, lath, or accessories.
- D. Bonding Compound: ASTM C932.
- E. Fasteners for Attaching Metal Lath to Substrates: ASTM C1063.
- F. Wire: ASTM A641/A641M, Class 1 zinc coating, soft temper, not less than 0.0475-inch diameter unless otherwise indicated.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Protect adjacent work from soiling, spattering, moisture deterioration, and other harmful effects caused by plastering.
- B. Prepare smooth, solid substrates for plaster according to ASTM C926.

3.3 INSTALLATION, GENERAL

- A. Fire-Resistance-Rated Assemblies: Install components according to requirements for design designations from listing organization and publication indicated on Drawings.

3.4 INSTALLATION OF ACCESSORIES

- A. Install according to ASTM C1063 and at locations indicated on Drawings.
- B. Reinforcement for External (Outside) Corners:
 - 1. Install lath-type, external-corner reinforcement at exterior locations.
 - 2. Install cornerbead at interior locations.
- C. Control Joints: Locate as approved by Architect for visual effect and as follows:
 - 1. As required to delineate plasterwork into areas (panels) of the following maximum sizes:
 - a. Vertical Surfaces: 144 sq. ft.
 - b. Horizontal and Other Nonvertical Surfaces: 100 sq. ft.
 - 2. At distances between control joints of not greater than 18 feet o.c.
 - 3. As required to delineate plasterwork into areas (panels) with length-to-width ratios of not greater than 2-1/2:1.
 - 4. Where control joints occur in surface of construction directly behind plaster.
 - 5. Where plasterwork areas change dimensions, to delineate rectangular-shaped areas (panels) and to relieve the stress that occurs at the corner formed by the dimension change.

3.5 APPLICATION OF BASE-COAT CEMENT PLASTER

- A. General: Comply with ASTM C926.
 - 1. Do not deviate more than plus or minus 1/4 inch in 10 feet from a true plane in finished plaster surfaces when measured by a 10-foot straightedge placed on surface.
 - 2. Finish plaster flush with metal frames and other built-in metal items or accessories that act as a plaster ground unless otherwise indicated. Where casing bead does not terminate plaster at metal frame, cut base coat free from metal frame before plaster sets and groove finish coat at junctures with metal.
 - 3. Provide plaster surfaces that are ready to receive field-applied finishes indicated.
- B. Bonding Compound: Apply on stucco substrates for direct application of plaster.
- C. Walls; Base-Coat Mixes for Use over Metal Lath: For scratch and brown coats, for three-coat plasterwork with 3/4-inch total thickness, as follows:
 - 1. Portland cement mixes.
- D. Walls; Base-Coat Mix: For base (scratch) coat, for two-coat plasterwork and having 3/8-inch thickness on masonry 1/4-inch thickness on concrete], as follows:
 - 1. Portland cement mix.

3.6 APPLICATION OF CEMENT PLASTER FINISH COATS

- A. Plaster Finish Coats: Apply to provide finish to match existing walls. It appears to be light dashed.
- B. Acrylic-Based Finish Coatings: Apply coating system, including primers, finish coats, and sealing topcoats, according to manufacturer's written instructions.
 - 1. Where plaster application is used as a base for adhesive application of tile and similar finishes, omit finish coat.

3.7 REPAIR

- A. Repair or replace work to eliminate cracks, dents, blisters, buckles, crazing and check cracking, dry outs, efflorescence, sweat outs, and similar defects and where bond to substrate has failed.

3.8 CLEANING

- A. Remove temporary protection and enclosure of other work after plastering is complete.
- B. Promptly remove plaster from door frames, windows, and other surfaces not indicated to be plastered.

- C. Repair floors, walls, and other surfaces stained, marred, or otherwise damaged during plastering.

END OF SECTION

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SECTION 09 90 00 - PAINTING

PART 1 - GENERAL

1.1 SUMMARY

- A. The work includes the furnishing of all materials and equipment and the completion of all painting and painter's finish on all exposed exterior and interior surfaces as required to complete the finishing of the building as shown and noted on the drawings and specified herein. The General Conditions, Supplementary General Conditions, Special Conditions and Division 1 apply to this section as fully as if repeated herein.

1.2 SUBMITTALS

- A. Contractor shall prepare samples of colors and textures based upon the color selections and shall submit them in duplicate for approval.
- B. Contractor shall submit a list of all materials proposed for use for approval. If required by the Architect, the Contractor shall submit chemical analysis of paint material for review.

1.3 GENERAL REQUIREMENTS

- A. The Contractor shall examine the drawings and the specifications of other trades and shall consult with the other trades to determine the full extent of work and items which are specified to include shop priming and shop finish painting.
- B. All conditions affecting the work of this section shall be verified at the job site.
- C. No materials other than those specified, or approved, shall be delivered to the job or used on the work. Materials shall be delivered in manufacturer's sealed containers with labels defining the contents thereon.
- D. Paint materials and equipment, when not in actual use, shall be stored in places specifically assigned for that purpose. Such storage space shall be well ventilated and adequately fire protected. All paint mixing and handling shall be performed in these assigned areas and all containers used for mixing and handling shall be metal and suitably designed for safety. All paint materials, including rags, tarpaulins, mixers, empty containers and filled or partially filled containers shall be removed from the building areas at the close of each working day.

1.4 QUALITY ASSURANCE

- A. Regulatory Requirements: Comply with applicable codes and regulations of governmental agencies having jurisdiction including those having jurisdiction over airborne emissions and industrial waste disposal. Where those requirements conflict with this Specification, comply with the more stringent provisions.
- B. Comply with the current applicable regulations of the California Air Resources Board (CARB) and the Environmental Protection Agency (EPA).
- C. Maximum Coverage: 425-550 sq. ft. per gallon, depending on surface conditions.

1.5 WORK INCLUDED

- A. The intent and requirements of this section, is that all work, items and surfaces which are normally painted and finished in a building of this type and quality, shall be so included in this contract, whether or not said work, item or surface is specifically called out and included in the schedules and notes on the drawings, or is, or is not, specifically mentioned in these specifications.
- B. The following general categories of work and items that are included under other sections, shall not be a part of this section:
 - 1. Shop prime painting of hollow metal work.
- C. All exposed mechanical, plumbing and electrical work, which is not factory finished, shall be painted under this section.
- D. The Room Finish Schedules indicated on the drawings, indicates the location of interior room surfaces to be painted or finished. The finish schedule indications are general and do not necessarily define the detail requirements. The Contractor shall include all detailed refinements and further instructions as may be given by the Architect for the required complete finishing of all spaces and rooms.

1.6 PRODUCT HANDLING

- A. Deliver all paint to site in manufacturer's labeled and sealed containers. Labels shall give manufacturer's name, brand, type, batch number, color of paint and instruction for reducing. Thin only in accordance with printed directions of manufacturer.

1.7 ENVIRONMENTAL CONDITIONS

- A. Do not apply exterior paint in damp, rainy weather or until the surface has dried thoroughly from the effects of such weather. Do not apply varnish or paint when temperature is below 50 degrees F. Avoid painting surfaces when exposed to hot sunlight.

1.8 PROTECTION AND CLEAN UP

- A. Before painting, remove hardware, accessories, plates, lighting fixtures and similar items or provide ample protection of such items.

On completion of each space, replace above items. Use only skilled mechanics for removing and connecting above items. Protect adjacent surfaces as required or directed.
- B. Wherever painting and finishing work is being performed, all floors, surfaces and items shall be carefully protected from damage by the painting work. Clean drop cloths shall be provided and used wherever necessary. All supplies, materials, paints, containers, etc., shall be orderly and carefully arranged and protected. All accidental spatter, spillage, etc., shall be immediately cleaned and the damaged surfaces restored to perfect condition. All paint spots and spatter on glass porcelain fixtures, etc., shall be completely removed and the surface cleaned.
- C. At the completion of work in each space or room, all materials, supplies, debris and rubbish shall be removed, and the areas left in a clean, orderly condition.

- D. GUARANTEE: This Contractor shall, in writing, guarantee the painting work against peeling, fading, cracking, blistering, or crazing for a period of two (2) years from the time the Notice of Completion is filed.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Paint materials shall be as manufactured by Behr Paint (B), Vista Paint (V), Dunn Edwards Paints (D-E), Olympic Stain Co. (O), or as indicated in the Paint Schedule or approved equal.
- B. All products must be applied in accordance with the Approved manufacturer's directions.
- C. The Contractor shall secure the Color Schedule before undercoating. Unless otherwise specified, all undercoats shall be tinted slightly to approximate the color of the finish coat. Approval of color shall be obtained before proceeding with the work.
- D. Where a specific name is not given for a product or ingredient, such item shall be of the best quality of the approved manufacturer, which is normally used for the intended purpose.

2.2 PAINTING SCHEDULE

- A. Exterior Steel
 - 1. Handrails/Guardrails: Galvanized Finish (Steel Contractor)
 - 2. Downspouts: Enamel Paint (Painting Contractor)
 - a. Match Dunn Edwards color to be selected by Owner and or Architect.
- B. Exterior Plaster: Painted
 - 1. Match Dunn Edwards color to be selected by Owner and or Architect.
- C. Pavement Markings
 - 1. Painted lines and markings on pavement shall be 3" minimum wide and blue in color equal to Color No. 15090 per Federal Standard 595B.2.
 - 2. Parking spaces for the disabled shall be marked according to CBC Section 1129B.5.
 - 3. Tactile warning lines shall be in conformance to CBC Section 1133B.8.3 and 1133B.8.4.
 - 4. Concrete & Plaster - Flat:
 - 1 Coat (F) 362 Pri Seal II
 - OR (S) 890 Pigmented Sealer (oil) OR
 - (D-E) W 709 Eff-Stop (Concrete) W
 - 707 Unikote (Plaster)

1 Coat (F) Oil Velvin
OR (S) 1700 Sinwall
OR (D-E) W 401 Decovel

5. Concrete & Plaster - Semi Gloss:

1 Coat (F) 161 All Purpose Undercoater (Concrete) OR 367 Fraflo II (Plaster)
OR (S) 890 Pigmented Sealer (oil)
OR (D-E) W 709 Eff-Stop (Concrete) OR W 707 Unikote (Plaster)

1 Coat (F) 328 Velglo II
OR (S) 975 Sinco Prime
OR (D-E) E 22-1 Super U-365

1 Coat (F) 328 Velglo II
OR (S) SG 25 Sinco Satin Enamel
OR (D-E) E 5 Series Satin Sheen II

6. Concrete & Plaster - Eggshell:

1 Coat (F) 161 All Purpose Undercoater (Concrete)
OR 367 Fraflo II (Plaster)
OR (S) 895 X-Tra Seal
OR (D-E) W 101 Vinylastic

1 Coat (F) 022 Lo-Glo
OR (S) 1790 Aqua Coater
OR (D-E) W 440 Decosheen

1 Coat (F) 022 Lo-Glo
OR (S) 3000 Aqua Suede Enamel
OR (D-E) W 440 Decosheen

7. Concrete & Plaster - Gloss:

1 Coat (F) 161 All Purpose Undercoater (Concrete)
OR 367 Fraflo II
OR (S) 895 X-Tra Seal
OR (D-E) E 28-1 Alkylseal

1 Coat (F) 349 Fragloss II
OR (S) 975 Sinco Prime Undercoater
OR (D-E) E 22-1 Super U-365

1 Coat (F) 349 Fragloss II

*Let 1st coat, primer sealer, dry for a minimum of 4 days before applying finish coats.

PART 3 - EXECUTION

3.1 PREPARATION

- A. All surfaces shall be clean and dry prior to painting and finishing. Dirt and dust shall be removed by stiff bristle brush and wiping with cloths. Oil and grease shall be removed by solvent cleaning, using a solvent such as mineral spirits and wiping with clean cloths. Surfaces shall be given a final rinse of clean solvent.

Surfaces which have been contaminated with chemicals shall be thoroughly rinsed with water. The first coat of paint shall be applied as soon as possible after cleaning and drying the surfaces.

- B. Shop primed ferrous metal surfaces shall be first washed free of grease, dirt, oil, and dust, using solvents as required. Galvanized surfaces shall be cleaned with solvents and given a vinyl wash coat. All shop primed surfaces shall be repaired and touched-up wherever shop priming is damaged, and at all welds.
- C. Concrete surfaces shall be thoroughly cleaned of all traces of form oil and other deposits from form surfaces and shall have all laitance and powder removed. Surfaces shall be clean and sound and thoroughly cured and dried before starting the painting work.
- D. Wood surfaces shall be sanded smooth and cleaned prior to application of the first coat. Holes, splits and scratches shall be puttied or spackled smooth after first coat application.
- E. Prior to vinyl covered tack surface installation all gypsum board walls to be prime painted and sized.

3.2 APPLICATION

- A. All materials shall be applied and cut in neatly so as to dry uniformly to the color and sheen required and shall be free from excessive runs, sags, wrinkles, shiners, streaks and brush marks.
- B. All materials shall be applied in accordance with the approved manufacturer's directions and specifications. Any thinning required, shall be done in the manner and the type of reducer recommended.
- C. Each coat of painted work shall vary in shade from the proceeding coat in a manner that will make each coat readily distinguishable without affecting the finish color. The Architect will inspect each coat and operation before succeeding coats are applied to determine that the work meets the requirements of the specifications.
- D. In enclosed spaces, the application and drying of paint shall be performed only when the temperature is 65 degrees F. or above and maintained constantly to prevent condensation.
- E. Enamel coats shall be sanded smooth prior to re-coating. All defects and unevenness in previously applied coatings shall be repaired before applying the next coat.
- F. Exterior painting shall only be performed when the weather conditions, temperatures and humidity are correct.

**SECTION 09 90 00
PAINTING**

- G. Workmanship shall be of the very best quality and only skilled mechanics shall be used on this project.
- H. The work of this section shall be subject to the approval of the Architect. Any work in need of correction because of improper preparation or workmanship, or as a result of failure to comply with these Specifications, shall be satisfactorily corrected by this Contractor at his own expense.
- I. Commencement of the painting work by this Contractor shall signify his acceptance of all surfaces as satisfactory to receive the finish specified herein.
- J. This Contractor shall be responsible for the complete painting finishing of all surfaces indicated in the Room Finish Schedule and as specified herein. Where questions occur as to the indicated surfaces, he shall inform the Architect and receive clarification therefrom.
- K. The proper number of coats of paints and other finishes specified, properly applied, will result in the desired effect. Should this effect not be attained, additional applications of the specified materials and methods shall be made by the Contractor, without additional costs to the Owner.

END OF SECTION

SECTION 10 14 00 - IDENTIFICATION SIGNS

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Chemically Deep-etched Zinc, raised character, tactile, room identification, exit door signs and non-tactile.

1.2 REFERENCE STANDARDS

- A. Conform to reference standards by date of issue current on date of Contract Documents.
- B. ADA - Americans with Disabilities Act of 1990 as amended.
 - 1. ADA/Standards - ADA Title II Regulations and the 2010 ADA Standards for Accessible Design.
- C. CBC - 2022 California Building Code (CBC)
 - 1. CBC 16 - Chapter 10, Egress Requirements
 - 2. CBC 11B - Chapter 11B, Accessibility for Public Buildings, Public Accommodations, Commercial Facilities and Publicly Funded Housing.
- D. CFC - 2022 California Fire Code.
- E. California Code of Regulations (CCR)
 - 1. CCR 19-3-Title 19, Chapter 3
- F. Fed.Stnd - Federal Standard
 - 1. Fed.Stnd 595C, Colors Used in Federal Procurement

1.3 SUBMITTALS

- A. Shop Drawings of each sign, indicating lettering styles and locations and overall dimensions.
- B. Three sample, full size, signs, [with different messages] of types, styles and colors specified including method of mounting. If accepted, samples may be installed in Project.
- C. Manufacturer's Installation Instructions
- D. Lettering Samples: 1-inch high, uppercase I, and O letters in each font specified, for required Quality Assurance testing.

1.4 QUALITY ASSURANCE

- A. Pre-Installation Conference
 - 1. Notify Architect when signs are ready for installation. Arrange for conference at site. Do not proceed with installation until Architect's approval of specific locations and methods of attachment has been obtained.
 - 2. Provide signs from one manufacturer, unless otherwise approved.

1.5 DELIVERY, STORAGE AND HANDLING

- A. Deliver products to site and protect from damage. Store until immediately prior to Notice of Completion.

PART 2 - PRODUCTS

2.1 REGULATORY REQUIREMENTS

- A. Signage and Graphics:
 - 1. Raised characters shall comply with CBC Section 11B-703.2
 - a. Depth: It shall be 1/32-inch minimum above their background and shall be sans serif uppercase and be duplicated in Braille.
 - b. Height: It shall be 5/8-inch minimum and 2 inches maximum based on the height of the uppercase letter "I". CBC Section 11 B-703.2.5.
 - c. Finish and contrast: Characters and their background shall have a non-glare finish. Character shall contrast with their background with either light characters on a dark background or dark characters on a light background. CBC Section 11B-703.5.1
 - d. Proportions: It shall be selected from fonts where the width of the uppercase letter "O" is 60% minimum and 110% maximum of the height of the uppercase letter "I". Stroke thickness of the uppercase letter "I" shall be 15% maximum of the height of the character. CBC Section 11 B-703.2.4 and 11 B-703.2.6.
 - e. Character Spacing: Spacing between individual raised characters shall comply with CBC Section 11B-703.2.7 and 11B-703.2.8.
 - f. Format: Text shall be in a horizontal format. CBC Section 11B-703.2.9.
 - g. Braille: It shall be contracted (Grade 2) and shall comply with CBC Sections 11B-703.3 and 11B-703.4. Braille dots shall have a domed or rounded shape and shall comply with CBC Table and Figure 11B-703.3.1,
 - h. Mounting height: Tactile characters on signs shall be located 48" minimum to the baseline of the lowest Braille cells and 60" maximum to the baseline of the highest line of raised characters above the finish floor or ground surface. CBC Section and Figure 11B-703.4.1.
 - i. Mounting location: A tactile sign shall be located per CBC Section and Figure 11 B-703.4.2 as follows:
 - 1) Alongside a single door at the latch side.

- 2) On the inactive leaf at double doors with one active leaf.
 - 3) To the right of the right hand door at double doors with two active leafs.
 - 4) On the nearest adjacent wall where there is no wall space at the latch side of a single door or at the right side of double doors with two active leafs.
 - 5) So that a clear floor space of 18" x 18" minimum, centered on the tactile characters, is provided beyond the arc of any door swing between the closed position and 45 degree open position.
2. Visual characters shall comply with CBC Section 11B-703.5 and shall be 40" minimum above finish floor or ground.
 3. Pictograms shall comply with CBC Section 11 B-703.6.
 4. Symbols of accessibility shall comply with CBC Section 11 B-703.7.
 5. Variable message signs shall comply with CBC Section 11 B-703.8.

2.2 MANUFACTURERS

- A. Products of following manufacturers form basis for design and quality intended.
 1. RB Industries
 2. Dixie Graphics, Nashville, TN.
 3. Gemini Incorporated, Cannon Falls, MN.
- B. Or an approved equal.

2.3 SIGN FABRICATION - GENERAL

- A. Chemically Deep-etched Zinc Signs, RB Industries Series 300 Photomag.
 1. Solid metal plate, sheet, and strip: 0.125 inch thick.
 2. Fabrication: Raised copy, Tactile and Braille.
 3. Finish: [matte] [semigloss] [gloss] [exterior gloss] sheen.
 4. Background: swirl-brushed and painted zinc background finish.
 5. Factory applied color finishes, minimum 2 colors. Colors: As selected by Architect.
 6. For Sizes and Dimensions verify with Architect.
 7. Square edges.
 8. Etch depth: 0.08"
 9. Mounting Holes: Drilled and countersunk
- B. Fasteners: Stainless steel screws, flat head, pin-in-head torx screws for vandal-proof

and clear silicone adhesive.

- C. Lettering Type Style: Helvetica Regular, uppercase letters only, refer to QUALITY ASSURANCE for letter-proportion compliance.
- D. Colors: as indicated on Drawings.

2.4 ROOM IDENTIFICATION SIGNS

- A. Chemically Deep-etched Zinc Signs
 - 1. Color: As selected by Architect.
 - 2. For Sizes and Dimensions verify with Architect.
- B. Size: 2-1/2 inches high, minimum, by 8 inches long, with 7/8 inch high, letters minimum 1/32 inch thick, minimum 3/32 inch thick for metal signs, fully tactile, with BRAILLE indicator.
 - 1. Provide one sign with up to 13 letters for each door.
 - 2. Provide one sign with up to 3 numerals for each door.
- C. Signs with Changeable Message Capability: Fabricate signs to allow insertion of changeable messages as follows: Laminated acrylic sheets with subsurface color for borders, reverse graphics, numbers and room name where required. Clear vision panel faces hall accommodate multiple acetate inserts with Owner's graphics/logo or letter/number messages.
 - 1. For slide-in changeable inserts, fabricate slot without burrs or constrictions that inhibit function. Furnish initial changeable insert. Furnish two blank inserts for each sign for Owner's use
 - 2. Raised Letter Signs with Braille and graphics on acrylic plastic (ADA Sign).
 - a. Base Acrylic Material: Cast acrylic
 - b. Sign material must have non-glare (matte) surface.
 - c. Solid embedded color material.
 - d. Sign Color: Color as selected.
 - e. Sizes: as indicated on drawings .
 - f. Edges: Square
 - g. Raised Characters: California Building Code (CBC) compliant
 - h. Character Font: California Building Code compliant
 - i. Character Color: contrasting color with background.
 - j. Character Thickness: 1/32 inch
 - k. Braille: Contracted Grade II Braille with domed surface.

2.5 OCCUPANT LOAD SIGNS

- A. Posting of occupant load signage in each room or area use for assembly per CBC 1004.3, CFC& Title 19.
- B. Provide maximum occupancy load signs. Post in a conspicuous place near main exits or exit-access doorway of following areas:
 - 1. as indicated on Drawings.
- C. Chemically Deep-etched Zinc Signs.
 - 1. Color: As selected by Architect.
 - 2. For Sizes and Dimensions verify with Architect.
- D. Size: 4 inches high by 8 inches, minimum, long, sub-surface application, 7/8 inch high letters, and 1 inch high numbers.
 - 1. Message: MAXIMUM OCCUPANCY LOAD ###
 - 2. Occupant load number as indicated on Drawings.
 - 3. Conform to Sections 1004.3 California Building Code.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that surfaces are ready to receive Work.
- B. Beginning of installation means installer accepts existing surfaces.

3.2 INSTALLATION

- A. Install signs only after surfaces are finished, install at all rooms.
 - 1. At single-leaf doors, locate signs on wall adjacent to latch side of applicable door opening, centered horizontally within 18-inch space adjacent to latch side of door, tactile characters on signs shall be located 48 inches minimum above the finish floor measured from the baseline of the lowest Braille cells and 60 inches maximum from finish floor measured from the baseline of the highest line of raised characters, CBC Section 11B-703.4.1. Mounting location shall be located so that a clear space of 18" minimum by minimum by 18" minimum, centered on the tactile characters, is provided beyond the arc of any door swing between the closed position and 45 degree open position. CBC Section 11B-703.4.2.
- B. Mounting:

1. Fasten with screws into metal blocking, not less than 1/4" diameter.
 2. Exterior: Provide stainless steel spanner head tamper resistant screw in expansion shields suitable for substrate. Countersink screw flush with surface.
 3. Interior: Unless noted otherwise, provide double stick foam tape mounting, 1/32 inches thick.
- C. For signs installed on glass: a blank vinyl backer is required to be placed on opposite side of glass exactly behind sign being installed. This blank glass back up is to be the same size as sign being installed.
- D. Clean and polish signs following manufacturer's instructions.

3.3 FIELD QUALITY CONTROL

- A. Signs and identifications or other information shall be field inspected after installation and approved prior to the issuance of a final certificate of occupancy, or final approval where no certificate of occupancy is issued. The inspection shall include, but not limited to, verification that Braille dots and cells are properly spaced and the size, proportion and type of raised characters are in compliance with CBC, Section 11B-703.1.1.2.

3.4 SIGN TYPES AND SCHEDULE

- A. As indicated on Drawings.

END OF SECTION

SECTION 10 14 23 – PANEL SIGNAGE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Traffic and parking control, and site informational signage

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Shop Drawings: For signs.
 - 1. Include fabrication and installation details and attachments to other work.
 - 2. Show sign mounting heights, locations of supplementary supports to be provided by other installers, and accessories.
- C. Samples for Initial Selection: For each type of sign assembly, exposed component, and exposed finish.
 - 1. Include representative Samples of available type, styles, and graphic symbols.
- D. Samples for Verification: For each type of sign assembly showing all components and with the required finish(es), in manufacturer's standard size unless otherwise indicated and as follows:
 - 1. Sign: Full-size Sample
 - 2. Full-size Samples, if approved, will be returned to Contractor for use in Project. Do not include submittal sticker on sign if you wish to install in field.

1.4 WARRANTY

- A. Special Warranty: Manufacturer agrees to repair or replace components of signs that fail in materials or workmanship within specified warranty period.
 - 1. Failures include, but are not limited to, the following:
 - a. Deterioration of finishes beyond normal weathering.
 - b. Deterioration of embedded graphic image.
 - c. Separation or delamination of sheet materials and components.
 - 2. Warranty Period: Five years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 SIGN: TO MATCH DRAWINGS

- A. Manufacturers: Open to contractor
- B. Plaque Signs Provide manufacturer's standard silk-screen signs, baked-on enamel applied over Diamond Grade (DG), retro-reflectorized backing; on aluminum or 16 gaga galvanized steel sheet. Provide with anti-graffiti protective overlay file. Produce smooth, even level sign surfaces, constructed to remain flat under installed condition within a tolerance of plus or minus 1/16-inch measured diagonally. Provide two holes for post mounting.
 - 1. Parking stall signs: sign text, accessible parking control shall comply with requirements of State of California Code of Regulations (CCR) – Title 24, Part 2, CBC ch. 11B-502.6 in addition to requirements of State of California, Department of Transportation (CALTRANS) and regulation of local authorities having jurisdiction.
 - a. Single post mount, not less than 70 square inches with white reflectorized copy on blue background conforming to No. 15090, (FED-STD-595C). Sign shall display a profile view of a wheelchair with occupant in white on blue background.
 - 1) Provide an additional sign below to accessible sign with the text "Minimum Fine \$250".
 - a) Position one sign at the end of each parking space designated for accessible usage.
 - b) Provide "Van Accessible" sign at location shown on drawings. Sign shall not be 12 inch by 3-1/4 inch min. or as shown on plans.
 - c) Sign shall be mounted 80 inches from bottom of sign to finish grade of parking space or centered on wall at interior end of parking space at a minimum height of 60 inches above the parking space, finished grade, ground of sidewalk, to the bottom of the sign. Locate per drawings.
 - 2. Support Posts:
 - a. Calvanized steel pipe minimum 2-1/2 inch diameter of as indicated on plans with caps.
 - b. Concrete: Ready-mixed, complying with ASTM C94/C94M; normal Portland cement, 3,500 psi strength at 28 days, 3 inch slump; 3/4" nominal size aggregate.
 - c. Fasteners: Provide tamper-proof stainless steel fasteners with bolts, nuts, washers typical.
- C. Direction Signs: To match drawings and all the requirements for plaque sign materials, fasteners, concrete, support post as shown above for Traffic Signs.

2.2 PERFORMANCE REQUIREMENTS

- A. Structural Performance: Signs and supporting elements shall withstand the effects of gravity and other loads within limits and under conditions indicated.
- B. Accessibility Standard: Comply with applicable provisions in the USDOJ's "2010 ADA Standards for Accessible Design", the ABA standards of the Federal agency having jurisdiction.

2.3 ACCESSORIES

- A. Fasteners and Anchors: Manufacturer's standard as required for secure anchorage of signs, noncorrosive and compatible with each material joined, and complying with the following unless otherwise indicated:

2.4 EXAMINATION

- A. Verify that sign-support surfaces are within tolerances to accommodate signs without gaps or irregularities between backs of signs and support surfaces unless otherwise indicated.

2.5 INSTALLATION

- A. General: Install signs using mounting methods indicated and according to manufacturer's written instructions or as indicated on the drawings.
 - 1. Install signs level, plumb, true to line, and at locations and heights indicated, with sign surfaces free of distortion and other defects in appearance.
 - 2. Install signs so they do not protrude or obstruct according to the accessibility standard.
- B. Accessible Signage: Install in locations as indicated on Drawings and according to the accessibility standard.
- C. Remove and replace damaged or deformed signs and signs that do not comply with specified requirements. Replace signs with damaged or deteriorated finishes or components that cannot be successfully repaired by finish touchup or similar minor repair procedures.
- D. Remove temporary protective coverings and strippable films as signs are installed.
- E. On completion of installation, clean exposed surfaces of signs according to manufacturer's written instructions and touch up minor nicks and abrasions in finish. Maintain signs in a clean condition during construction and protect from damage until acceptance by Owner.

END OF SECTION

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SECTION 22 05 17 - SLEEVES AND SLEEVE SEALS FOR PLUMBING PIPING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Sleeves.
 - 2. Sleeve-seal systems.
 - 3. Grout.

1.2 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated.

PART 2 - PRODUCTS

2.1 SLEEVES

- A. Cast-Iron Wall Pipes: Cast or fabricated of cast or ductile iron and equivalent to ductile-iron pressure pipe, with plain ends and integral waterstop unless otherwise indicated.
- B. Galvanized-Steel Wall Pipes: ASTM A 53/A 53M, Schedule 40, with plain ends and welded steel collar; zinc coated.
- C. Galvanized-Steel-Pipe Sleeves: ASTM A 53/A 53M, Type E, Grade B, Schedule 40, zinc coated, with plain ends.
- D. PVC-Pipe Sleeves: ASTM D 1785, Schedule 40.
- E. Galvanized-Steel-Sheet Sleeves: 0.0239-inch (0.6-mm) minimum thickness; round tube closed with welded longitudinal joint.

2.2 GROUT

- A. Standard: ASTM C 1107/C 1107M, Grade B, post-hardening and volume-adjusting, dry, hydraulic-cement grout.
- B. Characteristics: Non-shrink; recommended for interior and exterior applications.
- C. Design Mix: 5000-psi (34.5-MPa), 28-day compressive strength.
- D. Packaging: Premixed and factory packaged.

PART 3 - EXECUTION

3.1 SLEEVE INSTALLATION

- A. Install sleeves for piping passing through penetrations in floors, partitions, roofs, and walls.
- B. For sleeves that will have sleeve-seal system installed, select sleeves of size large enough to provide 1-inch (25-mm) annular clear space between piping and concrete slabs and walls.
 - 1. Sleeves are not required for core-drilled holes.
- C. Install sleeves in concrete floors, concrete roof slabs, and concrete walls as new slabs and walls are constructed.
 - 1. Cut sleeves to length for mounting flush with both surfaces.
 - a. Exception: Extend sleeves installed in floors of mechanical equipment areas or other wet areas 2 inches (50 mm) above finished floor level.
 - 2. Using grout, seal the space outside of sleeves in slabs and walls without sleeve-seal system.
- D. Install sleeves for pipes passing through interior partitions.
 - 1. Cut sleeves to length for mounting flush with both surfaces.
 - 2. Install sleeves that are large enough to provide 1/4-inch (6.4-mm) annular clear space between sleeve and pipe or pipe insulation.
 - 3. Seal annular space between sleeve and piping or piping insulation; use joint sealants appropriate for size, depth, and location of joint. Comply with requirements for sealants specified in Section 079200 "Joint Sealants."
- E. Fire-Barrier Penetrations: Maintain indicated fire rating of walls, partitions, ceilings, and floors at pipe penetrations. Seal pipe penetrations with firestop materials. Comply with requirements for firestopping specified in Section 078400 "Firestopping."

3.2 SLEEVE AND SLEEVE-SEAL SCHEDULE

- A. Use sleeves and sleeve seals for the following piping-penetration applications:
 - 1. Exterior Concrete Walls above Grade:
 - a. Piping Smaller than NPS 6 (DN 150): Cast-iron wall sleeves.
 - b. Piping NPS 6 (DN 150) and Larger: Cast-iron wall sleeves.
 - 2. Exterior Concrete Walls below Grade:
 - a. Piping Smaller than NPS 6 (DN 150): Cast-iron wall sleeves with sleeve-seal system.
 - 1) Select sleeve size to allow for 1-inch (25-mm) annular clear space between piping and sleeve for installing sleeve-seal system.

- b. Piping NPS 6 (DN 150) and Larger: Cast-iron wall sleeves with sleeve-seal system.
 - 1) Select sleeve size to allow for 1-inch (25-mm) annular clear space between piping and sleeve for installing sleeve-seal system.

END OF SECTION

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SECTION 22 10 05 - PLUMBING PIPING

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Pipe, pipe fittings, specialties, and connections for piping systems.
 - 1. Natural Gas.
 - 2. Flanges, unions, and couplings.

1.2 REFERENCE STANDARDS

- A. ANSI Z21.22 - American National Standard for Relief Valves and Automatic Gas Shutoff Devices for Hot Water Supply Systems 2015.
- B. ASME B16.3 - Malleable Iron Threaded Fittings: Classes 150 and 300 2016.
- C. Copper Alloy Tube 2016.
- D. ASTM B828 - Standard Practice for Making Capillary Joints by Soldering of Copper and Copper Alloy Tube and Fittings 2016.
- E. ASTM C425 - Standard Specification for Compression Joints for Vitrified Clay Pipe and Fittings 2004 (Reapproved 2018).
- F. ASTM C564 - Standard Specification for Rubber Gaskets for Cast Iron Soil Pipe and Fittings 2020a.
- G. ASTM D1785 - Standard Specification for Poly(Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80, and 120 2015, with Editorial Revision (2018).
- H. ASTM D2239 - Standard Specification for Polyethylene (PE) Plastic Pipe (SIDR-PR) Based on Controlled Inside Diameter 2012a.
- I. ASTM D2513 - Standard Specification for Polyethylene (PE) Gas Pressure Pipe, Tubing, and Fittings 2019.
- J. AGA - American Gas Association Code

1.3 SUBMITTALS

- A. Product Data: Provide data on pipe materials, pipe fittings, valves, and accessories. Provide manufacturers catalog information. Indicate valve data and ratings.

1.4 QUALITY ASSURANCE

- A. Perform Work in accordance with State of California, standards.
- B. Maintain one copy on project site.

1.5 REGULATORY REQUIREMENTS

- A. Perform Work in accordance with State of California plumbing code.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Provide temporary end caps and closures on piping and fittings. Maintain in place until installation.
- B. Protect piping systems from entry of foreign materials by temporary covers, completing sections of the work, and isolating parts of completed system.

PART 2 - PRODUCTS

2.1 GENERAL REQUIREMENTS

- A. Potable Water Supply Systems: Provide piping, pipe fittings, and solder and flux (if used), that comply with NSF 61 and NSF 372 for maximum lead content; label pipe and fittings.

2.2 DOMESTIC WATER PIPING, BURIED WITHIN 5 FEET (1500 mm) OF BUILDING

- A. Copper Pipe: Class 150 bronze unions with brazed joints below grade, hard drawn, Type K, wrapped.
 - 1. Fittings: ASME B16.18, cast copper alloy or ASME B16.22 wrought copper and bronze.
 - 2. Joints: ASTM B32, alloy Sn95 solder.

2.3 DOMESTIC WATER PIPING, ABOVE GRADE

- A. Copper Tube: ASTM B88 (ASTM B88M), Type L (B), Drawn (H).
 - 1. Fittings: ASME B16.18, cast copper alloy or ASME B16.22, wrought copper and bronze.
 - 2. Joints: ASTM B32, alloy Sn95 solder.

2.4 NATURAL GAS PIPING, BURIED BEYOND 5 FEET (1500 mm) OF BUILDING

- A. Polyethylene Pipe: ASTM D2513, SDR 11.
 - 1. Fittings: ASTM D2683 or ASTM D2513 socket type.
 - 2. Joints: Fusion welded.

2.5 NATURAL GAS PIPING, BURIED WITHIN 5 FEET (1500 mm) OF BUILDING

- A. Steel Pipe: ASTM A53/A53M Schedule 40 black.
 - 1. Fittings: ASTM A234/A234M, wrought steel welding type.

2. Joints: ASME B31.1, welded.
3. Jacket: AWWA C105/A21.5 polyethylene jacket or double layer, half-lapped 10 mil (0.25 mm) polyethylene tape.

2.6 NATURAL GAS PIPING, ABOVE GRADE

- A. Steel Pipe: ASTM A53/A53M Schedule 40 black.
 1. Fittings: ASME B16.3, malleable iron, or ASTM A234/A234M, wrought steel welding type.
 2. Joints: Threaded or welded to ASME B31.1.
 3. All exposed piping shall be painted or jacketed.

2.7 FLANGES, UNIONS, AND COUPLINGS

- A. Unions for Pipe Sizes 3 Inches (80 mm) and Under:
 1. Copper tube and pipe: Class 150 bronze unions with soldered joints.
- B. Grooved and Shouldered Pipe End Couplings:
 1. Housing: Malleable iron clamps to engage and lock, designed to permit some angular deflection, contraction, and expansion; steel bolts, nuts, and washers; galvanized for galvanized pipe.
 2. Sealing gasket: "C" shape composition sealing gasket.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that excavations are to required grade, dry, and not over-excavated.

3.2 PREPARATION

- A. Ream pipe and tube ends. Remove burrs. Bevel plain end ferrous pipe.
- B. Remove scale and dirt, on inside and outside, before assembly.
- C. Prepare piping connections to equipment with flanges or unions.

3.3 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Provide non-conducting dielectric connections wherever jointing dissimilar metals.
- C. Route piping in orderly manner and maintain gradient. Route parallel and perpendicular to

walls.

- D. Install piping to maintain headroom, conserve space, and not interfere with use of space.
- E. Group piping whenever practical at common elevations.
- F. Install piping to allow for expansion and contraction without stressing pipe, joints, or connected equipment.
- G. Provide clearance in hangers and from structure and other equipment for installation of insulation and access to valves and fittings.
- H. Shut-off valves shall be provided on all main branches, runs to risers and where shown on drawings. Locate shut-off valves over T-Bar Ceiling when possible. Provide access panels when shut-off valves are located over hard lid ceilings.
- I. Provide access where valves and fittings are not exposed.
- J. Prepare exposed, unfinished pipe, fittings, supports, and accessories ready for finish painting. Color to be specified by architect.
- K. All exposed, unfinished pipe, fittings, supports, and accessories shall be painted.
- L. All piping, fittings, supports and accessories shall approved UV protection
- M. Install valves with stems upright or horizontal, not inverted. Refer to Section 22 05 23.
- N. Provide stem extension on all valves for piping requiring insulation to ensure valve can be cycled without damaging pipe insulation.
- O. Install water piping to ASME B31.9.
- P. Copper Pipe and Tube: Make soldered joints in accordance with ASTM B828, using specified solder, and flux meeting ASTM B813; in potable water systems use flux also complying with NSF 61 and NSF 372.

3.4 DISINFECTION OF DOMESTIC WATER PIPING SYSTEM

- A. Disinfect water distribution system in accordance with local jurisdiction. Potable water systems shall be disinfected and flushed prior to use by water-chlorination solution and have bacteriological examination made by an approved agency per 2016 California Plumbing Code section 609.9 and as prescribed in AWWA C651. Methods of cleaning / disinfecting for new or repair piping as described in C651 or NFPA 24.
- B. Prior to starting work, verify system is complete, flushed and clean.

3.5 SERVICE CONNECTIONS

- A. See Civil plans for sewer service to the building. Before commencing work check invert elevations required for sewer connections, confirm inverts and ensure that these can be properly connected with slope for drainage and cover to avoid freezing.

B. See Civil plans for water service to the building.

3.6 PIPE MATERIAL SCHEDULES - SEE PLUMBING SHEET P0.01.

END OF SECTION

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SECTION 22 10 06 - PLUMBING PIPING SPECIALTIES

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Drains.
- B. Cleanouts.
- C. Hose bibbs.
- D. Refrigerator valve and recessed box.
- E. Water hammer arrestors.
- F. Trap Primers.
- G. Mixing valves.

1.2 REFERENCE STANDARDS

- A. ASME A112.6.3 - Floor and Trench Drains 2019.
- B. ASME A112.6.4 - Roof, Deck, and Balcony Drains 2008 (Reaffirmed 2012).
- C. ASSE 1011 - Performance Requirements for Hose Connection Vacuum Breakers 2017.
- D. ASSE 1012 - Performance Requirements for Backflow Preventers with an Intermediate Atmospheric Vent 2009.
- E. ASSE 1013 - Performance Requirements for Reduced Pressure Principle Backflow Preventers and Reduced Pressure Principle Fire Protection Backflow Preventers 2011.
- F. ASSE 1019 - Performance Requirements for Wall Hydrant with Backflow Protection and Freeze Resistance 2011 (Reaffirmed 2016).
- G. NSF 61 - Drinking Water System Components - Health Effects 2019.
- H. NSF 372 - Drinking Water System Components - Lead Content 2016.
- I. PDI-WH 201 - Water Hammer Arresters 2017.

1.3 SUBMITTALS

- A. Product Data: Provide component sizes, rough-in requirements, service sizes, and finishes.
- B. Certificates: Certify that grease interceptors meet or exceed specified requirements.

1.4 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the Products specified in this section with not less than three years documented experience.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Accept specialties on site in original factory packaging. Inspect for damage.

PART 2 - PRODUCTS

2.1 GENERAL REQUIREMENTS

- A. Specialties in Potable Water Supply Systems: Provide products that comply with NSF 61 and NSF 372 for maximum lead content.

2.2 HOSE BIBBS

- A. Manufacturers:
 - 1. Woodford: www.woodfordmfg.com.
 - 2. Zurn Industries, LLC: www.zurn.com.
 - 3. Mifab: www.mifab.com
- B. Interior Hose Bibbs (HB-1):
 - 1. ASSE 1019; freeze resistant, self-draining type with chrome plated wall plate hose thread spout, lockshield and removable key, and integral vacuum breaker. Faucet to be housed in a flush mounted, tamper resistant brass wall box.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Extend cleanouts to finished floor or wall surface. Lubricate threaded cleanout plugs with mixture of graphite and linseed oil. Ensure clearance at cleanout for rodding of drainage system.
- C. Encase exterior cleanouts in concrete flush with grade.
- D. Install floor cleanouts at elevation to accommodate finished floor.
- E. Install approved potable water protection devices on plumbing lines where contamination of domestic water may occur; on boiler feed water lines, janitor rooms, fire sprinkler systems, premise isolation, irrigation systems, flush valves, interior and exterior hose bibbs.

- F. Install water hammer arrestors complete with accessible isolation valve on hot and cold water supply piping to lavatory sinks.
- G. Install trap primers where floor drains are installed.

END OF SECTION

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SECTION 31 10 00 – SITE CLEARING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Protecting existing vegetation to remain.
 - 2. Removing existing vegetation.
 - 3. Clearing and grubbing.
 - 4. Removing above- and below-grade site improvements.
 - 5. Disconnecting, capping, or sealing site utilities.
 - 6. Temporary erosion and sedimentation control.

1.2 PREINSTALLATION MEETINGS

- A. Not required.

1.3 MATERIAL OWNERSHIP

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

1.4 FIELD CONDITIONS

- A. Traffic: Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities during site-clearing operations.
 - 1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction.
 - 2. Provide alternate routes around closed or obstructed trafficways if required by Owner or authorities having jurisdiction.
- B. Salvageable Improvements: Carefully remove items indicated to be salvaged and store on Owner's premises.
- C. Utility Locator Service: Notify utility locator service for area where Project is located before site clearing.
- D. Do not commence site clearing operations until temporary erosion- and sedimentation-control are in place.

PART 2 - PRODUCTS

(Not Used)

PART 3 - EXECUTION

3.1 PREPARATION

- A. Protect and maintain benchmarks and survey control points from disturbance during construction.
- B. Protect existing site improvements to remain from damage during construction.
 - 1. Restore damaged improvements to their original condition, as acceptable to Owner.

3.2 TEMPORARY EROSION AND SEDIMENTATION CONTROL

- A. Provide temporary erosion- and sedimentation-control measures to prevent soil erosion and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways, according to erosion- and sedimentation-control Drawings and requirements of authorities having jurisdiction.
- B. Verify that flows of water redirected from construction areas or generated by construction activity do not enter or cross protection zones.
- C. Inspect, maintain, and repair erosion- and sedimentation-control measures during construction until permanent vegetation has been established.
- D. Remove erosion and sedimentation controls, and restore and stabilize areas disturbed during removal.

3.3 TREE AND PLANT PROTECTION

- A. Protect trees and plants remaining on-site according to requirements in Section 01 56 39 "Temporary Tree and Plant Protection."
- B. Repair or replace trees, shrubs, and other vegetation indicated to remain or be relocated that are damaged by construction operations.

3.4 EXISTING UTILITIES

- A. Locate, identify, disconnect, and seal or cap utilities indicated to be removed or abandoned in place.
 - 1. Arrange with utility companies to shut off indicated utilities.
- B. Interrupting Existing Utilities: Do not interrupt utilities serving facilities occupied by Owner or others, unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:

1. Notify Architect and owner not less than 7 days in advance of proposed utility interruptions.
2. Do not proceed with utility interruptions without Architect's written permission.

3.5 CLEARING AND GRUBBING

- A. Remove obstructions, trees, shrubs, and other vegetation to permit installation of new construction.
 1. Grind down stumps and remove roots larger than 3 inches in diameter, obstructions, and debris to a depth of 18 inches below exposed subgrade.
 2. Use only hand methods or air spade for grubbing within protection zones.
- B. Fill depressions caused by clearing and grubbing operations with satisfactory soil material unless further excavation or earthwork is indicated.
 1. Place fill material in horizontal layers not exceeding a loose depth of 8 inches and compact each layer to a density equal to adjacent original ground.

3.6 SITE IMPROVEMENTS

- A. Remove existing above- and below-grade improvements as indicated and necessary to facilitate new construction.

3.7 DISPOSAL OF SURPLUS AND WASTE MATERIALS

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

END OF SECTION

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SECTION 32 12 16 - ASPHALT PAVING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Hot-mix asphalt paving.
 - 2. Hot-mix asphalt overlay.
 - 3. Cold milling of existing asphalt pavement.
 - 4. Hot-mix asphalt patching.
 - 5. Asphalt curbs.
- B. Related Requirements:
 - 1. Section 32 13 13 "Concrete Paving" for concrete pavement and for separate concrete curbs, gutters, and driveway aprons.

1.2 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Per Notes on drawings.

1.3 ACTION SUBMITTALS

- A. Product Data:
 - 1. Herbicide.
- B. Hot-mix asphalt designs.

1.4 INFORMATIONAL SUBMITTALS

- A. Material Certificates: Include statement that mixes containing recycled materials will perform equal to mixes produced from all new materials.
 - 1. Aggregates.
 - 2. Asphalt binder.
 - 3. Tack coat.

1.5 QUALITY ASSURANCE

- A. Regulatory Requirements: Comply with materials, workmanship, and other applicable requirements of section 302-5.5 of the standard specifications for public works construction for asphalt paving work.

1. Measurement and payment provisions and safety program submittals included in standard specifications do not apply to this Section.

PART 2 - PRODUCTS

2.1 AGGREGATES

- A. Coarse Aggregate: ASTM D692/D692M, sound; angular crushed stone, crushed gravel, or cured, crushed blast-furnace slag.
- B. Fine Aggregate: ASTM D1073 or AASHTO M 29, sharp-edged natural sand or sand prepared from stone, gravel, cured blast-furnace slag, or combinations thereof.

2.2 ASPHALT MATERIALS

- A. Asphalt Binder: PG64-10 binder designation.
- B. Retain "Asphalt Cement" Paragraph below with option for viscosity- or penetration-graded asphalt cement if these materials are available and required. Viscosity testing measures properties more accurately than penetration testing. Insert viscosity or penetration grades below if required.
- C. Asphalt Cement: ASTM d1557-12 Modified
- D. Tack Coat: Per drawings.

2.3 AUXILIARY MATERIALS

- A. Herbicide: Commercial chemical for weed control, registered by the EPA, and not classified as "restricted use" for locations and conditions of application. Provide in granular, liquid, or wettable powder form.

PART 3 - EXECUTION

3.1 COLD MILLING

- A. Clean existing pavement surface of loose and deleterious material immediately before cold milling. Remove existing asphalt pavement by cold milling to grades and cross sections indicated.

3.2 PATCHING

- A. Asphalt Pavement: Saw cut perimeter of patch and excavate existing pavement section to sound base. Excavate rectangular or trapezoidal patches, extending 12 inches into perimeter of adjacent sound pavement, unless otherwise indicated. Cut excavation faces vertically. Remove excavated material. Recompact existing unbound-aggregate base course to form new subgrade.
- B. Portland Cement Concrete Pavement: Break cracked slabs and roll as required to reseal concrete pieces firmly.
 1. Remove disintegrated or badly cracked pavement. Excavate rectangular or trapezoidal patches, extending into perimeter of adjacent sound pavement, unless

otherwise indicated. Cut excavation faces vertically. Recompact existing unbound-aggregate base course to form new subgrade.

- C. Tack Coat: Before placing patch material, apply tack coat uniformly to vertical asphalt surfaces abutting the patch. Apply at a rate of 0.10 gal./sq. yd.
 - 1. Allow tack coat to cure undisturbed before applying hot-mix asphalt paving.
 - 2. Avoid smearing or staining adjoining surfaces, appurtenances, and surroundings. Remove spillages and clean affected surfaces.
- D. Placing Patch Material: Fill excavated pavement areas with hot-mix asphalt base mix for full thickness of patch and, while still hot, compact flush with adjacent surface.

3.3 SURFACE PREPARATION

- A. Ensure that prepared subgrade is ready to receive paving. Immediately before placing asphalt materials, remove loose and deleterious material from substrate surfaces.
- B. Herbicide Treatment: Apply herbicide in accordance with manufacturer's recommended rates and written application instructions. Apply to dry, prepared subgrade or surface of compacted-aggregate base before applying paving materials.
 - 1. Mix herbicide with prime coat if formulated by manufacturer for that purpose.
- C. Tack Coat: Apply uniformly to surfaces of existing pavement at a rate of 0.10 gal./sq. yd.
 - 1. Allow tack coat to cure undisturbed before applying hot-mix asphalt paving.
 - 2. Avoid smearing or staining adjoining surfaces, appurtenances, and surroundings. Remove spillages and clean affected surfaces.

3.4 HOT-MIX ASPHALT PLACEMENT

- A. Machine place hot-mix asphalt on prepared surface, spread uniformly, and strike off. Place asphalt mix by hand in areas inaccessible to equipment in a manner that prevents segregation of mix. Place each course to required grade, cross section, and thickness when compacted.
 - 1. Place hot-mix asphalt base course and binder course in number of lifts and thicknesses indicated.
 - 2. Place hot-mix asphalt surface course in single lift.
 - 3. Spread mix at a minimum temperature of 250 deg F.
 - 4. Regulate paver machine speed to obtain smooth, continuous surface free of pulls and tears in asphalt-paving mat.
- B. Place paving in consecutive strips not less than 10 feet wide unless infill edge strips of a lesser width are required.

- C. Promptly correct surface irregularities in paving course behind paver. Use suitable hand tools to remove excess material forming high spots. Fill depressions with hot-mix asphalt to prevent segregation of mix; use suitable hand tools to smooth surface.

3.5 JOINTS

- 1. No joints should be needed.

3.6 COMPACTION

- A. General: Begin compaction as soon as placed hot-mix paving will bear roller weight without excessive displacement. Compact hot-mix paving with hot hand tampers or with vibratory-plate compactors in areas inaccessible to rollers.
 - 1. Complete compaction before mix temperature cools to 185 deg F.
- B. Breakdown Rolling: Complete breakdown or initial rolling immediately after rolling joints and outside edge. Examine surface immediately after breakdown rolling for indicated crown, grade, and smoothness. Correct laydown and rolling operations to comply with requirements.
- C. Intermediate Rolling: Begin intermediate rolling immediately after breakdown rolling while hot-mix asphalt is still hot enough to achieve specified density. Continue rolling until hot-mix asphalt course has been uniformly compacted to the following density:
 - 1. Average Density, Rice Test Method: 92 percent of reference maximum theoretical density in accordance with ASTM D2041/D2041M, but not less than 90 percent or greater than 96 percent.
- D. Finish Rolling: Finish roll paved surfaces to remove roller marks while hot-mix asphalt is still warm.
- E. Edge Shaping: While surface is being compacted and finished, trim edges of pavement to proper alignment. Bevel edges while asphalt is still hot; compact thoroughly.
- F. Protection: After final rolling, do not permit vehicular traffic on pavement until it has cooled and hardened.
- G. Erect barricades to protect paving from traffic until mixture has cooled enough not to become marked.

3.7 INSTALLATION TOLERANCES

- A. Pavement Thickness: Compact each course to produce thickness indicated within the following tolerances:
 - 1. Base Course and Binder Course: Plus or minus 1/2 inch.
 - 2. Surface Course: Plus 1/4 inch, no minus.
- B. Pavement Surface Smoothness: Compact each course to produce surface smoothness within the following tolerances as determined by using a 10-foot straightedge applied transversely or longitudinally to paved areas:

1. Base Course and Binder Course: 1/4 inch.
2. Surface Course: 1/8 inch.
3. Crowned Surfaces: Test with crowned template centered and at right angle to crown. Maximum allowable variance from template is 1/4 inch.

3.8 FIELD QUALITY CONTROL

- A. Testing Agency: Owner will engage a qualified testing agency to perform tests and inspections.
- B. Replace and compact hot-mix asphalt where core tests were taken.
- C. Remove and replace or install additional hot-mix asphalt where test results or measurements indicate that it does not comply with specified requirements.

3.9 WASTE HANDLING

- A. General: Handle asphalt-paving waste in accordance with approved waste management plan required in Section 017419 "Construction Waste Management and Disposal."

END OF SECTION

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SECTION 32 13 13 – CONCRETE PAVING

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Concrete sidewalks, integral curbs, and gutters.

1.2 REFERENCE STANDARDS

- A. ACI 211.1 - Standard Practice for Selecting Proportions for Normal Weight Concrete; American Concrete Institute International; 1991 (Reapproved 2002).
- B. ACI 301 - Specifications for Structural Concrete; American Concrete Institute International; 2010 (Errata 2012).
- C. ACI 304R - Guide for Measuring, Mixing, Transporting, and Placing Concrete; American Concrete Institute International; 2000.
- D. ACI 305R - Hot Weather Concreting; American Concrete Institute International; 2010.
- E. ACI 306R - Cold Weather Concreting; American Concrete Institute International; 2010.
- F. ASTM A615/A615M - Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement; 2014 is current; use 2004a as indicated in 2022 CBC Referenced Standards.
- G. ASTM C33/C33M - Standard Specification for Concrete Aggregates; 2011a is current; use 2003 as indicated in 2022 CBC Referenced Standards.
- H. ASTM C39/C39M - Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens; 2014.
- I. ASTM C94/C94M - Standard Specification for Ready-Mixed Concrete; use 2004a as indicated in 2022 CBC Referenced Standards.
- J. ASTM C150/C150M - Standard Specification for Portland Cement; use 2007 as indicated in 2022 CBC Referenced Standards.
- K. ASTM C309 - Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete; 2011.
- L. ASTM C494/C494M - Standard Specification for Chemical Admixtures for Concrete; 2013.
- M. ASTM D1751 - Standard Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Non-extruding and Resilient Bituminous Types); 2004 (Reapproved 2013).
- N. Standard Specifications for Public Works Construction, County of Los Angeles, latest edition.
 - 1. Standard Specifications shall be as amended and adopted by authorities having jurisdiction, including the County of Los Angeles.
 - 2. Where reference is made to Standard Details, such reference shall be to the Standard Details accompanying the Standard Specifications, as amended and adopted by the authorities having jurisdiction.

3. Wherever term "Agency" occurs in Standard Specifications, it shall be understood to mean Owner for purposes of the Contract.
4. Wherever term "Engineer" occurs in Standard Specifications, it shall be understood to mean Architect for purposes of the Contract.

1.3 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Mix Design: Design mixes for each concrete mix.
- C. Product Data: Provide data on joint filler, admixtures, and curing compound.
 1. Material Certificates signed by manufacturers for each of the following:
 - a. Cementitious materials and aggregates.
 - b. Steel reinforcement and reinforcement accessories.
 - c. Admixtures.
 - d. Curing compounds.
 - e. Joint fillers.
- D. Shop drawings: For pattern layout and verification.

1.4 QUALITY ASSURANCE

- A. Industry Standard: Perform concrete paving Work in accordance with ACI 301.
- B. Regulatory Requirements: Where reference is made to Standard Specifications, the following shall apply:
 - 1.. Perform on-site work as indicated and referenced on the Contract Drawings and as specified herein.
 2. Conform to Standard Specifications for Public Works Construction.
 3. Conform to California Code of Regulations (CCR), Volume 2, Part 2, Chapters 18A and 19A.
 4. Conform to California Building Code (CBC), Chapter 11B and ADAAG for accessibility requirements.
 - a. Concrete paving and concrete finishes along accessible routes of travel shall be at least as slip-resistant as that described as a medium Broom finish for slopes of less than 6%, and slip resistant at slopes of 6% or greater; CBC 11B-403.2.
 5. Comply with OSHA and Cal-OSHA requirements.
 6. Continuous surfaces, including walks and sidewalks, shall have a continuous common surface, not interrupted by steps or by abrupt changes in level exceeding 1/4 inch (3 mm) vertical (CBC 11B-303.2), or beveled at 1:2 slope to a maximum height of 1/2 inch (12 mm) (CBC 11B-303.3) and shall have a minimum width of 48 inches (1219 mm); CBC 11B-403.5.1.
 7. Surface cross slopes shall not exceed 2 percent on any accessible path of travel.

8. Surface slopes shall not exceed 2 percent in any direction for areas of flatwork that have no discernable path of travel. These areas are also known as plaza areas.
- C. Source Quality Control: Obtain like materials from one source throughout.
- D. Lines and Levels: Established by State of California licensed Surveyor or registered Civil Engineer. Costs of surveying services shall be included in the Contract Sum.

1.5 MOCK-UP

- A. Not required

PART 2 - PRODUCTS

2.1 PAVING ASSEMBLIES

- A. Comply with applicable requirements of ACI 301.
- B. Concrete Sidewalks: 2,500 psi (17.2 MPa) 28-day concrete, minimum 4 inches (100 mm), natural grey color Portland cement.

2.2 FORM MATERIALS

- A. Wood form material, profiled to suit conditions.
- B. Joint Filler: Preformed; non-extruding bituminous type (ASTM D 1751).
 1. Thickness: 1/2 inch (12 mm).

2.3 REINFORCEMENT

- A. General: As indicated on drawing
- B. Reinforcing Steel: ASTM A615/A615M Grade 60 (420); deformed billet steel bars; unfinished finish.
 1. Unless detailed otherwise on drawings, provide number 4 reinforcing bars at 18 inches on center, each way.
- C. Tie Wires: 18 gage minimum, black annealed steel.
- D. Construction Joint Reinforcing:
 1. Dowels: ASTM A615/A615M, Grade 60 - 60,000 psi (420 MPa) yield strength; deformed billet steel bars; unfinished finish.

2.4 PERFORMANCE REQUIREMENTS

- A. Albedo reflectance of finish concrete shall be minimum 0.30.

2.5 CONCRETE MATERIALS

- A. Obtain cementitious materials from same source throughout.
- B. Cement: ASTM C150/C150M Sulfate Resistant - Type V portland type, grey color.
- C. Fine and Coarse Mix Aggregates: ASTM C33/C33M.
- D. Water: Clean, and not detrimental to concrete.

2.6 ACCESSORIES

- A. Liquid Curing Compound: ASTM C 309, Type 1, Class A. Comply with all applicable air pollution requirements.
- B. Liquid Surface Sealer:
 - 1. High solids, acrylic curing and sealing compound: Minimum 30% non-yellowing, acrylic solids curing compound; shall conform to ASTM C 309 and ASTM C 1315, Type I, Class A, VOC compliant.
 - a. Acceptable Products:
 - 1) L&M Construction Chemicals, Inc.; Dress & Seal WB: www.lmcc.com.
 - 2) M. Scofield Company; Cureseal-W: www.scofield.com.
 - 3) W. R. Meadows Company; Decra-Seal W/B: www.wrmeadows.com.
 - 4) Substitutions: See Section 01 60 00 - Product Requirements.
- C. Surface Retarder:
 - 1. Color: As selected by Architect from manufacturer's custom range.
 - 2. Acceptable Products:
 - a. Preco EAC-S, manufactured by Fosroc, Inc., Georgetown, KY, or approved equal.
 - b. WR Grace; Grace Top Cast: www.graceconstruction.com
 - c. Substitutions: See Section 01 60 00 - Product Requirements.
- E. Concrete Paving Joint Sealant: Polyurethane, self-leveling; ASTM C920, Class 25, Uses T, I, M and A; single component.
 - 1. Color: Gray.
 - 2. Applications: Use for:
 - a. Joints in sidewalks and vehicular paving.
 - 3. Products:
 - a. Pecora Corporation; NR-201 Self-Leveling Traffic and Loop Sealant: www.pecora.com.
 - b. BASF Construction Chemicals-Building Systems: www.buildingsystems.basf.com.
 - c. Sherwin-Williams Company; Stampede 1SL Polyurethane Sealant: www.sherwin-williams.com.
 - d. Substitutions: See Section 01 60 00 - Product Requirements.
- F. Soil Sterilant: As specified in Standard Specifications for Public Works Construction. Soil sterilant shall comply with all applicable environmental protection and hazardous materials laws and regulations.
- G. Headers and Stakes: Pressure preservative treated Douglas Fir, 2 x 6 inch (50 x 150 mm) nominal size except at curves provide laminated 1 x 6 inch (25 x 150 mm). Use hot dipped galvanized nails only.

- H. Expansion Joint Filler: ASTM D1751, pre-molded, compressible 1/2 inch (12 mm) thick non-extruding bituminous type resilient filler, compatible with joint backing and sealing products.

2.7 CONCRETE MIX DESIGN

- A. Proportioning Normal Weight Concrete: Comply with ACI 211.1 recommendations.
- B. Concrete Mix for Pedestrian (Sidewalk) Pavements, Natural Color, unless indicated otherwise: Standard Specification for Public Works Construction, Section 201-1.1.2 - Class 520-C-2500, with minimum slump of 4-inches
- C. Concrete Strength: Establish required average strength for each type of concrete on the basis of field experience or trial mixtures, as specified in ACI 301.
 - 1. For trial mixtures method, employ independent testing agency acceptable to Architect for preparing and reporting proposed mix designs.
- D. Admixtures: Add acceptable admixtures as recommended in ACI 211.1 and at rates recommended by manufacturer.
 - 1. Use accelerating admixtures in cold weather or set retarding admixtures in hot weather only when approved by Architect. Do not use calcium chloride.
- E. Concrete Properties:
 - 1. Compressive strength, when tested in accordance with ASTM C39/C39M at 28 days; As scheduled.
 - 2. Water-Cement Ratio: Maximum 50 percent by weight.
 - 3. Maximum Slump: 4 inches (100 mm).

2.8 MIXING

- A. Transit Mixers: Comply with ASTM C94/C94M.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify compacted stabilized soil is acceptable and ready to support paving and imposed loads.
- B. Fine grading, checking, shaping, and compacting of subgrade shall be complete before start of concrete paving Work.
- C. Verify gradients and elevations of base are correct.

3.2 PREPARATION

- A. Project Conditions:
 - 1. Water and Dust Control: Maintain control of concrete dust and water at all times. Do not allow adjacent planting areas to be contaminated.
 - 2. Do not place pavement when base surface or ambient temperature is less than 40 degrees F (4 degrees C) or if base surface is wet or frozen.

3. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.
- B. Moisten base to minimize absorption of water from fresh concrete. Do not place concrete on standing water.

3.3 FORMING

- A. Place and secure forms to correct location, dimension, profile, and gradient.
 1. Surfaces and Edges: Provide tooled edges.
- B. Concrete Formwork:
 1. Construct formwork accurately and to configurations and dimensions indicated for finish concrete Work.
 2. Formwork shall be substantial, mortar-tight and braced to maintain position and shape during placement of reinforcing and concrete.
 3. Hold forms rigidly in place by stakes, clamps, spreaders and braces where required to ensure rigidity.
 4. Curbs:
 - a. Construct curb forms with smooth side placed next to exposed concrete face.
 - b. Curb forms shall have true, smooth upper edge.
 - c. Depth of curb forms at back of curbs shall be equal to full depth of curb.
 - d. Depth of face forms shall be equal to full face height of curb.
 - e. Benders or thin plank forms may be used to form curves and at grade changes and curb returns.
 - f. Back forms for curb returns may be made of 1/2 inch (12 mm) thick benders cleated together for full depth of the curb.
 5. Formwork shall not deviate more than 1/4 inch (6 mm) maximum from required positions and levels.
 6. Verify formwork alignment and levels as Work proceeds, promptly making adjustments and adding bracing as necessary.
- C. Assemble formwork to permit easy stripping and dismantling without damaging concrete.
 1. Remove the form on the front of curbs in not less than one hour nor more than 6 hours after the concrete has been placed.
 2. Remove side forms for sidewalks, gutter depressions, island paving and driveways, not less than 12 hours after the finishing has been completed.
- D. Place joint filler vertical in position, in straight lines. Secure to formwork during concrete placement.

3.5 REINFORCEMENT

- A. Place reinforcement at mid-height of slabs-on-grade.
- B. Reinforcement Placement, General: Locate reinforcement as indicated on Drawings or in Standard Specifications, whichever is more stringent.
 - 1. Locate reinforcement to provide required cover by concrete. If not otherwise indicated on Drawings or in Standard Specifications, provide concrete cover in compliance with ACI 318, Table 3.3.2.3.
 - 2. Place, support and secure reinforcement against displacement.
- C. Reinforcement Spacing: Space reinforcement as indicated on Drawings or in Standard Specifications, whichever is more stringent. If not indicated, maintain clear spacing of two times bar diameter but not less than 1-1/2 inch (38 mm) nor less than 1-1/3 times maximum size aggregate.
- D. Coordination: Locate reinforcement to accommodate embedded products and formed openings and recesses.
- E. Reinforcement Supports: Provide load bearing pads under supports or provide precast concrete block bar supports.
- F. Interrupt reinforcement at contraction and expansion joints.
- G. Place dowels to achieve pavement and curb alignment as detailed.
 - 1. Secure tie dowels in place before depositing concrete. Provide No. 3 bars, 18 inch (457 mm) long at 24 inches (610 mm) O.C. for securing dowels where no other reinforcement is provided.

3.6 COLD AND HOT WEATHER CONCRETING

- A. Follow recommendations of ACI 305R when concreting during hot weather.
- B. Follow recommendations of ACI 306R when concreting during cold weather.
- C. Do not place concrete when base surface temperature is less than 40 degrees F (4 degrees C), or surface is wet or frozen.

3.7 PLACING CONCRETE

- A. Mixing: If batch plant is within travel time not exceeding maximum limits, transit mix concrete in accordance with ASTM C94. If travel time exceeds limits, provide alternative means for mixing and submit for review and approval.
- B. Place concrete in accordance with ACI 304R.
- C. Do not place concrete when base surface is wet.
- D. Ensure reinforcement, inserts, embedded parts, formed joints are not disturbed during concrete placement.

- E. Place concrete continuously over the full width of the panel and between predetermined construction joints. Do not break or interrupt successive pours such that cold joints occur.
- F. Use internal vibration to consolidate concrete around reinforcing per industry guidelines.
- G. Place concrete to pattern indicated.

3.8 JOINTS

- A. Align curb, gutter, and sidewalk joints.
- B. Place 1/2 inch (12 mm) wide expansion joints as indicated on Drawings (if not indicated provide at 20 foot (6 m) intervals) and to separate paving from vertical surfaces and other components and in pattern indicated.
 - 1. Place in all concrete walks, other exterior flatwork and concrete curbs and gutters.
 - 2. If expansion joints are not indicated, comply with standard details and specifications of authorities having jurisdiction, including Standard Details for Public Works Construction and Standard Specification for Public Works Construction, as applicable.
 - 3. Place expansion control filler to correct elevation and profile. Form joints with joint filler extending from bottom of pavement to within 1/2 inch (13 mm) of finished surface.
 - 4. Secure to resist movement by wet concrete.
 - 5. Coordinate locations to align expansion joints in adjoining concrete walks, curbs, gutters and other exterior flatwork.
 - 6. Provide expansion joints also at beginning and end of all curved segments.
 - 7. Provide expansion joints also at intersections of concrete curbs and gutters and building footing.
 - 8. Provide expansion joints also at intersections of concrete paving and building footing.
 - 9. Lay out expansion joint locations to occur where possible at penetrations such as handrail posts and columns.
 - 10. Place expansion control filler to correct elevation and profile.
- C. Provide scored joints:
 - 1. As indicated on Drawings. If not indicated, locate joints in compliance with Standard Details and as indicated below.
 - 2. Evenly spaced at maximum 5 feet (1.5 m) intervals for vehicular paving and 5 feet (1.5 m) for pedestrian paving or as indicated on drawing 2/A10.01.
 - 3. Between sidewalks and curbs.

4. Between curbs and pavement.
 5. Lay out control joint locations to occur at penetrations such as handrail posts and columns and where shown on Drawings.
 6. Refer to Architectural, Landscape and Civil Drawings for additional information and joint locations.
- D. Provide keyed joints as indicated.
- E. Saw cut contraction joints 1/8 inch (3 mm) wide at an optimum time after finishing. Cut 1/3 into depth of slab.

3.9 FINISHING

- A. Concrete Paving Finish: ACI 301, two-step trowel finish, followed after surface has achieved initial set by flooding of surface and light rubbing with bristle brush so that concrete fines are exposed slightly.
1. Finish surface less than 6 percent shall receive medium broom finish resembling medium grit sandpaper. CBC 11B-403 and 11B-302.1.
 2. Finish surface greater than 6 percent shall receive heavy broom finish. CBC 11B-403 and 11B-302.1.
 3. Surfaces shall have static coefficients of friction of 1.3 to 1.6 (dry) and 1.2 to 1.4 (wet) when field tested in accordance with ASTM C1028.
 4. Portland cement concrete paving shall be stable, firm, and slip resistant and shall comply with CBC Sections 11B-302 and 11B-403.
- B. Curbs and Gutters: Comply with Standard Specifications.
- C. Specific Finishes:
1. Trowel: Precautions should be taken to ensure that the surface is uniformly troweled so that it is not slippery. Do not over-trowel or burnish the surface.
- D. Curing and Sealing:
1. Place sealer on exposed concrete surfaces immediately after finishing. Apply in accordance with manufacturer's instructions.
 2. Precautions shall be taken in hot weather to prevent plastic cracking resulting from excessively rapid drying at surface as described in CIP 5 Plastic Shrinkage Cracking published by the National Ready Mixed Concrete Association.
 3. Do not cover concrete with plastic sheeting.

3.10 JOINT SEALING

- A. See Section 07 92 00 - Joint Sealants for joint sealer requirements.

3.11 TOLERANCES

- A. ACI 301, Class B, except paving in public rights-of-way shall comply with the Standard Specifications.

- B. Maximum Variation of Surface Flatness: 1/4 inch (6 mm) in 10 ft (3 m).
- C. Maximum Variation from True Position: 1/4 inch (6 mm).

3.12 FIELD QUALITY CONTROL

- A. An independent testing agency will perform field quality control tests, as specified in Section 01 40 00.
 - 1. Provide free access to concrete operations at project site and cooperate with appointed firm.
 - 2. Submit proposed mix design of each class of concrete to inspection and testing firm for review prior to commencement of concrete operations.
 - 3. Tests of concrete and concrete materials may be performed at any time to ensure conformance with specified requirements.
- B. Compressive Strength Tests: ASTM C 39/C 39M. For each test, mold and cure three concrete test cylinders. Obtain test samples for every 75 cu yd (57 cu m) or less of each class of concrete placed each day.
 - 1. Take one additional test cylinder during cold weather concreting, cured on job site under same conditions as concrete it represents.
 - 2. Perform one slump test for each set of test cylinders taken.
- C. Maintain records of placed concrete items. Record date, location of pour, quantity, air temperature, and test samples taken.

3.13 PROTECTION

- A. Immediately after placement, protect pavement from premature drying, excessive hot or cold temperatures, and mechanical injury.
- B. Do not permit pedestrian or vehicular traffic over pavement until 75 percent design strength of concrete has been achieved.
- C. Prohibit all vehicular traffic across pedestrian paving unless suitable base and reinforcement have been added.
- D. Provide lumber ramping and plywood covering where curbs and gutters are subject to vehicular and equipment traffic during construction.
- E. Provide protection of colored concrete in accordance with colored concrete manufacturer's instructions and recommendations.

END OF SECTION

SECTION 32 13 73 – CONCRETE PAVING JOINT SEALANTS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Cold-applied joint sealants.
 - 2. Hot-applied joint sealants.
 - 3. Joint-sealant backer materials.
 - 4. Primers.

1.2 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at project site.

1.3 ACTION SUBMITTALS

- A. Product data.
- B. Samples: Manufacturer's standard color sheets, showing full range of available colors for each type of joint sealant.

1.4 QUALITY ASSURANCE

- A. Qualifications:
 - 1. Installers: Entity that employs installers and supervisors who are trained and approved by manufacturer.

PART 2 - PRODUCTS

2.1 JOINT SEALANTS, GENERAL

- A. Compatibility: Provide joint sealants, backer materials, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by joint-sealant manufacturer, based on testing and field experience.

2.2 COLD-APPLIED JOINT SEALANTS

- A. Single-Component, Nonsag, Silicone Joint Sealant: ASTM D5893/D5893M, Type NS.
- B. Single-Component, Self-Leveling, Silicone Joint Sealant: ASTM D5893/D5893M, Type SL.

- C. Single Component, Pourable, Urethane, Elastomeric Joint Sealant: ASTM C920, Type S, Grade P, Class 25, for Use T.

2.3 HOT-APPLIED JOINT SEALANTS

- A. Hot-Applied, Single-Component Joint Sealant, Type I: ASTM D6690.
- B. Hot-Applied, Single-Component Joint Sealant, Type I or Type II: ASTM D6690.
- C. Hot-Applied, Single-Component Joint Sealant, Type I, II, or III: ASTM D6690.
- D. Hot-Applied, Single-Component Joint Sealant, Type IV: ASTM D6690.

2.4 JOINT-SEALANT BACKER MATERIALS

- A. Joint-Sealant Backer Materials: Nonstaining; compatible with joint substrates, sealants, primers, and other joint fillers; and approved for applications indicated by joint-sealant manufacturer, based on field experience and laboratory testing.
- B. Round Backer Rods for Cold- and Hot-Applied Joint Sealants: ASTM D5249, Type 1, of diameter and density required to control sealant depth and prevent bottom-side adhesion of sealant.
- C. Round Backer Rods for Cold-Applied Joint Sealants: ASTM D5249, Type 3, of diameter and density required to control joint-sealant depth and prevent bottom-side adhesion of sealant.
- D. Backer Strips for Cold- and Hot-Applied Joint Sealants: ASTM D5249; Type 2; of thickness and width required to control joint-sealant depth, prevent bottom-side adhesion of sealant, and fill remainder of joint opening under sealant.

2.5 PRIMERS

- A. Primers: Product recommended by joint-sealant manufacturer where required for adhesion of sealant to joint substrates indicated.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Surface Cleaning of Joints: Before installing joint sealants, clean out joints immediately to comply with joint-sealant manufacturer's written instructions.
- B. Joint Priming: Prime joint substrates where indicated or where recommended in writing by joint-sealant manufacturer.

3.2 INSTALLATION OF JOINT SEALANTS

- A. Comply with joint-sealant manufacturer's written installation instructions for products and applications indicated unless more stringent requirements apply.

- B. Joint-Sealant Installation Standard: Comply with recommendations in ASTM C1193 for use of joint sealants as applicable to materials, applications, and conditions.
- C. Install joint-sealant backers to support joint sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.
 - 1. Do not leave gaps between ends of joint-sealant backer materials.
 - 2. Do not stretch, twist, puncture, or tear joint-sealant backer materials.
 - 3. Remove absorbent joint-sealant backer materials that have become wet before sealant application and replace them with dry materials.
- D. Install joint sealants immediately following backer material installation, using proven techniques that comply with the following:
 - 1. Place joint sealants so they fully contact joint substrates.
 - 2. Completely fill recesses in each joint configuration.
 - 3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.
- E. Tooling of Nonsag Joint Sealants: Immediately after joint-sealant application and before skinning or curing begins, tool sealants in accordance with the following requirements to form smooth, uniform beads of configuration indicated; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint:
 - 1. Remove excess joint sealant from surfaces adjacent to joints.
 - 2. Use tooling agents that are approved in writing by joint-sealant manufacturer and that do not discolor sealants or adjacent surfaces.
- F. Provide joint configuration to comply with joint-sealant manufacturer's written instructions unless otherwise indicated.
- G. Clean off excess joint sealant as the Work progresses, by methods and with cleaning materials approved in writing by joint-sealant manufacturers.

END OF SECTION

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SECTION 32 17 23 – PAVEMENT MARKINGS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Painted markings applied to asphalt paving.
 - 2. Painted markings applied to concrete surfaces.

1.2 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at project site.

1.3 ACTION SUBMITTALS

- A. Product Data:
 - 1. Pavement-marking paint, solvent-borne.
 - 2. Pavement-marking paint, acrylic.
 - 3. Pavement-marking paint, latex.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Contractor to submit product for review.

2.2 PERFORMANCE REQUIREMENTS

- A. Accessibility Standard: Comply with applicable provisions in the USDOJ's "2010 ADA Standards for Accessible Design" and ICC A117.1.

2.3 PAVEMENT-MARKING PAINT

- A. Pavement-Marking Paint, Solvent-Borne: MPI #32, solvent-borne traffic-marking paint.
 - 1. Color: White and Blue.
- B. Pavement-Marking Paint, Acrylic: Acrylic, waterborne emulsion, lead and chromate free, ready mixed, complying with FS TT-P-1952F, Type II, with drying time of less than 45 minutes.
 - 1. Color: White and Blue.
- C. Pavement-Marking Paint, Latex: MPI #97, latex traffic-marking paint.

1. Color: White and Blue.

PART 3 - EXECUTION

3.1 PAVEMENT MARKING

- A. Do not apply pavement-marking paint until layout, colors, and placement have been verified with Architect.
- B. Allow asphalt paving or concrete surfaces to age for a minimum of 30 days before starting pavement marking.
- C. Sweep and clean surface to eliminate loose material and dust.
- D. Apply paint with mechanical equipment to produce pavement markings, of dimensions indicated, with uniform, straight edges. Apply at manufacturer's recommended rates to provide a minimum wet film thickness of 15 mils.
 1. Apply graphic symbols and lettering with paint-resistant, die-cut stencils, firmly secured to asphalt paving or concrete surface.

END OF SECTION

SECTION 32 17 26 – TACTILE WARNING SURFACING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Cast-in-place detectable warning tiles.

1.2 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Samples for each type of exposed finish requiring color selection.

PART 2 - PRODUCTS

2.1 TACTILE WARNING SURFACING, GENERAL

- A. Accessibility Requirements: Comply with applicable provisions in the U.S. Architectural & Transportation Barriers Compliance Board's ADA-ABA Accessibility Guidelines for Buildings and Facilities and ICC A117.1 for tactile warning surfaces.
 - 1. For tactile warning surfaces composed of multiple units, provide units that when installed provide consistent side-to-side and end-to-end dome spacing that complies with requirements.

2.2 DETECTABLE WARNING TILES

- A. Cast-in-Place Detectable Warning Tiles: Accessible truncated-dome detectable warning tiles with replaceable surface configured for setting flush in new concrete walkway surfaces, with slip-resistant surface treatment on domes and field of tile.
 - 1. Material: Molded glass- and carbon-fiber-reinforced polyester.
 - 2. Color: Safety yellow
 - 3. Shapes and Sizes:
 - a. Rectangular panel, 12 by 12 inches.
 - b. Radius panel, nominal 24 inches deep by 6-foot outside radius.
 - 4. Dome Spacing and Configuration: 1.67-inch spacing 2.35-inch spacing Manufacturer's standard compliant spacing, in square [manufacturer's standard pattern.
 - 5. Mounting:
 - a. Permanently embedded detectable warning tile wet-set into freshly poured concrete.
 - b. Detectable warning tile set into formed recess in concrete and adhered with mortar.

- c. Replaceable detectable warning tile wet-set into freshly poured concrete and surface-fastened to permanently embedded anchors.

2.3 ACCESSORIES

- A. Sealant: As recommended by manufacturer for sealing perimeter of tactile warning surfacing unit.

PART 3 - EXECUTION

3.1 INSTALLATION OF TACTILE WARNING SURFACING

- A. General: Prepare substrate and install tactile warning surfacing according to manufacturer's written instructions unless otherwise indicated.
- B. Place tactile warning surfacing units in dimensions and orientation indicated. Comply with location requirements of AASHTO MP 12.
- C. Cast-in-Place Detectable Warning Tiles: Set each detectable warning tile accurately and firmly in place and completely seat tile back and embedments in wet concrete by tamping or vibrating. Set surface of tile flush with surrounding concrete and adjacent tiles. Remove concrete from tile surfaces and clean using methods recommended in writing by manufacturer.
- D. Remove and replace tactile warning surfacing that is broken or damaged or does not comply with requirements in this Section. Remove in complete sections from joint to joint unless otherwise approved by Architect. Replace using tactile warning surfacing installation methods acceptable to Architect.
- E. Protect tactile warning surfacing from damage and maintain free of stains, discoloration, dirt, and other foreign material.

END OF SECTION



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APPENDIX A – Asbestos & Lead Survey



Magnolia Environmental, LLC

Project:

Limited Asbestos and Lead Survey Report

550 E. 6th St.

Beaumont, CA 92223

Project Number: 3541

Local Office:

Magnolia Environmental

1100 E. Orangethorpe Ave. Unit 200-Z1

Anaheim, CA 92801

Office: 562-922-3144

Client:

City of Beaumont

Date Report Issued:

November 3, 2021

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INTRODUCTION

The client referenced above retained Magnolia Environmental to perform an environmental evaluation that included: asbestos-containing material (ACM) and lead-based paint (LBP), at the property referenced above prior to renovation. The evaluation included the sampling of suspect asbestos containing materials, potential lead-based paint, and a visual assessment in areas that will be impacted during the renovation project at the subject property. Industrial hygienist, Andrea Pulsipher Cal-OSHA Certified Asbestos Consultant (CAC) No. 17-5929, and California Department of Public Health (CDPH) Certified Lead Inspector/Assessor No. LRC-00003897, performed the on-site hazard evaluation on October 21, 2021.

Magnolia Environmental report is for the exclusive use of our client referenced above and applies only to the structures referenced above or portion thereof. No one other than our client or those contracted by our client may utilize, reference, or otherwise rely on this report without prior written consent from Magnolia Environmental.

DESCRIPTION OF FACILITY/WORK AREA

Work area is located in a commercial building. Our inspector noted that the ceiling plaster was damaged. Causes to the disturbance is unknown.

PURPOSE AND SCOPE

The purpose of this investigation is to perform a hazardous materials environmental evaluation in order to aid our client referenced above prior to renovation at the subject property.

Magnolia Environmental's scope of work included:

- A visual reconnaissance of the impacted areas on the property to evaluate the possible presence of ACM and LBP
- Collection of bulk samples of suspect ACM, submittal to a NVLAP accredited laboratory for analysis.
- Collection of paint was sampled for potential LBP by XRF analysis.
- Assessment of the condition of potential ACM and LBP.
- Preparation of this report, which presents our data and summarizes the assessed materials.



METHODS

A. ASBESTOS

Suspect asbestos materials are sampled and later identified using the Polarized Light Microscopy (PLM) method in accordance with the EPA Interim method of the Determination of Asbestos in Bulk Samples (EPA/600/ R-93/116, July 1993). Sampling was performed in accordance with 40 CFR 763.86. Homogeneous areas were based on the total functional space. Number of samples per homogeneous area was taken as recommended under said section "Sampling Procedures". The PLM Method is the most commonly used method to analyze building materials for the presence of asbestos. This method utilizes the optical properties of minerals to identify the selected constituent. The use of this method enables identification of the type and the percentage of asbestos in each sample. The detection limit of the PLM method for asbestos identification is about one (1) percent asbestos. Because the State of California recognizes asbestos-containing building material (ACBM) as any material, which contains greater than or equal to one tenth of one percent (.1) asbestos, materials containing "trace" amounts of asbestos are reported as ACBM in the State of California. CSC recommends Transmission Electron Microscopy (TEM) analysis for asbestos samples with one percent (1%) or less asbestos content and Point Count Method with results ranging between two percent (2%) and ten percent (10%) when analyzed via PLM.

Documentation of the laboratory results should be retained as a reference for general building safety and maintenance, and for any future renovation/ demolition activities.

INSPECTION PROCEDURE (763.85)

Areas Inspected: The inspector performed a preliminary walk-through to designate the functional spaces. She also noted which areas had homogeneous materials.

The inspector then visually inspected each accessible room that will be impacted during the renovation. The inspector touched suspect materials to determine if they were friable. For each suspect material, the inspector noted its condition and the potential for disturbance.

Quantities: Suspect asbestos-containing materials identified at the site were quantified. For general functional space measurements were used. Such measurements provide "approximate square or linear footage" (763.93 (d)(2)(ii)). Suspect Asbestos-Containing Materials: were sampled for laboratory analysis or were visually identified as ACM. Magnolia Environmental collected a total of Forty Eight (48) bulk samples of suspect ACM material. The samples were transferred following proper chain of custody protocol to Ecologics Laboratories, located at 2487 Orangethorpe Ave. Fullerton, CA 92831, for analysis. Ecologics Laboratories is an accredited laboratory for bulk asbestos analysis under the National Institute of Standards and Technology, National Voluntary Laboratory Accreditation Program (CertificationNumber 600190-0).

A total of 48 bulk samples were collected. Below is a list of samples collected:

- GB-1 Gypsum board
- GB-2 Gypsum board
- GB-3 Gypsum board
- JC-1 Joint compound
- JC-2 Joint compound
- JC-3 Joint compound
- CB-1 Cove base – black
- CB-2 Cove base – black
- CB-3 Cove base – black
- CT-1 2'x4' Ceiling tile – white
- CT-2 2'x4' Ceiling tile – white
- CT-3 2'x4' Ceiling tile - white



List of bulk samples of suspect ACM collected continued:

- F-1 Ceramic flooring grout
- F-2 Ceramic flooring grout
- F-3 Ceramic flooring grout
- R1-1 Roofing layer 1
- R1-2 Roofing layer 2
- R1-3 Roofing layer 3
- P-1 Interior plaster
- P-2 Interior plaster
- P-3 Interior plaster
- R2-1 Roofing layer 2
- R2-2 Roofing layer 2
- R2-3 Roofing layer 2
- CM-1 Carpet mastic
- CM-2 Carpet mastic
- RF-1 Roofing felt – layer 3
- RF-2 Roofing felt – layer 3
- RF-3 Roofing felt – layer 3
- PM-1 Penetration mastic
- PM-2 Penetration mastic
- PM-3 Penetration mastic
- CT2-1 1’x1’ Ceiling tile
- CT2-2 1’x1’ Ceiling tile
- CT2-3 1’x1’ Ceiling tile
- CTM-1 Brown ceiling tile mastic
- CTM-2 Brown ceiling tile mastic
- CTM-3 Brown ceiling tile mastic
- P2-1 Interior plaster (building B)
- P2-2 Interior plaster (building B)
- P2-3 Interior plaster (building B)
- WP-1 Window putty
- WP-2 Window putty
- WP-3 Window putty
- S-1 Stucco
- S-2 Stucco
- S-3 Stucco

B. LEAD-BASEDPAINT

Our inspector analyzed Twenty Two (22) paint samples from representative surfaces of the areas that will be impacted during the renovation. The samples were analyzed via XRF analysis; results are attached in appropriate appendixes.



RESULT

A. ASBESTOS

Forty Eight (48) bulk samples were taken using polarized light microscopy (PLM). The following table summarizes the results of the sample analysis and of the visual assessment. A complete list of sample results can be found in the laboratory sheets at the end of this report.

TABLE I: ACM RESULTS

MTL #	Sample ID	Material Description	Sample Location	F/NF ¹	Cond. ²	%ACM	# Samples	Est. Quantity
01	GB	Gypsum Board	Gypsum board sampled from the kitchen, finance, and women's bathroom	NF	G	0%	3	1,680 SF
02	JC	Joint Compound	Joint compound sampled from the kitchen, customer service, and men's bathroom	NF	G	0%	3	1,680 SF
03	CB	Cove Base – Black	Black cove base sampled from finance, customer service, and kitchen	NF	G	0%	3	75 SF
04	CT	2'x4' Ceiling Tile – White	2'x4' White ceiling tile sampled from the kitchen, finance, and customer service	NF	G	0%	3	163 SF
05	F	Ceramic Flooring Grout	Ceramic flooring grout sampled from the kitchen, men's bathroom, and women's bathroom	NF	G	0%	3	403 SF
06	R1	Roofing Layer 1	Roofing (layer 1) sampled from the roof	NF	G	0%	3	5,031 SF
07	P	Interior Plaster	Interior plaster sampled from the kitchen, finance, and customer service	F	D	0%	3	1,680 SF
08	R2	Roofing Layer 2	Roofing (layer 2) sampled from the roof	NF	G	0%	3	5,031 SF
09	CM	Carpet Mastic	Carpet mastic sampled from the kitchen and finance	NF	G	0%	3	1,180 SF
10	RF	Roofing Felt Layer 3	Roofing felt (layer 3) sampled from the roof	NF	G	0%	3	5,031 SF
11	PM	Penetration Mastic	Penetration mastic sampled from the roof penetrations including skylights	NF	G	7%	3	80 SF
12	CT2	1'x1' Ceiling Tile	1'x1' Ceiling tile sampled from the kitchen and finance	NF	G	0%	3	1,400 SF
13	CTM	Brown Ceiling Tile Mastic	Brown ceiling tile mastic sampled from the kitchen and finance	NF	G	0%	3	1,400 SF



MTL #	Sample ID	Material Description	Sample Location	F/NF ¹	Cond. ²	%ACM	# Samples	Est. Quantity
14	P2	Interior Plaster – Building B	Interior plaster sampled from the North wall in building B	NF	G	0%	3	2,000 SF
15	WP	Window Putty	Window putty sampled from the North windows of building B	NF	G	0%	3	2,000 SF
16	S	Stucco	Stucco sampled from the exterior of building B	NF	G	<0.1%	3	2,000 SF

¹-F=Friable; NF= Non-Friable

²-Cond = condition of Materials. Either good (G), damaged (D), or significantly damaged (SD)

*See the laboratory report and chain custodies for the complete list materials tested and the sampling locations.

**Listed square footage is an estimate and should not be used for bidding purposes. Contractor should confirm quantities.

**Should the demolition/renovation process reveal any additional suspect asbestos-containing materials; work must stop until the suspect materials are tested for asbestos content.



B. LEAD-BASED PAINT

TABLE II: LBP RESULTS

Lead Paint XRF Results								
Read No.	Site Location	Component	Substrate	Side ¹	Paint Cond. ²	Color	Lead Content (mg/cm ²)	Classification ³
1	Calibration						1.0	
2	Calibration						1.0	
3	Calibration						1.0	
4	Admin	Wall	Gypsum Board	C	I	Grey	0.1	LCP
5	Admin	Wall	Gypsum Board	A	I	Brown	0.1	LCP
6	Kitchen	Wall	Gypsum Board	C	I	Grey	0.2	LCP
7	Kitchen	Door	Wood	A	I	White	0.0	BDL
8	Kitchen	Floor	Ceramic	Center	I	Grey	0.0	BDL
9	Kitchen	Base	Ceramic	A	I	Brown	0.0	BDL
10	Kitchen	Wall	Gypsum Board	D	I	Beige	0.2	LCP
11	Roof	Layer Roof	Rolled Roof	Center	I	White	0.0	BDL
12	Roof	Flashing	Metal	A	I	White	0.2	LCP
13	Exterior	Wall	Stucco	A	I	Beige	0.4	LCP
14	Roof	Exhaust	Metal	B	I	White	0.0	BDL
15	Finance	Wall	Plaster	C	I	Grey	0.2	LCP
16	Customer Service	Wall	Plaster	A	I	Grey	0.2	LCP
17	Building B	Wall	Plaster	C	I	Beige	0.0	BDL
18	Building B	Windowsill	Wood	C	I	White	0.0	BDL
19	Building B	Window Frame	Wood	C	I	White	0.0	BDL
20	Building B	Window Frame	Wood	C	D	Beige	1.6	LBP



Lead Paint XRF Results								
Read No.	Site Location	Component	Substrate	Side ¹	Paint Cond. ²	Color	Lead Content (mg/cm ²)	Classification ³
21	Building B	Window	Metal	C	D	Beige	1.1	LBP
22	Building B	Wall	Stucco	C	I	Beige	0.0	BDL
23	Women's Bathroom	Wall	Gypsum Board	B	I	White	0.0	BDL
24	Women's Bathroom	Base of Wall	Ceramic	A	I	White	0.3	LCP
25	Men's Bathroom	Floor	Ceramic	Center	I	Grey	0.0	BDL

Legend:

mg/cm² = milligrams per centimeter squared

¹ Side: A=Street side, B = To the left of side A, C = Across side A, D = To the right of side A, Center = Center of area

² Paint Condition: I = Intact, D = Deteriorated

³ Classification:

BDL = Below the XRF's detection level; less than 0.1 mg/cm².

LCP = Lead Containing Paints; any detectable concentration

LBP = Lead-Based Paints; equal to or exceeding 1.0 mg/cm² or 0.5 mg/cm² for City of San Diego or 0.7 mg/cm² for Los Angeles County.

*Paint conditions are based on visual observations in survey areas. Different conditions may be present in other areas of the Subject Property. Limit of Detection (LOD) is 0.1 mg/cm²



CONCLUSION / RECOMMENDATIONS

A. ASBESTOS

According to bulk sampling and visual inspection of impacted areas, asbestos-containing materials were present in the following materials sampled:

- Penetration mastic
- Stucco

The stucco was further analyzed via 1,000 point count and was found to contain <0.1% asbestos.

The stucco and penetration mastic should be abated by a licensed abatement contractor. Abatement by a licensed abatement contractor is recommended prior to disturbance of asbestos containing materials.

It is always necessary to comply with the pertinent provisions of EPA, OSHA and AQMD regulations during any removal or repair activities that may disturb the asbestos-containing materials that may have been inaccessible and or untested during the survey. Caution should be taken when inaccessible and untested areas are disturbed.

The Environmental protection Agency (EPA) and California OSHA (Cal/OSHA) define materials which contain more than one percent asbestos to be asbestos containing materials (ACM). In addition, Cal/ OSHA defines any manufactured construction material more than 0.1% asbestos as asbestos-containing construction materials (ACCMs). Cal/OSHA also requires notification and registration of the contractor when disturbing materials with more than one-tenth of one percent asbestos and regulates worker protection whenever materials containing any detectable levels of asbestos are disturbed.

B. LEAD

Based on the field assessment and XRF analysis, Lead-Based paint was detected on the following materials sampled:

- Building B beige window frame
- Building B beige window

It is recommended that peeling/flaking lead-based paint in the surveyed areas be subjected to a scraping/stabilization process designed to remove loose/flaking paint chips. Such an effort, as well as any other future work involving disturbances to the lead-based paint identified during this survey, should only be performed by persons who are properly qualified and trained to perform lead-related work, with the work performed using proper work practices and controls and in accordance with applicable lead regulations (e.g., T8, CCR, §1532.1).



If, during future work, materials or surface coatings suspected to contain asbestos or lead are encountered that were not specifically addressed during this survey (e.g., under/behind existing materials or in areas that were not included in the scope of this survey), the newly discovered suspect materials/surface coatings should be appropriately evaluated for asbestos and/or lead content prior to initiating any work or activities involving their disturbance. It is always necessary to comply with the pertinent provisions of EPA, OSHA regulations during any removal or repair activities that may disturb the lead-containing materials that may have been inaccessible and untested areas during this survey. Caution should be taken when inaccessible and untested areas are disturbed.

LIMITATIONS

Magnolia Environmental prepared this asbestos and lead survey for the client referenced above. No warranties expressed or implied, are made by Magnolia Environmental or its employees as to the use of any information, apparatus, product, or process disclosed in this report. Though reasonable efforts have been made to assure correctness, if a Contractor is employed, he should bring any discrepancies to the immediate attention of Magnolia Environmental.

We have employed state-of-the-art practices to perform this analysis of risk and identification, but this evaluation is severely limited in scope to areas accessible to a visual inspection or through reasonable means of the areas evaluated. No demolition or product review was performed in attempts to reveal material compositions. Our services consist of professional opinions and recommendations made in accordance with generally accepted engineering principles and practices and are designed to provide an analytical tool to assist the client. Magnolia Environmental or those representing Magnolia Environmental bear no responsibility for the actual condition of the structure or safety of a site pertaining to asbestos and/or asbestos contamination regardless of the actions taken by the client.

Magnolia Environmental appreciated having the opportunity to inspect your property. If you have any questions regarding this survey or other environmental hazards, please don't hesitate to contact us at (562) 922-3144 or at Office@Magnoliaenvironmental.com.



Andrea Pulsipher Project
Consultant CAC No. 17-5929
CDPH Lead Inspector/Assessor LRC-00003897



APPENDIX A

**ASBESTOS LABORATORY ANALYTICAL RESULTS
AND CHAIN OFCUSTODY**





Ecologics Laboratories

2487 E. Orangethorpe Ave.
 Fullerton, CA 92831
 Phone (714)632-8118
 NVLAP Lab Code:600190-0

PLM Bulk Asbestos Report

Client: Magnolia Environmental
 Address: 1100 E. Orangethorpe Ave. Anaheim, CA 92801
 Project #: 3541
 Project Location: 550 E. 6th St. Beaumont, CA 92223
 Date Received: 10/21/2021

LAB Job #: 211021030
 Project Name: N/A
 No of Samples: 48
 Collected By: A. Pulsipher
 Date Analyzed: 10/23/2021

Client ID	Layer #	Lab ID	Asbestos Present	% Asbestos / Type
GB-1	211021030.01.A	211021030.01	No	NAD
Location : Kitchen				
Analyst Description / Color : Gypsum Board, Firm, Homogenous, White				
Asbestos Type : NONE				
Other Material Type : 5% Cellulose, 5% Fiberglass, 90% Non-Fibrous Material				
GB-2	211021030.02.A	211021030.02	No	NAD
Location : Finance				
Analyst Description / Color : Gypsum Board, Firm, Homogenous, White				
Asbestos Type : NONE				
Other Material Type : 5% Cellulose, 5% Fiberglass, 90% Non-Fibrous Material				
GB-3	211021030.03.A	211021030.03	No	NAD
Location : W. Bathroom				
Analyst Description / Color : Gypsum Board, Firm, Homogenous, White				
Asbestos Type : NONE				
Other Material Type : 10% Cellulose, 5% Fiberglass, 85% Non-Fibrous Material				
JC-1	211021030.04.A	211021030.04	No	NAD
Location : Kitchen				
Analyst Description / Color : Joint Compound, Firm, Homogenous, White				
Asbestos Type : NONE				
Other Material Type : 100% Non-Fibrous Material				
JC-2	211021030.05.A	211021030.05	No	NAD
Location : Customer Service				
Analyst Description / Color : Joint Compound, Firm, Homogenous, White				
Asbestos Type : NONE				
Other Material Type : 100% Non-Fibrous Material				
JC-3	211021030.06.A	211021030.06	No	NAD
Location : M. Bathroom				
Analyst Description / Color : Joint Compound, Firm, Homogenous, White				
Asbestos Type : NONE				
Other Material Type : 100% Non-Fibrous Material				
CB-1	211021030.07.A	211021030.07	No	NAD
Location : Finance				
Analyst Description / Color : Cove Base, Homogenous, Flexible, Black				
Asbestos Type : NONE				
Other Material Type : 100% Non-Fibrous Material				



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LAB Job #: 211021030
 Project Name: N/A
 No of Samples: 48
 Collected By: A. Pulsipher
 Date Analyzed: 10/23/2021

Client ID	Layer #	Lab ID	Asbestos Present	% Asbestos / Type
CB-1	211021030.07.B	211021030.07	No	NAD
Location	: Finance			
Analyst Description / Color	: Mastic, Soft, Homogenous, Yellow			
Asbestos Type	: NONE			
Other Material Type	: 35% Cellulose, 65% Non-Fibrous Material			
CB-2	211021030.08.A	211021030.08	No	NAD
Location	: Customer Service			
Analyst Description / Color	: Cove Base, Homogenous, Flexible, Black			
Asbestos Type	: NONE			
Other Material Type	: 100% Non-Fibrous Material			
CB-2	211021030.08.B	211021030.08	No	NAD
Location	: Customer Service			
Analyst Description / Color	: Mastic, Soft, Homogenous, Yellow			
Asbestos Type	: NONE			
Other Material Type	: 100% Non-Fibrous Material			
CB-3	211021030.09.A	211021030.09	No	NAD
Location	: Kitchen			
Analyst Description / Color	: Cove Base, Homogenous, Flexible, Black			
Asbestos Type	: NONE			
Other Material Type	: 100% Non-Fibrous Material			
CB-3	211021030.09.B	211021030.09	No	NAD
Location	: Kitchen			
Analyst Description / Color	: Mastic, Soft, Homogenous, Yellow			
Asbestos Type	: NONE			
Other Material Type	: 100% Non-Fibrous Material			
CT-1	211021030.10.A	211021030.10	No	NAD
Location	: Kitchen			
Analyst Description / Color	: Ceiling Tile, Firm, Homogenous, Brown			
Asbestos Type	: NONE			
Other Material Type	: 15% Fiberglass, 20% Cellulose, 65% Non-Fibrous Material			
CT-2	211021030.11.A	211021030.11	No	NAD
Location	: Finance			
Analyst Description / Color	: Ceiling Tile, Firm, Homogenous, Brown			
Asbestos Type	: NONE			
Other Material Type	: 15% Fiberglass, 20% Cellulose, 65% Non-Fibrous Material			



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LAB Job #: 211021030
 Project Name: N/A
 No of Samples: 48
 Collected By: A. Pulsipher
 Date Analyzed: 10/23/2021

Client ID	Layer #	Lab ID	Asbestos Present	% Asbestos / Type
CT-3	211021030.12.A	211021030.12	No	NAD
Location	: Customer Service			
Analyst Description / Color	: Ceiling Tile, Firm, Homogenous, Brown			
Asbestos Type	: NONE			
Other Material Type	: 15% Fiberglass, 20% Cellulose, 65% Non-Fibrous Material			
F-1	211021030.13.A	211021030.13	No	NAD
Location	: Kitchen			
Analyst Description / Color	: Grout, Firm, Homogenous, Gray			
Asbestos Type	: NONE			
Other Material Type	: 2% Cellulose, 98% Non-Fibrous Material			
F-2	211021030.14.A	211021030.14	No	NAD
Location	: Men's Bathroom			
Analyst Description / Color	: Grout, Firm, Homogenous, Gray			
Asbestos Type	: NONE			
Other Material Type	: 2% Cellulose, 98% Non-Fibrous Material			
F-3	211021030.15.A	211021030.15	No	NAD
Location	: Women's Bathroom			
Analyst Description / Color	: Grout, Firm, Homogenous, Gray			
Asbestos Type	: NONE			
Other Material Type	: 2% Cellulose, 98% Non-Fibrous Material			
R1-1	211021030.16.A	211021030.16	No	NAD
Location	: Roof			
Analyst Description / Color	: Roof Material, Fibrous, Firm, Homogenous, Black, White			
Asbestos Type	: NONE			
Other Material Type	: 65% Synthetic Fiber, 15% Non-Fibrous Material, 20% Tar			
R1-2	211021030.17.A	211021030.17	No	NAD
Location	: Roof			
Analyst Description / Color	: Roof Material, Fibrous, Firm, Homogenous, Black, White			
Asbestos Type	: NONE			
Other Material Type	: 65% Synthetic Fiber, 15% Non-Fibrous Material, 20% Tar			
R1-3	211021030.18.A	211021030.18	No	NAD
Location	: Roof			
Analyst Description / Color	: Roof Material, Fibrous, Firm, Homogenous, Black, White			
Asbestos Type	: NONE			
Other Material Type	: 65% Synthetic Fiber, 15% Non-Fibrous Material, 20% Tar			



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LAB Job #: 211021030
 Project Name: N/A
 No of Samples: 48
 Collected By: A. Pulsipher
 Date Analyzed: 10/23/2021

Client ID	Layer #	Lab ID	Asbestos Present	% Asbestos / Type
P-1	211021030.19.A	211021030.19	No	NAD
Location	: Kitchen			
Analyst Description / Color	: Plaster Composite, Granular, Cementitious, Homogenous, Tan			
Asbestos Type	: NONE			
Other Material Type	: 100% Non-Fibrous Material			
P-2	211021030.20.A	211021030.20	No	NAD
Location	: Finance			
Analyst Description / Color	: Plaster Composite, Granular, Cementitious, Homogenous, Tan			
Asbestos Type	: NONE			
Other Material Type	: 100% Non-Fibrous Material			
P-3	211021030.21.A	211021030.21	No	NAD
Location	: Customer Service			
Analyst Description / Color	: Plaster Composite, Granular, Cementitious, Homogenous, Tan			
Asbestos Type	: NONE			
Other Material Type	: 100% Non-Fibrous Material			
R2-1	211021030.22.A	211021030.22	No	NAD
Location	: Roof			
Analyst Description / Color	: Roofing Material, Fibrous, Firm, Homogenous, Black, Gray			
Asbestos Type	: NONE			
Other Material Type	: 45% Fiberglass, 40% Non-Fibrous Material, 15% Tar			
R2-2	211021030.23.A	211021030.23	No	NAD
Location	: Roof			
Analyst Description / Color	: Roofing Material, Fibrous, Firm, Homogenous, Black			
Asbestos Type	: NONE			
Other Material Type	: 55% Cellulose, 5% Non-Fibrous Material, 40% Tar			
R2-3	211021030.24.A	211021030.24	No	NAD
Location	: Roof			
Analyst Description / Color	: Roofing Material, Fibrous, Firm, Homogenous, Black			
Asbestos Type	: NONE			
Other Material Type	: 45% Fiberglass, 15% Non-Fibrous Material, 40% Tar			
CM-1	211021030.25.A	211021030.25	No	NAD
Location	: Kitchen			
Analyst Description / Color	: Carpet Mastic, Soft, Homogenous, Yellow			
Asbestos Type	: NONE			
Other Material Type	: 100% Non-Fibrous Material			



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LAB Job #: 211021030
 Project Name: N/A
 No of Samples: 48
 Collected By: A. Pulsipher
 Date Analyzed: 10/23/2021

Client ID	Layer #	Lab ID	Asbestos Present	% Asbestos / Type
CM-2	211021030.26.A	211021030.26	No	NAD
Location	: Finance			
Analyst Description / Color	: Carpet Mastic, Soft, Homogenous, Yellow			
Asbestos Type	: NONE			
Other Material Type	: 100% Non-Fibrous Material			
CM-3	211021030.27.A	211021030.27	No	NAD
Location	: Finance			
Analyst Description / Color	: Carpet Mastic, Soft, Homogenous, Yellow			
Asbestos Type	: NONE			
Other Material Type	: 100% Non-Fibrous Material			
RF-1	211021030.28.A	211021030.28	No	NAD
Location	: Roof Layer 3			
Analyst Description / Color	: Roof Felt , Fibrous, Paper-Like, Homogenous, Black			
Asbestos Type	: NONE			
Other Material Type	: 65% Cellulose, 10% Non-Fibrous Material, 25% Tar			
RF-1	211021030.28.B	211021030.28	No	NAD
Location	: Roof Layer 3			
Analyst Description / Color	: Mastic, Soft, Homogenous, Black			
Asbestos Type	: NONE			
Other Material Type	: 10% Non-Fibrous Material, 90% Tar			
RF-2	211021030.29.A	211021030.29	No	NAD
Location	: Roof Layer 3			
Analyst Description / Color	: Roof Felt , Fibrous, Paper-Like, Homogenous, Black			
Asbestos Type	: NONE			
Other Material Type	: 65% Cellulose, 10% Non-Fibrous Material, 25% Tar			
RF-2	211021030.29.B	211021030.29	No	NAD
Location	: Roof Layer 3			
Analyst Description / Color	: Mastic, Soft, Homogenous, Black			
Asbestos Type	: NONE			
Other Material Type	: 10% Non-Fibrous Material, 90% Tar			
RF-3	211021030.30.A	211021030.30	No	NAD
Location	: Roof Layer 3			
Analyst Description / Color	: Roof Felt , Fibrous, Paper-Like, Homogenous, Black			
Asbestos Type	: NONE			
Other Material Type	: 65% Cellulose, 10% Non-Fibrous Material, 25% Tar			



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 Date Received: 10/21/2021

LAB Job #: 211021030
 Project Name: N/A
 No of Samples: 48
 Collected By: A. Pulsipher
 Date Analyzed: 10/23/2021

Client ID	Layer #	Lab ID	Asbestos Present	% Asbestos / Type
RF-3	211021030.30.B	211021030.30	No	NAD
Location : Roof Layer 3 Analyst Description / Color : Mastic, Soft, Homogenous, Black Asbestos Type : NONE Other Material Type : 10% Non-Fibrous Material, 90% Tar				
PM-1	211021030.31.A	211021030.31	Yes	7% Chrysotile
Location : Roof Penetration - Including skylights Analyst Description / Color : Penetration Mastic, Firm, Homogenous, Black, Gray Asbestos Type : Chrysotile Other Material Type : 8% Non-Fibrous Material, 85% Tar				
PM-2	211021030.32.A	211021030.32	Stop	PS
Location : Roof Penetration - Including skylights Analyst Description / Color : Not Analyzed - Positive Stop Asbestos Type : NONE Other Material Type :				
PM-3	211021030.33.A	211021030.33	Stop	PS
Location : Roof Penetration - Including skylights Analyst Description / Color : Not Analyzed - Positive Stop Asbestos Type : NONE Other Material Type :				
CT2-1	211021030.34.A	211021030.34	No	NAD
Location : Kitchen Analyst Description / Color : Ceiling Tile, Firm, Homogenous, Brown, White Asbestos Type : NONE Other Material Type : 80% Cellulose, 20% Non-Fibrous Material				
CT2-2	211021030.35.A	211021030.35	No	NAD
Location : Finance Analyst Description / Color : Ceiling Tile, Firm, Homogenous, Brown, White Asbestos Type : NONE Other Material Type : 80% Cellulose, 20% Non-Fibrous Material				
CT2-3	211021030.36.A	211021030.36	No	NAD
Location : Finance Analyst Description / Color : Ceiling Tile, Firm, Homogenous, Brown, White Asbestos Type : NONE Other Material Type : 80% Cellulose, 20% Non-Fibrous Material				



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 Project #: 3541
 Project Location: 550 E. 6th St. Beaumont, CA 92223
 Date Received: 10/21/2021

LAB Job #: 211021030
 Project Name: N/A
 No of Samples: 48
 Collected By: A. Pulsipher
 Date Analyzed: 10/23/2021

Client ID	Layer #	Lab ID	Asbestos Present	% Asbestos / Type
CTM-1	211021030.37.A	211021030.37	No	NAD
Location	: Kitchen			
Analyst Description / Color	: Mastic, Firm, Homogenous, Brown			
Asbestos Type	: NONE			
Other Material Type	: 3% Cellulose, 97% Non-Fibrous Material			
CTM-2	211021030.38.A	211021030.38	No	NAD
Location	: Finance			
Analyst Description / Color	: Mastic, Firm, Homogenous, Brown			
Asbestos Type	: NONE			
Other Material Type	: 3% Cellulose, 97% Non-Fibrous Material			
CTM-3	211021030.39.A	211021030.39	No	NAD
Location	: Finance			
Analyst Description / Color	: Mastic, Firm, Homogenous, Brown			
Asbestos Type	: NONE			
Other Material Type	: 3% Cellulose, 97% Non-Fibrous Material			
P2-1	211021030.40.A	211021030.40	No	NAD
Location	: Building B N. Wall			
Analyst Description / Color	: Plaster Composite, Granular, Cementitious, Non-Homogenous, Gray			
Asbestos Type	: NONE			
Other Material Type	: 100% Non-Fibrous Material			
P2-2	211021030.41.A	211021030.41	No	NAD
Location	: Building B N. Wall			
Analyst Description / Color	: Plaster Composite, Granular, Cementitious, Non-Homogenous, Gray			
Asbestos Type	: NONE			
Other Material Type	: 100% Non-Fibrous Material			
P2-3	211021030.42.A	211021030.42	No	NAD
Location	: Building B N. Wall			
Analyst Description / Color	: Plaster Composite, Granular, Cementitious, Non-Homogenous, Gray			
Asbestos Type	: NONE			
Other Material Type	: 100% Non-Fibrous Material			
WP-1	211021030.43.A	211021030.43	No	NAD
Location	: Building B N. Windows			
Analyst Description / Color	: Window Putty, Firm, Homogenous, White			
Asbestos Type	: NONE			
Other Material Type	: 100% Non-Fibrous Material			



Ecologics Laboratories

2487 E. Orangethorpe Ave.
Fullerton, CA 92831
Phone (714)632-8118
NVLAP Lab Code:600190-0

PLM Bulk Asbestos Report

Client: Magnolia Environmental
Address: 1100 E. Orangethorpe Ave. Anaheim, CA 92801
Project #: 3541
Project Location: 550 E. 6th St. Beaumont, CA 92223
Date Received: 10/21/2021

LAB Job #: 211021030
Project Name: N/A
No of Samples: 48
Collected By: A. Pulsipher
Date Analyzed: 10/23/2021

Client ID	Layer #	Lab ID	Asbestos Present	% Asbestos / Type
WP-2	211021030.44.A	211021030.44	No	NAD
Location	: Building B N. Windows			
Analyst Description / Color	: Window Putty, Firm, Homogenous, White			
Asbestos Type	: NONE			
Other Material Type	: 100% Non-Fibrous Material			
WP-3	211021030.45.A	211021030.45	No	NAD
Location	: Building B N. Windows			
Analyst Description / Color	: Window Putty, Firm, Homogenous, White			
Asbestos Type	: NONE			
Other Material Type	: 100% Non-Fibrous Material			
S-1	211021030.46.A	211021030.46	Yes	<1% Chrysotile
Location	: Building B Exterior			
Analyst Description / Color	: Stucco Composite, Granular, Cementitious, Non-Homogenous, Gray, Beige			
Asbestos Type	: Chrysotile			
Other Material Type	: 100% Non-Fibrous Material			
S-2	211021030.47.A	211021030.47	Yes	<1% Chrysotile
Location	: Building B Exterior			
Analyst Description / Color	: Stucco Composite, Granular, Cementitious, Non-Homogenous, Gray			
Asbestos Type	: Chrysotile			
Other Material Type	: 100% Non-Fibrous Material			
S-3	211021030.48.A	211021030.48	Yes	<1% Chrysotile
Location	: Building B Exterior			
Analyst Description / Color	: Stucco Composite, Granular, Cementitious, Non-Homogenous, Gray, Beige			
Asbestos Type	: Chrysotile			
Other Material Type	: 100% Non-Fibrous Material			

Daniel Wood – Analyst

Paola Ducoing – Approved by

NAD = no asbestos detected; NA = not analyzed, PS = positive stop; Reporting Limits: CVES = 1%, 400 PT CT = 0.25%, 1,000 PT CT = 0.1%. The analyses of the samples in this report were performed and analyzed in accordance with the procedures outlined in EPA 600/R-93/116 (Method for Determination of Asbestos in Building Materials); EPA 600/M4-82-020 (Interim Method for the Determination of Asbestos in Bulk Insulation Samples) and US Federal Register 40 CFR Appendix E to Subpart E of Part 763 (Interim Method of the Determination of Asbestos in Bulk Insulation Samples). Samples were analyzed using Calibrated Visual Estimate (CVES), therefore results may not be reliable for samples with low concentration levels or other Non-Friable Organically Bound (NOB) materials. The limit of detection for this analytical method is less than one percent (<1%) and total sample constituents may total greater than 100% due to trace amounts. These results lie within the statistical limits of variability calculated with standard reference materials routinely analyzed in the laboratory. In multi-layer samples, unless otherwise specified, the asbestos concentration is reported for the layer where asbestos is found. This report only relates to the samples that were submitted and Ecologics Lab and its personnel assumes no responsibility and/or are not liable for any misinformation provided by the client such as "sample location" or "sample type." This report may contain specific data not covered by NVLAP and is identified if footnotes are present. This report was issued by Ecologics Lab which is accredited by NVLAP (Lab Code 600190-0) and may not be reproduced except in full, without written approval of this laboratory. This report may not be used by the client to claim product certification, approval or endorsement by NVLAP, NIST or any agency of the Federal Government.



CHAIN OF CUSTODY

2487 E. Orangethorpe Ave. Fullerton, CA 92831

(714) 632 8118 reports@ecologicslab.com



CONTACT INFORMATION *	PROJECT INFORMATION *
Company: Magnolia Environmental Inc.	Project #: 3541
Address: 885 Mango St. Brea, CA 92821	Project name:
Phone: (562) 922-3144	Project location: 550 E. 6th St
Contact: Andrea Pulsipher	Beaumont, Ca 92223
Email results to: maglabresults@gmail.com	Date sampled: 10/21/21
	Sampled by: A. Pulsipher

ASBESTOS	MICROBIOLOGY
<input checked="" type="checkbox"/> PLM Bulk Analysis (EPA 600/R-93/116)	<input type="checkbox"/> Fungi: Non Viable Mold (ST)
<input type="checkbox"/> PLM 1,000 Point Count (<0.1%)	<input type="checkbox"/> Fungi: Non Viable Mold (TL, B, SW)
<input type="checkbox"/> PLM 400 Point Count (<0.25%)	<input type="checkbox"/> Fungi: Quantitative Spore Count Direct Exam (TL, B, SW)
<input type="checkbox"/> Gravimetric Point Count (<0.1%)	<input type="checkbox"/> Bacteria: Total Coliform, E. coli (P/A)
<input type="checkbox"/> PCM Airborne Fiber Count (NIOSH 7400)	<input type="checkbox"/> Bacteria: Total Coliform, E. coli, Enterococcus (P/A)
<input type="checkbox"/> PCM Airborne Fiber Count with TWA	<input type="checkbox"/> Carbon Black & Material Science Analysis
<input type="checkbox"/> Other:	

Turnaround time (TAT) *: 3-4 Hrs 6-8 Hrs 24 Hrs 48 Hrs 72 Hrs Other:

Additional information/ Special instructions:
 Stop at 1st positive on samples greater than 1%, EXCEPT for: _____
 Composite 1 wall system sample if found to be greater than or equal to 1%.
 Other:

SAMPLE ID	LOCATION *	DESCRIPTION *	ASBESTOS			MICROBIOLOGY/PCM				
			COND	QTY SF/LF	FRIABLE Y/N	TIME START STOP		FLOW START STOP		TOTAL
GB-1	Kitchen	Gypsum Board	G	1680	N					
↓-2	Finance	↓								
↓-3	W. Bathroom	↓								
JC-1	Kitchen	Joint Compound								
↓-2	Customer Service	↓								
↓-3	M. Bathroom	↓								
CB-1	Finance	Covebase - Black		75						
↓-2	Customer Service	↓								
↓-3	Kitchen	↓								

Weather	Fog	Rain	Snow	Wind	Clear	TIME *	DATE *	RELINQUISHED BY *	RECEIVED BY
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3:25	10/21/21	A. Pulsipher	OCT 21 '21 PM 3:25
						3:40pm	10/21/21		Angela F.

* Necessary information for processing.
 ST: Spore Trap, TL: Tape Lift, B: Bulk, Sw: Swab, P/A: Presence/ Absence, QTY: Quantity, SF: Square Foot, LF: Linear Foot,
 COND: Conditions: G = Good; D = Damaged; SD = Significantly Damaged.



CHAIN OF CUSTODY

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(714) 632 8118 reports@ecologicslab.com

Job ID:211021030



Magnolia Environmental

Company: Magnolia Environmental Project #: 3541

SAMPLE ID	LOCATION *	DESCRIPTION *	ASBESTOS			MICROBIOLOGY/PCM				
			COND	QTY	FRIABLE	TIME		FLOW		TOTAL
				SF/LF	Y/N	START	STOP	START	STOP	
CT-1	Kitchen	2x4' Ceiling tile-white	G	103	N					
↓-2	Finance	↓	↓	↓	↓					
↓-3	Customer service	↓	↓	↓	↓					
F-1	Kitchen	Ceramic Flooring ^{Grout}		403						
↓-2	Mens Bathroom	↓	↓	↓	↓					
↓-3	Womens Bathroom	↓	↓	↓	↓					
R1-1	Roof	Roofing layer 1		5031						
↓-2	↓	↓	↓	↓	↓					
↓-3	↓	↓	↓	↓	↓					
P-1	Kitchen	Plaster interior	D	1080	Y					
↓-2	Finance	↓ Ceiling Damaged	↓	↓	↓					
↓-3	Customer Service	↓	↓	↓	↓					
R2-1	Roof	Roof layer 2	G	5031	N					
↓-2	↓	↓	↓	↓	↓					
↓-3	↓	↓	↓	↓	↓					
CM-1	Kitchen	Carpet mastic		1180						
↓-2	Finance	↓	↓	↓	↓					
↓-3	↓	↓	↓	↓	↓					

* Necessary information for processing.

ST: Spore Trap, TL: Tape Lift, B: Bulk, Sw: Swab, P/A: Presence/ Absence, QTY: Quantity, SF: Square Foot, LF: Linear Foot,

COND: Conditions: G = Good; D = Damaged; SD = Significantly Damaged.



CHAIN OF CUSTODY

2487 E. Orangethorpe Ave. Fullerton, CA 92831

(714) 632 8118 reports@ecologicslab.com

Job ID:211021030



Magnolia Environmental

Company: Magnolia Environmental Project #: 3541

SAMPLE ID	LOCATION *	DESCRIPTION *	ASBESTOS			MICROBIOLOGY/PCM				
			COND	QTY	FRIABLE	TIME		FLOW		TOTAL
				SF/LF	Y/N	START	STOP	START	STOP	
RF-1	Roof layer 3	Roofing Felt layer 3	G	5031	N					
↓-2	↓	↓	↓	↓	↓					
↓-3	↓	↓	↓	↓	↓					
PM-1	Roof penetrations	Penetration mastic		80						
↓-2	including skylights	↓	↓	↓	↓					
↓-3	↓	↓	↓	↓	↓					
CT2-1	Kitchen	1x1' Ceiling tile		1400						
↓-2	Finance	↓	↓	↓	↓					
↓-3	Finance	↓	↓	↓	↓					
CTM-1	Kitchen	Brown ceiling tile ^{mastic}		1400						
↓-2	Finance	↓	↓	↓	↓					
↓-3	Finance	↓	↓	↓	↓					
P2-1	Building B ^N wall	Interior Plaster	G	2000	N					
↓-2	↓	↓	↓	↓	↓					
↓-3	↓	↓	↓	↓	↓					
WP-1	Building B ^N windows	Window Putty								
↓-2	↓	↓	↓	↓	↓					
↓-3	↓	↓	↓	↓	↓					

* Necessary information for processing.

ST: Spore Trap, TL: Tape Lift, B: Bulk, Sw: Swab, P/A: Presence/ Absence, QTY: Quantity, SF: Square Foot, LF: Linear Foot,

COND: Conditions: G = Good; D = Damaged; SD = Significantly Damaged.



CHAIN OF CUSTODY

2487 E. Orangethorpe Ave. Fullerton, CA 92831

(714) 632 8118 reports@ecologicslab.com

Job ID:211021030



Company: Magnolia Environmental Project #: 354

Table with columns: SAMPLE ID, LOCATION *, DESCRIPTION *, ASBESTOS (COND, QTY, FRIABLE), MICROBIOLOGY/PCM (TIME, FLOW, TOTAL). Includes handwritten entries for samples 5-1, -2, and -3.

* Necessary information for processing.

ST: Spore Trap, TL: Tape Lift, B: Bulk, Sw: Swab, P/A: Presence/ Absence, QTY: Quantity, SF: Square Foot, LF: Linear Foot,

COND: Conditions: G = Good; D = Damaged; SD = Significantly Damaged.



Ecologics Laboratories

2487 E. Orangethorpe Ave.

Fullerton, CA 92831

Phone (714)632-8118 Fax (714)632-8111

NVLAP Lab Code:600190-0

PLM Bulk Asbestos Report 1,000 Point Count

Client: Magnolia Environmental
Address: 1100 E. Orangethorpe Ave. Anaheim, CA 92801
Project #: 3541
Project Location: 550 E. 6th St. Beaumont, CA 92223
Date Received: 10/27/2021

LAB Job #: 211027081
Project Name: N/A
No of Samples: 3
Collected By: A. Pulsipher
Date Analyzed: 10/28/2021

Client ID	Layer #	Lab ID	Asbestos Present	% Asbestos / Type
S-1	211027081.01.A	211027081.01	Yes	<0.1% Chrysotile
Location : Building B Exterior				
Analyst Description / Color : Stucco Composite, Granular, Non-Homogenous, Gray, Beige				
Asbestos Type : Chrysotile				
Other Material Type : 100% Non-Fibrous Material				
S-2	211027081.02.A	211027081.02	Yes	<0.1% Chrysotile
Location : Building B Exterior				
Analyst Description / Color : Stucco Composite, Granular, Non-Homogenous, Gray				
Asbestos Type : Chrysotile				
Other Material Type : 100% Non-Fibrous Material				
S-3	211027081.03.A	211027081.03	Yes	<0.1% Chrysotile
Location : Building B Exterior				
Analyst Description / Color : Stucco Composite, Granular, Non-Homogenous, Gray, Beige				
Asbestos Type : Chrysotile				
Other Material Type : 100% Non-Fibrous Material				

Jhair Gonzalez – Analyst

Paola Ducoing – Approved By

NAD = no asbestos detected; NA = not analyzed, PS = positive stop; Reporting Limits: CVES = 1%, 400 PT CT = 0.25%, 1,000 PT CT = 0.1%. The analyses of the samples in this report were performed and analyzed in accordance with the procedures outlined in EPA 600/R-93/116 (Method for Determination of Asbestos in Building Materials); EPA 600/M4-82-020 (Interim Method for the Determination of Asbestos in Bulk Insulation Samples) and US Federal Register 40 CFR Appendix E to Subpart E of Part 763 (Interim Method of the Determination of Asbestos in Bulk Insulation Samples). Samples were analyzed using Calibrated Visual Estimate (CVES), therefore results may not be reliable for samples with low concentration levels or other Non-Friable Organically Bound (NOB) materials. The limit of detection for this analytical method is less than one percent (<1%) and total sample constituents may total greater than 100% due to trace amounts. These results lie within the statistical limits of variability calculated with standard reference materials routinely analyzed in the laboratory. In multi-layer samples, unless otherwise specified, the asbestos concentration is reported for the layer where asbestos is found. This report only relates to the samples that were submitted and Ecologics Lab and its personnel assumes no responsibility and/or are not liable for any misinformation provided by the client such as "sample location" or "sample type." This report may contain specific data not covered by NVLAP and is identified if footnotes are present. This report was issued by Ecologics Lab which is accredited by NVLAP (Lab Code 600190-0) and may not be reproduced except in full, without written approval of this laboratory. This report may not be used by the client to claim product certification, approval or endorsement by NVLAP, NIST or any agency of the Federal Government.

211027081



Ecologics Laboratories <reports@ecologicslab.com>

PLM Report - #3541 (211021030)

3 messages

Ecologics Laboratories <Reports@ecologicslab.com>
To: Magnolia Environmental <maglabresults@gmail.com>

Mon, Oct 25, 2021 at 1:00 PM

Dear Magnolia Environmental,

Please do not hesitate to contact us if you have any questions or concerns about the attached report.

Have a great day!



2487 E. Orangethorpe Ave.
Fullerton, CA 92831
(714) 632 - 8118
<http://www.ecologicslab.com>

How are we doing? Take the [Customer Survey](#).

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 **PLM Report - #3541 (211021030).pdf**
2322K

Magnolia Environmental <maglabresults@gmail.com>
To: Ecologics Laboratories <Reports@ecologicslab.com>

Wed, Oct 27, 2021 at 9:34 AM

Can we have all 3 stucco samples analyzed via 1,000 point count on a 24 TAT?

[Quoted text hidden]

Ecologics Laboratories <Reports@ecologicslab.com>
To: Magnolia Environmental <maglabresults@gmail.com>

Wed, Oct 27, 2021 at 12:06 PM

Hello Magnolia Environmental,

This is confirmation of Gravimetric PLM 1000 point count.

Job#: 3541

Samples:

- S-1 - Stucco
- S-2 - Stucco

211027081

S-3 - Stucco

TAT: **24 HR**

Special Instructions: N/A

Due: **Thursday October 28th, 2021 @ 9:30AM**

Thank you!



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Fullerton, CA 92831

(714) 632 - 8118

<http://www.ecologicslab.com>

How are we doing? Take the [Customer Survey](#).

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[Quoted text hidden]

APPENDIX B

LEAD BASED PAINT
PERFORMANCE CHARACTERIZATION SHEET



Performance Characteristic Sheet

EFFECTIVEDATE: December 1, 2015

MANUFACTURERANDMODEL:

Make: *Heuresis*
Models: *Model Pb200i*
Source: *⁵⁷Co, 5 mCi(nominal–newsourc)*

FIELD OPERATION GUIDANCE

OPERATING PARAMETERS:

Action Level mode

XRF CALIBRATION CHECK LIMITS:

0.8 to 1.2 mg/cm ² (inclusive)

SUBSTRATE CORRECTION:

Not applicable

INCONCLUSIVE RANGE OR THRESHOLD:

ACTION LEVEL MODE READING DESCRIPTION	SUBSTRATE	THRESHOLD(mg/cm²)
Results not corrected for substrate bias on any substrate	Concrete	1.0
	Drywall	1.0
	Metal	1.0
	Plaster	1.0
	Wood	1.0

BACKGROUND INFORMATION

EVALUATION DATA SOURCE AND DATE:

This sheet is supplemental information to be used in conjunction with Chapter 7 of the HUD *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing* ("HUD Guidelines"). Performance parameters shown on this sheet are calculated using test results on building components in the HUD archive. Testing was conducted on 146 test samples in November 2015, with two separate instruments running software version 2.1-2 in ActionLevel test mode. The actual source strength of each instrument on the day of testing was approximately 2.0 mCi; source ages were approximately one year.

OPERATING PARAMETERS

Performance parameters shown in this sheet are applicable only when properly operating the instrument using the manufacturer's instructions and procedures described in Chapter 7 of the HUD Guidelines.

XRF CALIBRATION CHECK:

The calibration of the XRF instrument should be checked using the paint film nearest 1.0 mg/cm² in the NIST Standard Reference Material (SRM) used (e.g., for NIST SRM 2579, use the 1.02 mg/cm² film).

If the average (rounded to 1 decimal place) of three readings is outside the acceptable calibration check range, follow the manufacturer's instructions to bring the instrument into control before XRF testing proceeds.

SUBSTRATE CORRECTION VALUE COMPUTATION:

Chapter 7 of the HUD Guidelines provides guidance on correcting XRF results for substrate bias. Supplemental guidance for using the paint film nearest 1.0 mg/cm² for substrate correction is provided:

XRF results are corrected for substrate bias by subtracting from each XRF result a correction value determined separately in each house for single-family housing or in each development for multifamily housing, for each substrate. The correction value is an average of XRF readings taken over the NIST SRM paint film nearest to 1.0 mg/cm² at test locations that have been scraped bare of their paint covering. Compute the correction values as follows:

Using the same XRF instrument, take three readings on a bare substrate area covered with the NIST SRM paint film nearest 1 mg/cm². Repeat this procedure by taking three more readings on a second bare substrate area of the same substrate covered with the NIST SRM.

Compute the correction value for each substrate type where XRF readings indicate substrate correction is needed by computing the average of all six readings as shown below.

For each substrate type (the 1.02 mg/cm² NIST SRM is shown in this example; use the actual lead loading of the NIST SRM used for substrate correction):

$$\text{Correction value} = (1\text{st} + 2\text{nd} + 3\text{rd} + 4\text{th} + 5\text{th} + 6\text{th Reading})/6 - 1.02 \text{ mg/cm}^2$$

Repeat this procedure for each substrate requiring substrate correction in the house or housing development.

EVALUATING THE QUALITY OF XRF TESTING:

Randomly select ten testing combinations for retesting from each house or from two randomly selected units in multifamily housing.

Conduct XRF re-testing at the ten testing combinations selected for retesting.

Determine if the XRF testing in the units or house passed or failed the test by applying the steps below.

Compute the Retest Tolerance Limit by the following steps:

Determine XRF results for the original and retest XRF readings. Do not correct the original or retest results for substrate bias. In single-family and multi-family housing, a result is defined as a single reading. Therefore, there will be ten original and ten retest XRF results for each house or for the two selected units.

Calculate the average of the original XRF result and the retest XRF result for each testing combination.

Square the average for each testing combination.

Add the ten squared averages together. Call this quantity C.

Multiply the number C by 0.0072. Call this quantity D.

Add the number 0.032 to D. Call this quantity E.

Take the square root of E. Call this quantity F.

Multiply F by 1.645. The result is the Retest Tolerance Limit.

Compute the average of all ten original XRF readings.

Compute the average of all ten re-test XRF readings.

Find the absolute difference of the two averages.

If the difference is less than the Retest Tolerance Limit, the inspection has passed the retest. If the difference of the overall averages equals or exceeds the Retest Tolerance Limit, this procedure should be repeated with ten new testing combinations. If the difference of the overall averages is equal to or greater than the Retest Tolerance Limit a second time, then the inspection should be considered deficient.

Use of this procedure is estimated to produce a spurious result approximately 1% of the time. That is, results of this procedure will call for further examination when no examination is warranted in approximately 1 out of 100 dwelling units tested.

TESTING TIMES:

In the Action Level paint test mode, the instrument takes the longest time to complete readings close to the Federal standard of 1.0 mg/cm². The table below shows the mean and standard deviation of actual reading times by reading level for paint samples during the November 2015 archive testing. The tested instruments reported readings to one decimal place. No significant differences in reading times by substrate were observed. These times apply only to instruments with the same source strength as those tested (2.0 mCi). Instruments with stronger sources will have shorter reading times and those with weaker sources, longer reading times, than those in the table.

Mean and Standard Deviation of Reading Times in Action Level Mode by Reading Level		
Reading (mg/cm ²)	Mean Reading Time (seconds)	Standard Deviation (seconds)
< 0.7	3.48	0.47
0.7	7.29	1.92
0.8	13.95	1.78
0.9 – 1.2	15.25	0.66
1.3 – 1.4	6.08	2.50
> 1.5	3.32	0.05

CLASSIFICATION OF RESULTS:

XRF results are classified as **positive** if they are **greater than or equal** to the stated threshold for the instrument (1.0 mg/cm²), and *negative* if they are *less than* the threshold.

DOCUMENTATION:

A report titled *Methodology for XRF Performance Characteristic Sheets* (EPA 747-R-95-008) provides an explanation of the statistical methodology used to construct the data in the sheets, and provides empirical results from using the recommended inconclusive ranges or thresholds for specific XRF instruments. The report may be downloaded at <http://www2.epa.gov/lead/methodology-xrf-performance-characteristic-sheets-epa-747-r-95-008-september-1997>.

This XRF Performance Characteristic Sheet (PCS) was developed by QuanTech, Inc., under a contract with the _____ XRF _____ manufacturer.

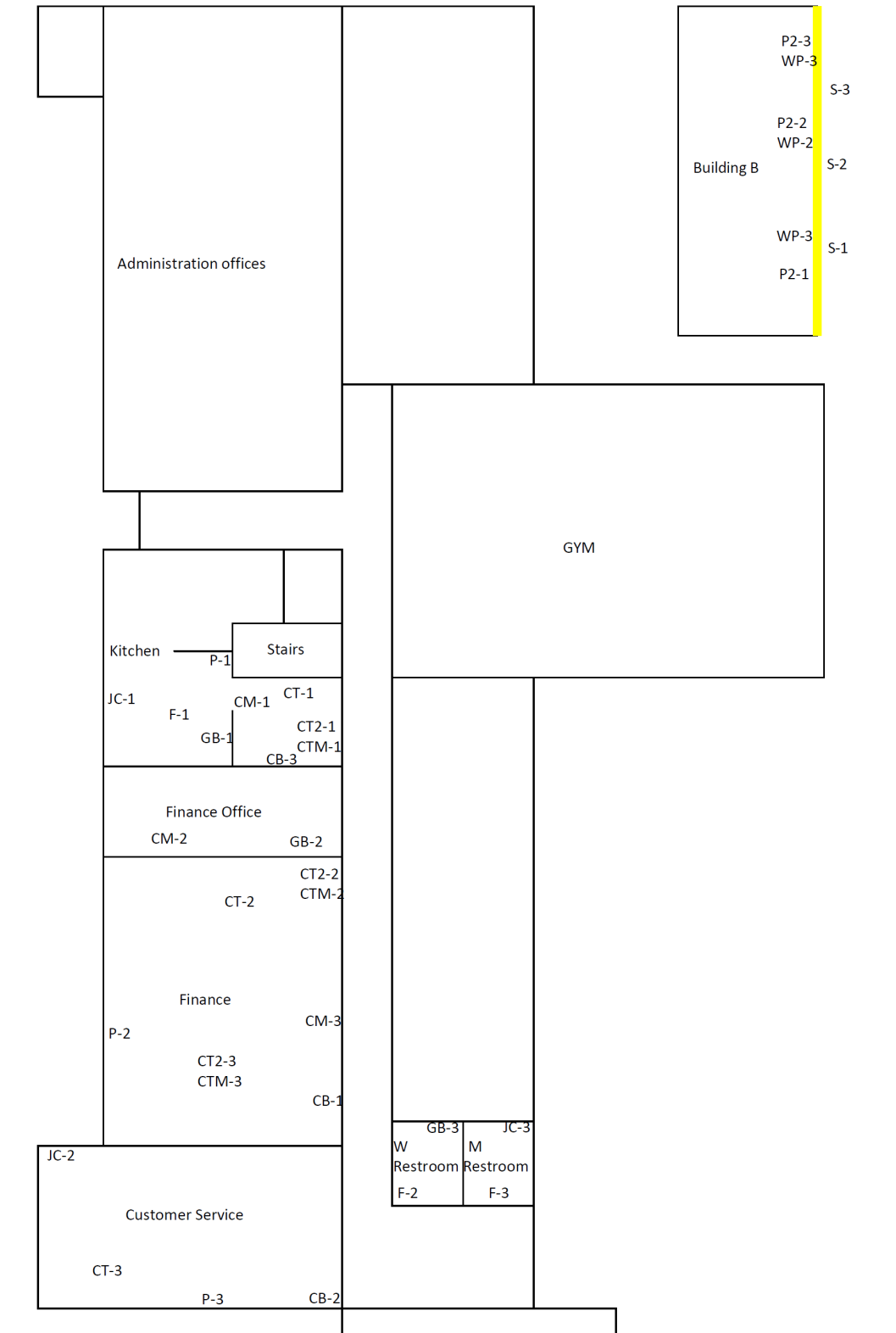
APPENDIX C

Site Map/Sketch

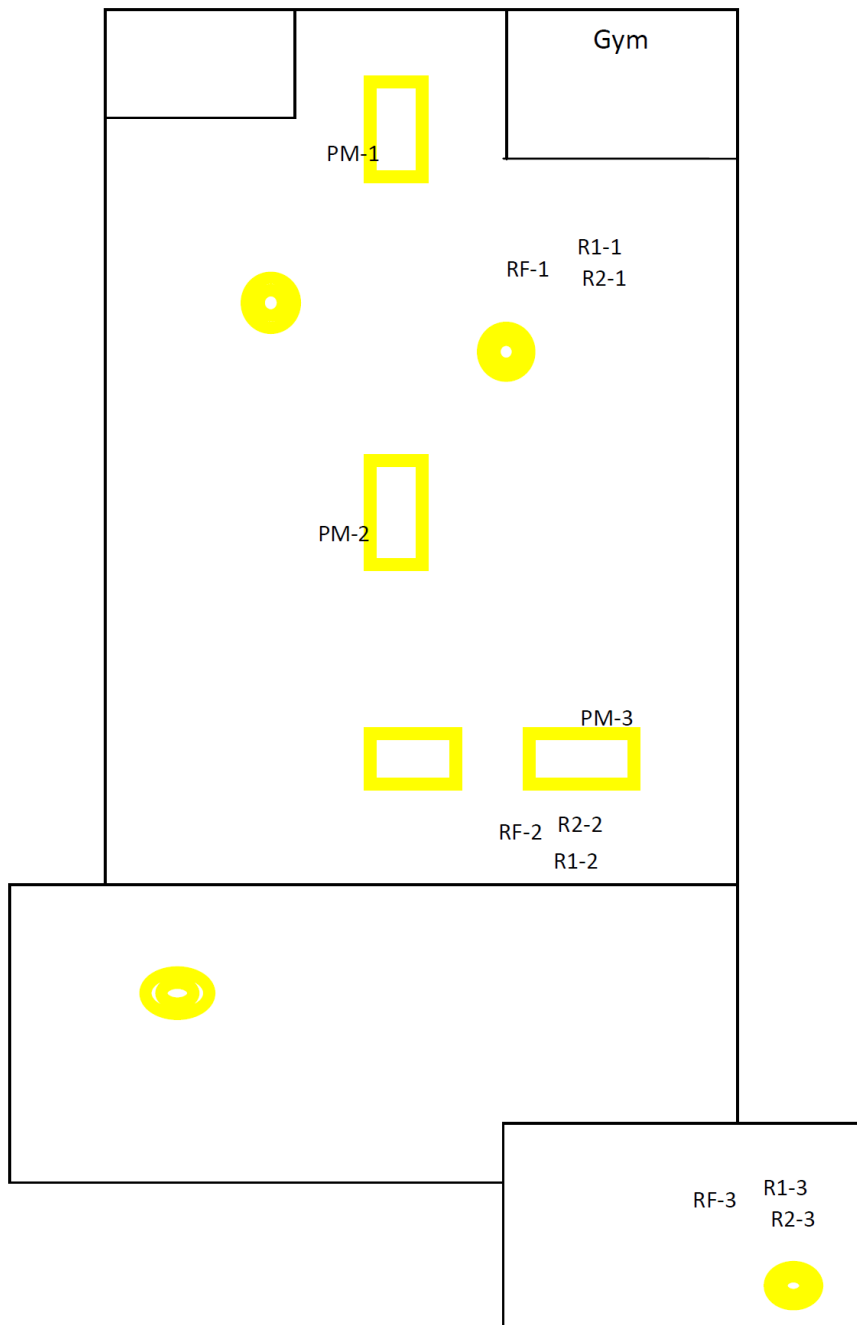


Sketch not to scale.

Sample ID indicates location of sampling.



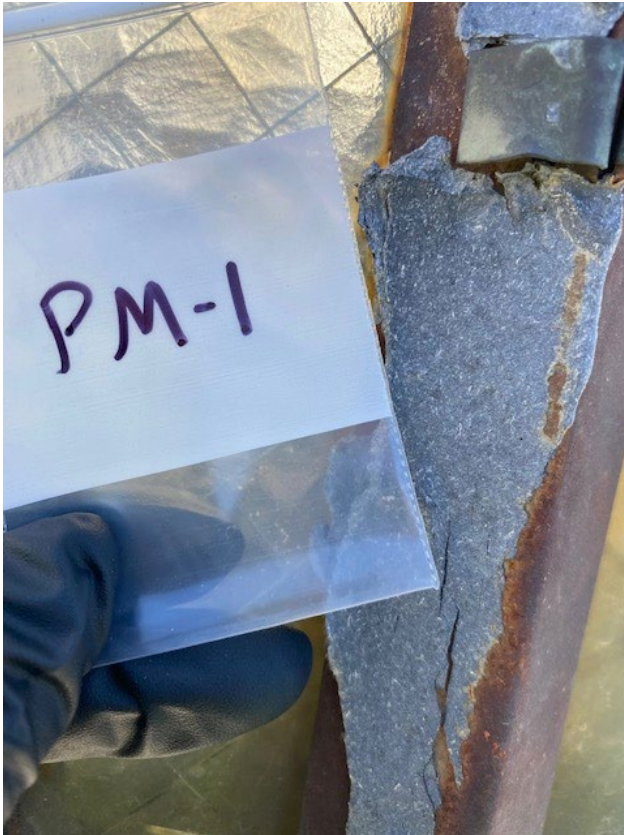
Roof



APPENDIX D

Site Photographs





Picture 1: Asbestos containing penetration mastic



Picture 2: Lead-based paint was detected on the exterior window and window frame of Building B



APPENDIX E

Accreditations and Certification





STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC HEALTH

LEAD-RELATED CONSTRUCTION CERTIFICATE

INDIVIDUAL:	CERTIFICATE TYPE:	NUMBER:	EXPIRATION DATE:
 Andrea Pulsipher	Lead Inspector/Assessor	LRC-00003897	11/3/2021

Disclaimer: This document alone should not be relied upon to confirm certification status. Compare the individual's photo and name to another valid form of government issued photo identification. Verify the individual's certification status by searching for Lead-Related Construction Professionals at www.cdph.ca.gov/programs/clppb or calling (800) 597-LEAD.





APPENDIX B – Prevailing Wage Determination

"General Decision Number: CA20240025 01/19/2024

Superseded General Decision Number: CA20230025

State: California

Construction Types: Building, Heavy (Heavy and Dredging) and Highway

County: Riverside County in California.

BUILDING CONSTRUCTION PROJECTS; DREDGING PROJECTS (does not include hopper dredge work); HEAVY CONSTRUCTION PROJECTS (does not include water well drilling); HIGHWAY CONSTRUCTION PROJECTS

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(1).

<p>If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022:</p>	<ul style="list-style-type: none"> . Executive Order 14026 generally applies to the contract. . The contractor must pay all covered workers at least \$17.20 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2024.
<p>If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:</p>	<ul style="list-style-type: none"> . Executive Order 13658 generally applies to the contract. . The contractor must pay all covered workers at least \$12.90 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2024.

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at <http://www.dol.gov/whd/govcontracts>.

Modification Number	Publication Date
0	01/05/2024
1	01/12/2024
2	01/19/2024

ASBE0005-002 09/01/2023

	Rates	Fringes
Asbestos Workers/Insulator (Includes the application of all insulating materials, protective coverings, coatings, and finishes to all types of mechanical systems).....	\$ 49.58	25.27
Fire Stop Technician (Application of Firestopping Materials for wall openings and penetrations in walls, floors, ceilings and curtain walls).....	\$ 36.97	20.36

ASBE0005-004 07/04/2022

	Rates	Fringes
Asbestos Removal worker/hazardous material handler (Includes preparation, wetting, stripping, removal, scrapping, vacuuming, bagging and disposing of all insulation materials from mechanical systems, whether they contain asbestos or not)....	\$ 23.52	13.37

BOIL0092-003 01/01/2024

	Rates	Fringes
BOILERMAKER.....	\$ 51.98	42.11

* BRCA0004-011 05/01/2020

	Rates	Fringes
BRICKLAYER; MARBLE SETTER.....	\$ 41.48	18.63

*The wage scale for prevailing wage projects performed in Blythe, China lake, Death Valley, Fort Irwin, Twenty-Nine Palms, Needles and 1-15 corridor (Barstow to the Nevada State Line) will be Three Dollars (\$3.00) above the standard San Bernardino/Riverside County hourly wage rate

BRCA0018-004 06/01/2022

	Rates	Fringes
MARBLE FINISHER.....	\$ 37.87	14.13
TILE FINISHER.....	\$ 32.44	12.54
TILE LAYER.....	\$ 45.05	18.33

BRCA0018-010 09/01/2022

	Rates	Fringes
TERRAZZO FINISHER.....	\$ 38.37	14.13
TERRAZZO WORKER/SETTER.....	\$ 46.49	14.66

 CARP0213-001 07/01/2021

	Rates	Fringes
CARPENTER		
(1) Carpenter, Cabinet Installer, Insulation Installer, Hardwood Floor Worker and acoustical installer.....	\$ 51.60	16.28
(2) Millwright.....	\$ 52.10	16.48
(3) Piledrivermen/Derrick Bargeman, Bridge or Dock Carpenter, Heavy Frammer, Rock Bargeman or Scowman, Rockslinger, Shingler (Commercial).....	\$ 51.73	16.28
(4) Pneumatic Nailer, Power Stapler.....	\$ 51.85	16.28
(5) Sawfiler.....	\$ 51.69	16.28
(6) Scaffold Builder.....	\$ 42.80	16.28
(7) Table Power Saw Operator.....	\$ 51.70	16.28

FOOTNOTE: Work of forming in the construction of open cut sewers or storm drains, on operations in which horizontal lagging is used in conjunction with steel H-Beams driven or placed in pre- drilled holes, for that portion of a lagged trench against which concrete is poured, namely, as a substitute for back forms (which work is performed by piledrivers): \$0.13 per hour additional.

 CARP0213-002 07/01/2021

	Rates	Fringes
Diver		
(1) Wet.....	\$ 834.40	16.28
(2) Standby.....	\$ 445.84	16.28
(3) Tender.....	\$ 437.84	16.28
(4) Assistant Tender.....	\$ 413.84	16.28

Amounts in "'Rates' column are per day

 CARP0213-004 07/01/2021

	Rates	Fringes
Drywall		
DRYWALL INSTALLER/LATHER....	\$ 51.60	16.28
STOCKER/SCRAPPER.....	\$ 22.16	8.62

 CARP0721-001 07/01/2021

	Rates	Fringes
Modular Furniture Installer.....	\$ 21.85	7.15

* ELEC0440-001 01/01/2024

	Rates	Fringes
ELECTRICIAN		
INSIDE ELECTRICIAN.....	\$ 53.76	3%+27.50
INTELLIGENT TRANSPORTATION SYSTEMS		
Electrician.....	\$ 36.99	3%+23.18
Technician.....	\$ 27.75	3%+23.18

ZONE PAY: Zone A: Free travel zone for all contractors performing work in Zone A.
 Zone B: Any work performed in Zone (B) shall add \$12.00 per hour to the current wage scale. Zone (B) shall be the area from the eastern perimeter of Zone (A) to a line which runs north and south beginning at Little Morongo Canyon (San Bernardino/Riverside County Line), Southeast along the Coachella Tunnels, Colorado River Aqueduct and Mecca Tunnels to Pinkham Wash then South to Box Canyon Road, then southwest along Box Canyon Road to Highway 195 west onto 195 south to Highway 86 to Riverside/Imperial County Line.

 ELEC1245-001 06/01/2022

	Rates	Fringes
LINE CONSTRUCTION		
(1) Lineman; Cable splicer..	\$ 64.40	22.58
(2) Equipment specialist (operates crawler tractors, commercial motor vehicles, backhoes, trenchers, cranes (50 tons and below), overhead & underground distribution line equipment).....	\$ 50.00	21.30
(3) Groundman.....	\$ 38.23	20.89
(4) Powderman.....	\$ 51.87	18.79

HOLIDAYS: New Year's Day, M.L. King Day, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving Day and day after Thanksgiving, Christmas Day

 ELEV0018-001 01/01/2023

	Rates	Fringes
ELEVATOR MECHANIC.....	\$ 63.95	37.335+a+b

FOOTNOTE:

- a. PAID VACATION: Employer contributes 8% of regular hourly rate as vacation pay credit for employees with more than 5 years of service, and 6% for 6 months to 5 years of service.
- b. PAID HOLIDAYS: New Year's Day, Memorial Day, Independence Day, Labor Day, Veterans' Day, Thanksgiving Day, Friday after Thanksgiving, and Christmas Day.

 ENGI0012-003 07/01/2022

	Rates	Fringes
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OPERATOR: Power Equipment
(All Other Work)

GROUP 1.....	\$ 51.90	30.70
GROUP 2.....	\$ 52.68	30.70
GROUP 3.....	\$ 52.97	30.70
GROUP 4.....	\$ 54.46	30.70
GROUP 5.....	\$ 48.96	25.25
GROUP 6.....	\$ 54.68	30.70
GROUP 8.....	\$ 54.79	30.70
GROUP 9.....	\$ 49.29	25.25
GROUP 10.....	\$ 54.91	30.70
GROUP 11.....	\$ 49.41	25.25
GROUP 12.....	\$ 55.08	30.70
GROUP 13.....	\$ 55.18	30.70
GROUP 14.....	\$ 55.21	30.70
GROUP 15.....	\$ 55.29	30.70
GROUP 16.....	\$ 55.41	30.70
GROUP 17.....	\$ 55.58	30.70
GROUP 18.....	\$ 55.68	30.70
GROUP 19.....	\$ 55.79	30.70
GROUP 20.....	\$ 55.91	30.70
GROUP 21.....	\$ 56.08	30.70
GROUP 22.....	\$ 56.18	30.70
GROUP 23.....	\$ 56.29	30.70
GROUP 24.....	\$ 56.41	30.70
GROUP 25.....	\$ 56.58	30.70

OPERATOR: Power Equipment
(Cranes, Piledriving &
Hoisting)

GROUP 1.....	\$ 53.25	30.70
GROUP 2.....	\$ 54.03	30.70
GROUP 3.....	\$ 54.32	30.70
GROUP 4.....	\$ 54.46	30.70
GROUP 5.....	\$ 54.68	30.70
GROUP 6.....	\$ 54.79	30.70
GROUP 7.....	\$ 54.91	30.70
GROUP 8.....	\$ 55.08	30.70
GROUP 9.....	\$ 55.25	30.70
GROUP 10.....	\$ 56.25	30.70
GROUP 11.....	\$ 57.25	30.70
GROUP 12.....	\$ 58.25	30.70
GROUP 13.....	\$ 59.25	30.70

OPERATOR: Power Equipment
(Tunnel Work)

GROUP 1.....	\$ 54.53	30.70
GROUP 2.....	\$ 54.82	30.70
GROUP 3.....	\$ 54.96	30.70
GROUP 4.....	\$ 55.18	30.70
GROUP 5.....	\$ 55.29	30.70
GROUP 6.....	\$ 55.41	30.70
GROUP 7.....	\$ 55.71	30.70

PREMIUM PAY:

\$3.75 per hour shall be paid on all Power Equipment Operator work on the following Military Bases: China Lake Naval Reserve, Vandenberg AFB, Point Arguello, Seely Naval Base, Fort Irwin, Nebo Annex Marine Base, Marine Corp Logistics Base Yermo, Edwards AFB, 29 Palms Marine Base and Camp Pendleton

Workers required to suit up and work in a hazardous material environment: \$2.00 per hour additional. Combination mixer and compressor operator on gunite work shall be classified as a concrete mobile mixer operator.

SEE ZONE DEFINITIONS AFTER CLASSIFICATIONS

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Bargeman; Brakeman; Compressor operator; Ditch Witch, with seat or similar type equipment; Elevator operator-inside; Engineer Oiler; Forklift operator (includes loed, lull or similar types under 5 tons; Generator operator; Generator, pump or compressor plant operator; Pump operator; Signalman; Switchman

GROUP 2: Asphalt-rubber plant operator (nurse tank operator); Concrete mixer operator-skip type; Conveyor operator; Fireman; Forklift operator (includes loed, lull or similar types over 5 tons; Hydrostatic pump operator; oiler crusher (asphalt or concrete plant); Petromat laydown machine; PJU side dum jack; Screening and conveyor machine operator (or similar types); Skiploader (wheel type up to 3/4 yd. without attachment); Tar pot fireman; Temporary heating plant operator; Trenching machine oiler

GROUP 3: Asphalt-rubber blend operator; Bobcat or similar type (Skid steer); Equipment greaser (rack); Ford Ferguson (with dragtype attachments); Helicopter radioman (ground); Stationary pipe wrapping and cleaning machine operator

GROUP 4: Asphalt plant fireman; Backhoe operator (mini-max or similar type); Boring machine operator; Boxman or mixerman (asphalt or concrete); Chip spreading machine operator; Concrete cleaning decontamination machine operator; Concrete Pump Operator (small portable); Drilling machine operator, small auger types (Texoma super economatic or similar types - Hughes 100 or 200 or similar types - drilling depth of 30' maximum); Equipment greaser (grease truck); Guard rail post driver operator; Highline cableway signalman; Hydra-hammer-aero stomper; Micro Tunneling (above ground tunnel); Power concrete curing machine operator; Power concrete saw operator; Power-driven jumbo form setter operator; Power sweeper operator; Rock Wheel Saw/Trencher; Roller operator (compacting); Screed operator (asphalt or concrete); Trenching machine operator (up to 6 ft.); Vacuum or much truck

GROUP 5: Equipment Greaser (Grease Truck/Multi Shift).

GROUP 6: Articulating material hauler; Asphalt plant engineer; Batch plant operator; Bit sharpener; Concrete joint machine operator (canal and similar type); Concrete planer operator; Dandy digger; Deck engine operator; Derrickman (oilfield type); Drilling machine operator, bucket or auger types (Calweld 100 bucket or similar types - Watson 1000 auger or similar types - Texoma 330, 500 or 600 auger or similar types - drilling depth of 45' maximum); Drilling machine operator; Hydrographic seeder machine operator (straw, pulp or seed), Jackson track maintainer, or similar type; Kalamazoo Switch tamper, or similar type; Machine tool operator; Maginnis internal full slab vibrator, Mechanical berm, curb or gutter (concrete or asphalt); Mechanical finisher operator (concrete, Clary-Johnson-Bidwell or similar); Micro tunnel system (below ground); Pavement breaker operator (truck mounted); Road oil mixing machine operator; Roller operator (asphalt or finish), rubber-tired earth moving equipment (single engine, up to and including 25 yds. struck); Self-propelled

tar pipelining machine operator; Skiploader operator (crawler and wheel type, over 3/4 yd. and up to and including 1-1/2 yds.); Slip form pump operator (power driven hydraulic lifting device for concrete forms); Tractor operator-bulldozer, tamper-scraper (single engine, up to 100 h.p. flywheel and similar types, up to and including D-5 and similar types); Tugger hoist operator (1 drum); Ultra high pressure waterjet cutting tool system operator; Vacuum blasting machine operator

GROUP 8: Asphalt or concrete spreading operator (tamping or finishing); Asphalt paving machine operator (Barber Greene or similar type); Asphalt-rubber distribution operator; Backhoe operator (up to and including 3/4 yd.), small ford, Case or similar; Cast-in-place pipe laying machine operator; Combination mixer and compressor operator (gunite work); Compactor operator (self-propelled); Concrete mixer operator (paving); Crushing plant operator; Drill Doctor; Drilling machine operator, Bucket or auger types (Calweld 150 bucket or similar types - Watson 1500, 2000 2500 auger or similar types - Texoma 700, 800 auger or similar types - drilling depth of 60' maximum); Elevating grader operator; Grade checker; Gradall operator; Grouting machine operator; Heavy-duty repairman; Heavy equipment robotics operator; Kalamazoo balliste regulator or similar type; Kolman belt loader and similar type; Le Tourneau blob compactor or similar type; Loader operator (Athey, Euclid, Sierra and similar types); Mobark Chipper or similar; Ozzie padder or similar types; P.C. slot saw; Pneumatic concrete placing machine operator (Hackley-Presswell or similar type); Pumpcrete gun operator; Rock Drill or similar types; Rotary drill operator (excluding caisson type); Rubber-tired earth-moving equipment operator (single engine, caterpillar, Euclid, Athey Wagon and similar types with any and all attachments over 25 yds. up to and including 50 cu. yds. struck); Rubber-tired earth-moving equipment operator (multiple engine up to and including 25 yds. struck); Rubber-tired scraper operator (self-loading paddle wheel type-John Deere, 1040 and similar single unit); Self-propelled curb and gutter machine operator; Shuttle buggy; Skiploader operator (crawler and wheel type over 1-1/2 yds. up to and including 6-1/2 yds.); Soil remediation plant operator; Surface heaters and planer operator; Tractor compressor drill combination operator; Tractor operator (any type larger than D-5 - 100 flywheel h.p. and over, or similar-bulldozer, tamper, scraper and push tractor single engine); Tractor operator (boom attachments), Traveling pipe wrapping, cleaning and bendng machine operator; Trenching machine operator (over 6 ft. depth capacity, manufacturer's rating); trenching Machine with Road Miner attachment (over 6 ft depth capacity): Ultra high pressure waterjet cutting tool system mechanic; Water pull (compaction) operator

GROUP 9: Heavy Duty Repairman

GROUP 10: Drilling machine operator, Bucket or auger types (Calweld 200 B bucket or similar types-Watson 3000 or 5000 auger or similar types-Texoma 900 auger or similar types-drilling depth of 105' maximum); Dual drum mixer, dynamic compactor LDC350 (or similar types); Monorail locomotive operator (diesel, gas or electric); Motor patrol-blade operator (single engine); Multiple engine tractor operator (Euclid and similar type-except Quad 9 cat.); Rubber-tired earth-moving equipment operator (single

engine, over 50 yds. struck); Pneumatic pipe ramming tool and similar types; Prestressed wrapping machine operator; Rubber-tired earth-moving equipment operator (single engine, over 50 yds. struck); Rubber tired earth moving equipment operator (multiple engine, Euclid, caterpillar and similar over 25 yds. and up to 50 yds. struck), Tower crane repairman; Tractor loader operator (crawler and wheel type over 6-1/2 yds.); Woods mixer operator (and similar Pugmill equipment)

GROUP 11: Heavy Duty Repairman - Welder Combination, Welder - Certified.

GROUP 12: Auto grader operator; Automatic slip form operator; Drilling machine operator, bucket or auger types (Calweld, auger 200 CA or similar types - Watson, auger 6000 or similar types - Hughes Super Duty, auger 200 or similar types - drilling depth of 175' maximum); Hoe ram or similar with compressor; Mass excavator operator less tha 750 cu. yards; Mechanical finishing machine operator; Mobile form traveler operator; Motor patrol operator (multi-engine); Pipe mobile machine operator; Rubber-tired earth- moving equipment operator (multiple engine, Euclid, Caterpillar and similar type, over 50 cu. yds. struck); Rubber-tired self- loading scraper operator (paddle-wheel-auger type self-loading - two (2) or more units)

GROUP 13: Rubber-tired earth-moving equipment operator operating equipment with push-pull system (single engine, up to and including 25 yds. struck)

GROUP 14: Canal liner operator; Canal trimmer operator; Remote- control earth-moving equipment operator (operating a second piece of equipment: \$1.00 per hour additional); Wheel excavator operator (over 750 cu. yds.)

GROUP 15: Rubber-tired earth-moving equipment operator, operating equipment with push-pull system (single engine, Caterpillar, Euclid, Athey Wagon and similar types with any and all attachments over 25 yds. and up to and including 50 yds. struck); Rubber-tired earth-moving equipment operator, operating equipment with push-pull system (multiple engine-up to and including 25 yds. struck)

GROUP 16: Rubber-tired earth-moving equipment operator, operating equipment with push-pull system (single engine, over 50 yds. struck); Rubber-tired earth-moving equipment operator, operating equipment with push-pull system (multiple engine, Euclid, Caterpillar and similar, over 25 yds. and up to 50 yds. struck)

GROUP 17: Rubber-tired earth-moving equipment operator, operating equipment with push-pull system (multiple engine, Euclid, Caterpillar and similar, over 50 cu. yds. struck); Tandem tractor operator (operating crawler type tractors in tandem - Quad 9 and similar type)

GROUP 18: Rubber-tired earth-moving equipment operator, operating in tandem (scrapers, belly dumps and similar types in any combination, excluding compaction units - single engine, up to and including 25 yds. struck)

GROUP 19: Rotex concrete belt operator (or similar types); Rubber-tired earth-moving equipment operator, operating in tandem (scrapers, belly dumps and similar types in any

combination, excluding compaction units - single engine, Caterpillar, Euclid, Athey Wagon and similar types with any and all attachments over 25 yds. and up to and including 50 cu. yds. struck); Rubber-tired earth-moving equipment operator, operating in tandem (scrapers, belly dumps and similar types in any combination, excluding compaction units - multiple engine, up to and including 25 yds. struck)

GROUP 20: Rubber-tired earth-moving equipment operator, operating in tandem (scrapers, belly dumps and similar types in any combination, excluding compaction units - single engine, over 50 yds. struck); Rubber-tired earth-moving equipment operator, operating in tandem (scrapers, belly dumps, and similar types in any combination, excluding compaction units - multiple engine, Euclid, Caterpillar and similar, over 25 yds. and up to 50 yds. struck)

GROUP 21: Rubber-tired earth-moving equipment operator, operating in tandem (scrapers, belly dumps and similar types in any combination, excluding compaction units - multiple engine, Euclid, Caterpillar and similar type, over 50 cu. yds. struck)

GROUP 22: Rubber-tired earth-moving equipment operator, operating equipment with the tandem push-pull system (single engine, up to and including 25 yds. struck)

GROUP 23: Rubber-tired earth-moving equipment operator, operating equipment with the tandem push-pull system (single engine, Caterpillar, Euclid, Athey Wagon and similar types with any and all attachments over 25 yds. and up to and including 50 yds. struck); Rubber-tired earth-moving equipment operator, operating with the tandem push-pull system (multiple engine, up to and including 25 yds. struck)

GROUP 24: Rubber-tired earth-moving equipment operator, operating equipment with the tandem push-pull system (single engine, over 50 yds. struck); Rubber-tired earth-moving equipment operator, operating equipment with the tandem push-pull system (multiple engine, Euclid, Caterpillar and similar, over 25 yds. and up to 50 yds. struck)

GROUP 25: Concrete pump operator-truck mounted; Rubber-tired earth-moving equipment operator, operating equipment with the tandem push-pull system (multiple engine, Euclid, Caterpillar and similar type, over 50 cu. yds. struck)

CRANES, PILEDRIVING AND HOISTING EQUIPMENT CLASSIFICATIONS

GROUP 1: Engineer oiler; Fork lift operator (includes loed, lull or similar types)

GROUP 2: Truck crane oiler

GROUP 3: A-frame or winch truck operator; Ross carrier operator (jobsite)

GROUP 4: Bridge-type unloader and turntable operator; Helicopter hoist operator

GROUP 5: Hydraulic boom truck; Stinger crane (Austin-Western or similar type); Tugger hoist operator (1 drum)

GROUP 6: Bridge crane operator; Cretor crane operator; Hoist operator (Chicago boom and similar type); Lift mobile operator; Lift slab machine operator (Vagtborg and similar types); Material hoist and/or manlift operator; Polar gantry crane operator; Self Climbing scaffold (or similar type); Shovel, backhoe, dragline, clamshell operator (over 3/4 yd. and up to 5 cu. yds. mrc); Tugger hoist operator

GROUP 7: Pedestal crane operator; Shovel, backhoe, dragline, clamshell operator (over 5 cu. yds. mrc); Tower crane repair; Tugger hoist operator (3 drum)

GROUP 8: Crane operator (up to and including 25 ton capacity); Crawler transporter operator; Derrick barge operator (up to and including 25 ton capacity); Hoist operator, stiff legs, Guy derrick or similar type (up to and including 25 ton capacity); Shovel, backhoe, dragline, clamshell operator (over 7 cu. yds., M.R.C.)

GROUP 9: Crane operator (over 25 tons and up to and including 50 tons mrc); Derrick barge operator (over 25 tons up to and including 50 tons mrc); Highline cableway operator; Hoist operator, stiff legs, Guy derrick or similar type (over 25 tons up to and including 50 tons mrc); K-crane operator; Polar crane operator; Self erecting tower crane operator maximum lifting capacity ten tons

GROUP 10: Crane operator (over 50 tons and up to and including 100 tons mrc); Derrick barge operator (over 50 tons up to and including 100 tons mrc); Hoist operator, stiff legs, Guy derrick or similar type (over 50 tons up to and including 100 tons mrc), Mobile tower crane operator (over 50 tons, up to and including 100 tons M.R.C.); Tower crane operator and tower gantry

GROUP 11: Crane operator (over 100 tons and up to and including 200 tons mrc); Derrick barge operator (over 100 tons up to and including 200 tons mrc); Hoist operator, stiff legs, Guy derrick or similar type (over 100 tons up to and including 200 tons mrc); Mobile tower crane operator (over 100 tons up to and including 200 tons mrc)

GROUP 12: Crane operator (over 200 tons up to and including 300 tons mrc); Derrick barge operator (over 200 tons up to and including 300 tons mrc); Hoist operator, stiff legs, Guy derrick or similar type (over 200 tons, up to and including 300 tons mrc); Mobile tower crane operator (over 200 tons, up to and including 300 tons mrc)

GROUP 13: Crane operator (over 300 tons); Derrick barge operator (over 300 tons); Helicopter pilot; Hoist operator, stiff legs, Guy derrick or similar type (over 300 tons); Mobile tower crane operator (over 300 tons)

TUNNEL CLASSIFICATIONS

GROUP 1: Skiploader (wheel type up to 3/4 yd. without attachment)

GROUP 2: Power-driven jumbo form setter operator

GROUP 3: Dinkey locomotive or motorperson (up to and including 10 tons)

GROUP 4: Bit sharpener; Equipment greaser (grease truck); Slip form pump operator (power-driven hydraulic lifting device for concrete forms); Tugger hoist operator (1 drum); Tunnel locomotive operator (over 10 and up to and including 30 tons)

GROUP 5: Backhoe operator (up to and including 3/4 yd.); Small Ford, Case or similar; Drill doctor; Grouting machine operator; Heading shield operator; Heavy-duty repairperson; Loader operator (Athey, Euclid, Sierra and similar types); Mucking machine operator (1/4 yd., rubber-tired, rail or track type); Pneumatic concrete placing machine operator (Hackley-Presswell or similar type); Pneumatic heading shield (tunnel); Pumpcrete gun operator; Tractor compressor drill combination operator; Tugger hoist operator (2 drum); Tunnel locomotive operator (over 30 tons)

GROUP 6: Heavy Duty Repairman

GROUP 7: Tunnel mole boring machine operator

ENGINEERS ZONES

\$1.00 additional per hour for all of IMPERIAL County and the portions of KERN, RIVERSIDE & SAN BERNARDINO Counties as defined below:

That area within the following Boundary: Begin in San Bernardino County, approximately 3 miles NE of the intersection of I-15 and the California State line at that point which is the NW corner of Section 1, T17N, R14E, San Bernardino Meridian. Continue W in a straight line to that point which is the SW corner of the northwest quarter of Section 6, T27S, R42E, Mt. Diablo Meridian. Continue North to the intersection with the Inyo County Boundary at that point which is the NE corner of the western half of the northern quarter of Section 6, T25S, R42E, MDM. Continue W along the Inyo and San Bernardino County boundary until the intersection with Kern County, as that point which is the SE corner of Section 34, T24S, R40E, MDM. Continue W along the Inyo and Kern County boundary until the intersection with Tulare County, at that point which is the SW corner of the SE quarter of Section 32, T24S, R37E, MDM. Continue W along the Kern and Tulare County boundary, until that point which is the NW corner of T25S, R32E, MDM. Continue S following R32E lines to the NW corner of T31S, R32E, MDM. Continue W to the NW corner of T31S, R31E, MDM. Continue S to the SW corner of T32S, R31E, MDM. Continue W to SW corner of SE quarter of Section 34, T32S, R30E, MDM. Continue S to SW corner of T11N, R17W, SBM. Continue E along south boundary of T11N, SBM to SW corner of T11N, R7W, SBM. Continue S to SW corner of T9N, R7W, SBM. Continue E along south boundary of T9N, SBM to SW corner of T9N, R1E, SBM. Continue S along west boundary of R1E, SBM to Riverside County line at the SW corner of T1S, R1E, SBM. Continue E along south boundary of T1s, SBM (Riverside County Line) to SW corner of T1S, R10E, SBM. Continue S along west boundary of R10E, SBM to Imperial County line at the SW corner of T8S, R10E, SBM. Continue W along Imperial and Riverside county line to NW corner of T9S, R9E, SBM. Continue S along the boundary between Imperial and San Diego Counties, along the west edge of R9E, SBM to the south boundary of Imperial County/California state line. Follow the California state line west to Arizona state line, then north to Nevada state line, then continuing NW back to start at the point which is the NW corner of Section 1, T17N, R14E, SBM

\$1.00 additional per hour for portions of SAN LUIS OBISPO, KERN, SANTA BARBARA & VENTURA as defined below:

That area within the following Boundary: Begin approximately 5 miles north of the community of Cholame, on the Monterey County and San Luis Obispo County boundary at the NW corner of T25S, R16E, Mt. Diablo Meridian. Continue south along the west side of R16E to the SW corner of T30S, R16E, MDM. Continue E to SW corner of T30S, R17E, MDM. Continue S to SW corner of T31S, R17E, MDM. Continue E to SW corner of T31S, R18E, MDM. Continue S along West side of R18E, MDM as it crosses into San Bernardino Meridian numbering area and becomes R30W. Follow the west side of R30W, SBM to the SW corner of T9N, R30W, SBM. Continue E along the south edge of T9N, SBM to the Santa Barbara County and Ventura County boundary at that point which is the SW corner of Section 34.T9N, R24W, SBM, continue S along the Ventura County line to that point which is the SW corner of the SE quarter of Section 32, T7N, R24W, SBM. Continue E along the south edge of T7N, SBM to the SE corner to T7N, R21W, SBM. Continue N along East side of R21W, SBM to Ventura County and Kern County boundary at the NE corner of T8N, R21W. Continue W along the Ventura County and Kern County boundary to the SE corner of T9N, R21W. Continue North along the East edge of R21W, SBM to the NE corner of T12N, R21W, SBM. Continue West along the north edge of T12N, SBM to the SE corner of T32S, R21E, MDM. [T12N SBM is a thin strip between T11N SBM and T32S MDM]. Continue North along the East side of R21E, MDM to the Kings County and Kern County border at the NE corner of T25S, R21E, MDM, continue West along the Kings County and Kern County Boundary until the intersection of San Luis Obispo County. Continue west along the Kings County and San Luis Obispo County boundary until the intersection with Monterey County. Continue West along the Monterey County and San Luis Obispo County boundary to the beginning point at the NW corner of T25S, R16E, MDM.

\$2.00 additional per hour for INYO and MONO Counties and the Northern portion of SAN BERNARDINO County as defined below:

That area within the following Boundary: Begin at the intersection of the northern boundary of Mono County and the California state line at the point which is the center of Section 17, T10N, R22E, Mt. Diablo Meridian. Continue S then SE along the entire western boundary of Mono County, until it reaches Inyo County at the point which is the NE corner of the Western half of the NW quarter of Section 2, T8S, R29E, MDM. Continue SSE along the entire western boundary of Inyo County, until the intersection with Kern County at the point which is the SW corner of the SE 1/4 of Section 32, T24S, R37E, MDM. Continue E along the Inyo and Kern County boundary until the intersection with San Bernardino County at that point which is the SE corner of section 34, T24S, R40E, MDM. Continue E along the Inyo and San Bernardino County boundary until the point which is the NE corner of the Western half of the NW quarter of Section 6, T25S, R42E, MDM. Continue S to that point which is the SW corner of the NW quarter of Section 6, T27S, R42E, MDM. Continue E in a straight line to the California and Nevada state border at the point which is the NW corner of Section 1, T17N, R14E, San Bernardino Meridian. Then continue NW along the state line to the starting point, which is the center of Section 18, T10N, R22E, MDM.

REMAINING AREA NOT DEFINED ABOVE RECEIVES BASE RATE

ENGI0012-004 08/01/2023

	Rates	Fringes
OPERATOR: Power Equipment (DREDGING)		
(1) Leverman.....	\$ 64.10	34.60
(2) Dredge dozer.....	\$ 58.13	34.60
(3) Deckmate.....	\$ 58.02	34.60
(4) Winch operator (stern winch on dredge).....	\$ 57.47	34.60
(5) Fireman-Oiler, Deckhand, Bargeman, Leveehand.....	\$ 56.93	34.60
(6) Barge Mate.....	\$ 57.54	34.60

IRON0433-006 01/01/2024

	Rates	Fringes
IRONWORKER		
Fence Erector.....	\$ 42.53	26.26
Ornamental, Reinforcing and Structural.....	\$ 47.45	34.90

PREMIUM PAY:

\$9.00 additional per hour at the following locations:

China Lake Naval Test Station, Chocolate Mountains Naval Reserve-Niland, Edwards AFB, Fort Irwin Military Station, Fort Irwin Training Center-Goldstone, San Clemente Island, San Nicholas Island, Susanville Federal Prison, 29 Palms - Marine Corps, U.S. Marine Base - Barstow, U.S. Naval Air Facility - Sealey, Vandenberg AFB Army Defense Language Institute - Monterey, Fallon Air Base, Naval Post Graduate School - Monterey, Yermo Marine Corps Logistics Center
Port Hueneme, Port Mugu, U.S. Coast Guard Station - Two Rock

LAB00300-005 08/01/2022

	Rates	Fringes
Asbestos Removal Laborer.....	\$ 39.23	23.28

SCOPE OF WORK: Includes site mobilization, initial site cleanup, site preparation, removal of asbestos-containing material and toxic waste, encapsulation, enclosure and disposal of asbestos- containing materials and toxic waste by hand or with equipment or machinery; scaffolding, fabrication of temporary wooden barriers and assembly of decontamination stations.

LAB00345-001 07/01/2022

	Rates	Fringes
LABORER (GUNITE)		

GROUP 1.....	\$ 48.50	21.37
GROUP 2.....	\$ 47.55	21.37
GROUP 3.....	\$ 44.01	21.37

FOOTNOTE: GUNITE PREMIUM PAY: Workers working from a Bosn'n's Chair or suspended from a rope or cable shall receive 40 cents per hour above the foregoing applicable classification rates. Workers doing gunite and/or shotcrete work in a tunnel shall receive 35 cents per hour above the foregoing applicable classification rates, paid on a portal-to-portal basis. Any work performed on, in or above any smoke stack, silo, storage elevator or similar type of structure, when such structure is in excess of 75'-0"" above base level and which work must be performed in whole or in part more than 75'-0"" above base level, that work performed above the 75'-0"" level shall be compensated for at 35 cents per hour above the applicable classification wage rate.

GUNITE LABORER CLASSIFICATIONS

GROUP 1: Rodmen, Nozzlemen

GROUP 2: Gunmen

GROUP 3: Reboundmen

 LAB01184-001 07/01/2022

	Rates	Fringes
Laborers: (HORIZONTAL DIRECTIONAL DRILLING)		
(1) Drilling Crew Laborer...	\$ 40.69	18.25
(2) Vehicle Operator/Hauler.	\$ 40.86	18.25
(3) Horizontal Directional Drill Operator.....	\$ 42.71	18.25
(4) Electronic Tracking Locator.....	\$ 44.71	18.25
Laborers: (STRIPING/SLURRY SEAL)		
GROUP 1.....	\$ 41.90	21.32
GROUP 2.....	\$ 43.20	21.32
GROUP 3.....	\$ 45.21	21.32
GROUP 4.....	\$ 46.95	21.32

LABORERS - STRIPING CLASSIFICATIONS

GROUP 1: Protective coating, pavement sealing, including repair and filling of cracks by any method on any surface in parking lots, game courts and playgrounds; carstops; operation of all related machinery and equipment; equipment repair technician

GROUP 2: Traffic surface abrasive blaster; pot tender - removal of all traffic lines and markings by any method (sandblasting, waterblasting, grinding, etc.) and preparation of surface for coatings. Traffic control person: controlling and directing traffic through both conventional and moving lane closures; operation of all related machinery and equipment

GROUP 3: Traffic delineating device applicator: Layout and application of pavement markers, delineating signs, rumble

and traffic bars, adhesives, guide markers, other traffic delineating devices including traffic control. This category includes all traffic related surface preparation (sandblasting, waterblasting, grinding) as part of the application process. Traffic protective delineating system installer: removes, relocates, installs, permanently affixed roadside and parking delineation barricades, fencing, cable anchor, guard rail, reference signs, monument markers; operation of all related machinery and equipment; power broom sweeper

GROUP 4: Striper: layout and application of traffic stripes and markings; hot thermo plastic; tape traffic stripes and markings, including traffic control; operation of all related machinery and equipment

LAB01184-002 07/01/2022

	Rates	Fringes
LABORER (TUNNEL)		
GROUP 1.....	\$ 45.68	23.30
GROUP 2.....	\$ 46.00	23.30
GROUP 3.....	\$ 46.46	23.30
GROUP 4.....	\$ 47.15	23.30
LABORER		
GROUP 1.....	\$ 36.39	21.04
GROUP 2.....	\$ 36.94	21.04
GROUP 3.....	\$ 37.49	21.04
GROUP 4.....	\$ 39.04	21.04
GROUP 5.....	\$ 39.39	21.04

LABORER CLASSIFICATIONS

GROUP 1: Cleaning and handling of panel forms; Concrete screeding for rough strike-off; Concrete, water curing; Demolition laborer, the cleaning of brick if performed by a worker performing any other phase of demolition work, and the cleaning of lumber; Fire watcher, limber, brush loader, piler and debris handler; Flag person; Gas, oil and/or water pipeline laborer; Laborer, asphalt-rubber material loader; Laborer, general or construction; Laborer, general clean-up; Laborer, landscaping; Laborer, jetting; Laborer, temporary water and air lines; Material hose operator (walls, slabs, floors and decks); Plugging, filling of shee bolt holes; Dry packing of concrete; Railroad maintenance, repair track person and road beds; Streetcar and railroad construction track laborers; Rigging and signaling; Scaler; Slip form raiser; Tar and mortar; Tool crib or tool house laborer; Traffic control by any method; Window cleaner; Wire mesh pulling - all concrete pouring operations

GROUP 2: Asphalt shoveler; Cement dumper (on 1 yd. or larger mixer and handling bulk cement); Cesspool digger and installer; Chucktender; Chute handler, pouring concrete, the handling of the chute from readymix trucks, such as walls, slabs, decks, floors, foundation, footings, curbs, gutters and sidewalks; Concrete curer, impervious membrane and form oiler; Cutting torch operator (demolition); Fine grader, highways and street paving, airport, runways and similar type heavy construction; Gas, oil and/or water pipeline wrapper - pot tender and form person; Guinea chaser; Headerboard person - asphalt; Laborer, packing rod steel and pans; Membrane vapor barrier installer; Power

broom sweeper (small); Riprap stonepaver, placing stone or wet sacked concrete; Roto scraper and tiller; Sandblaster (pot tender); Septic tank digger and installer(lead); Tank scaler and cleaner; Tree climber, faller, chain saw operator, Pittsburgh chipper and similar type brush shredder; Underground laborer, including caisson bellower

GROUP 3: Buggymobile person; Concrete cutting torch; Concrete pile cutter; Driller, jackhammer, 2-1/2 ft. drill steel or longer; Dri-pak-it machine; Gas, oil and/or water pipeline wrapper, 6-in. pipe and over, by any method, inside and out; High scaler (including drilling of same); Hydro seeder and similar type; Impact wrench multi-plate; Kettle person, pot person and workers applying asphalt, lay-kold, creosote, lime caustic and similar type materials ("applying" means applying, dipping, brushing or handling of such materials for pipe wrapping and waterproofing); Operator of pneumatic, gas, electric tools, vibrating machine, pavement breaker, air blasting, come-alongs, and similar mechanical tools not separately classified herein; Pipelayer's backup person, coating, grouting, making of joints, sealing, caulking, diapering and including rubber gasket joints, pointing and any and all other services; Rock slinger; Rotary scarifier or multiple head concrete chipping scarifier; Steel headerboard and guideline setter; Tamper, Barko, Wacker and similar type; Trenching machine, hand-propelled

GROUP 4: Asphalt raker, lute person, ironer, asphalt dump person, and asphalt spreader boxes (all types); Concrete core cutter (walls, floors or ceilings), grinder or sander; Concrete saw person, cutting walls or flat work, scoring old or new concrete; Cribber, shorer, lagging, sheeting and trench bracing, hand-guided lagging hammer; Head rock slinger; Laborer, asphalt- rubber distributor boot person; Laser beam in connection with laborers' work; Oversize concrete vibrator operator, 70 lbs. and over; Pipelayer performing all services in the laying and installation of pipe from the point of receiving pipe in the ditch until completion of operation, including any and all forms of tubular material, whether pipe, metallic or non-metallic, conduit and any other stationary type of tubular device used for the conveying of any substance or element, whether water, sewage, solid gas, air, or other product whatsoever and without regard to the nature of material from which the tubular material is fabricated; No-joint pipe and stripping of same; Prefabricated manhole installer; Sandblaster (nozzle person), water blasting, Porta Shot-Blast

GROUP 5: Blaster powder, all work of loading holes, placing and blasting of all powder and explosives of whatever type, regardless of method used for such loading and placing; Driller: All power drills, excluding jackhammer, whether core, diamond, wagon, track, multiple unit, and any and all other types of mechanical drills without regard to the form of motive power; Toxic waste removal

TUNNEL LABORER CLASSIFICATIONS

GROUP 1: Batch plant laborer; Changehouse person; Dump person; Dump person (outside); Swamper (brake person and switch person on tunnel work); Tunnel materials handling person; Nipper; Pot tender, using mastic or other materials (for example, but not by way of limitation, shotcrete, etc.)

GROUP 2: Chucktender, cabledtender; Loading and unloading agitator cars; Vibrator person, jack hammer, pneumatic tools (except driller); Bull gang mucker, track person; Concrete crew, including rodder and spreader

GROUP 3: Blaster, driller, powder person; Chemical grout jet person; Cherry picker person; Grout gun person; Grout mixer person; Grout pump person; Jackleg miner; Jumbo person; Kemper and other pneumatic concrete placer operator; Miner, tunnel (hand or machine); Nozzle person; Operating of troweling and/or grouting machines; Powder person (primer house); Primer person; Sandblaster; Shotcrete person; Steel form raiser and setter; Timber person, retimber person, wood or steel; Tunnel Concrete finisher

GROUP 4: Diamond driller; Sandblaster; Shaft and raise work

LAB01184-004 07/01/2022

	Rates	Fringes
Brick Tender.....	\$ 37.32	21.45

LAB01414-001 08/03/2022

	Rates	Fringes
LABORER		
PLASTER CLEAN-UP LABORER....	\$ 38.92	23.32
PLASTER TENDER.....	\$ 41.47	23.32

Work on a swing stage scaffold: \$1.00 per hour additional.

PAIN0036-001 07/01/2023

	Rates	Fringes
Painters: (Including Lead Abatement)		
(1) Repaint (excludes San Diego County).....	\$ 29.59	17.12
(2) All Other Work.....	\$ 38.52	18.64

REPAINT of any previously painted structure. Exceptions: work involving the aerospace industry, breweries, commercial recreational facilities, hotels which operate commercial establishments as part of hotel service, and sports facilities.

PAIN0036-008 09/01/2022

	Rates	Fringes
DRYWALL FINISHER/TAPER.....	\$ 46.28	23.52

PAIN0036-015 01/01/2020

	Rates	Fringes
GLAZIER.....	\$ 43.45	23.39

FOOTNOTE: Additional \$1.25 per hour for work in a condor, from the third (3rd) floor and up Additional \$1.25 per

hour for work on the outside of the building from a swing stage or any suspended contrivance, from the ground up

PLAS0200-009 08/03/2022

	Rates	Fringes
PLASTERER.....	\$ 47.37	19.64

PLAS0500-002 07/01/2020

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER...	\$ 38.50	25.91

PLUM0016-001 09/01/2023

	Rates	Fringes
PLUMBER/PIPEFITTER		
Work ONLY on new additions and remodeling of bars, restaurant, stores and commercial buildings not to exceed 5,000 sq. ft. of floor space.....	\$ 53.51	25.28
Work ONLY on strip malls, light commercial, tenant improvement and remodel work.....	\$ 42.49	23.86
All other work except work on new additions and remodeling of bars, restaurant, stores and commercial buildings not to exceed 5,000 sq. ft. of floor space and work on strip malls, light commercial, tenant improvement and remodel work.....	\$ 55.18	26.26

PLUM0345-001 09/01/2023

	Rates	Fringes
PLUMBER		
Landscape/Irrigation Fitter..	\$ 40.20	25.90
Sewer & Storm Drain Work....	\$ 44.29	23.28

ROOF0036-002 08/13/2023

	Rates	Fringes
ROOFER.....	\$ 46.02	20.05

FOOTNOTE: Pitch premium: Work on which employees are exposed to pitch fumes or required to handle pitch, pitch base or pitch impregnated products, or any material containing coal tar pitch, the entire roofing crew shall receive \$1.75 per hour ""pitch premium"" pay.

SFCA0669-002 01/01/2024

	Rates	Fringes
SPRINKLER FITTER.....	\$ 45.31	27.91

SHEE0105-003 01/01/2024		

LOS ANGELES (South of a straight line drawn between Gorman and Big Pines)and Catalina Island, INYO, KERN (Northeast part, East of Hwy 395), MONO ORANGE, RIVERSIDE, AND SAN BERNARDINO COUNTIES

	Rates	Fringes
SHEET METAL WORKER		
(1) Commercial - New Construction and Remodel work.....	\$ 56.95	30.04
(2) Industrial work including air pollution control systems, noise abatement, hand rails, guard rails, excluding aritechtrual sheet metal work, excluding A-C, heating, ventilating systems for human comfort...	\$ 56.95	30.04

TEAM0011-002 07/01/2023		

	Rates	Fringes
TRUCK DRIVER		
GROUP 1.....	\$ 38.19	33.69
GROUP 2.....	\$ 38.34	33.69
GROUP 3.....	\$ 38.47	33.69
GROUP 4.....	\$ 38.66	33.69
GROUP 5.....	\$ 38.69	33.69
GROUP 6.....	\$ 38.72	33.69
GROUP 7.....	\$ 38.97	33.69
GROUP 8.....	\$ 39.22	33.69
GROUP 9.....	\$ 39.42	33.69
GROUP 10.....	\$ 39.72	33.69
GROUP 11.....	\$ 40.22	33.69
GROUP 12.....	\$ 40.65	33.69

WORK ON ALL MILITARY BASES:
 PREMIUM PAY: \$3.00 per hour additional.
 [29 palms Marine Base, Camp Roberts, China Lake, Edwards AFB, El Centro Naval Facility, Fort Irwin, Marine Corps Logistics Base at Nebo & Yermo, Mountain Warfare Training Center, Bridgeport, Point Arguello, Point Conception, Vandenberg AFB]

TRUCK DRIVERS CLASSIFICATIONS

GROUP 1: Truck driver

GROUP 2: Driver of vehicle or combination of vehicles - 2 axles; Traffic control pilot car excluding moving heavy equipment permit load; Truck mounted broom

GROUP 3: Driver of vehicle or combination of vehicles - 3

axles; Boot person; Cement mason distribution truck; Fuel truck driver; Water truck - 2 axle; Dump truck, less than 16 yds. water level; Erosion control driver

GROUP 4: Driver of transit mix truck, under 3 yds.; Dumpcrete truck, less than 6-1/2 yds. water level

GROUP 5: Water truck, 3 or more axles; Truck greaser and tire person (\$0.50 additional for tire person); Pipeline and utility working truck driver, including winch truck and plastic fusion, limited to pipeline and utility work; Slurry truck driver

GROUP 6: Transit mix truck, 3 yds. or more; Dumpcrete truck, 6-1/2 yds. water level and over; Vehicle or combination of vehicles - 4 or more axles; Oil spreader truck; Dump truck, 16 yds. to 25 yds. water level

GROUP 7: A Frame, Swedish crane or similar; Forklift driver; Ross carrier driver

GROUP 8: Dump truck, 25 yds. to 49 yds. water level; Truck repair person; Water pull - single engine; Welder

GROUP 9: Truck repair person/welder; Low bed driver, 9 axles or over

GROUP 10: Dump truck - 50 yds. or more water level; Water pull - single engine with attachment

GROUP 11: Water pull - twin engine; Water pull - twin engine with attachments; Winch truck driver - \$1.25 additional when operating winch or similar special attachments

GROUP 12: Boom Truck 17K and above

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at <https://www.dol.gov/agencies/whd/government-contracts>.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses

(29CFR 5.5 (a) (1) (iii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of ""identifiers"" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date

for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour National Office because National Office has responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION"



APPENDIX C – SAM UEI Form

SYSTEM for AWARD MANAGEMENT (SAM)
UNIQUE ENTITY ID (UEI)

On **April 4, 2022**, the unique entity identifier used across the federal government changed from the DUNS Number to the Unique Entity ID (generated by SAM.gov).

Contractor and subcontractors are required to register in the System for Award Management (SAM) and provide the City with their Unique Entity ID (UEI) using the following links: <https://sam.gov/content/entity-registration> or <https://usfcr.com/sam-registration/>

Upon registration and obtaining the UEI, Contractors and subcontractors are required to submit this Form for each entity performing work on this Project.

Entity Name:	
Entity Type:	
Registration Date:	
Unique Entity ID	

SAM registration will be valid for one year from the date the registration is complete. A SAM registration must be renewed each year to remain active and compliant. The City recommends renewing 90 days prior to the SAM expiration date.



APPENDIX D – Byrd Anti-Lobbying Certification Form



APPENDIX E – Economic Sanctions EO N-6-22 Form

ECONOMIC SANCTIONS IN RESPONSE TO RUSSIA FORM

(California Executive Order N-6-22)

The Contractor and subcontractors are required to comply with all applicable reporting requirements regarding compliance with the economic sanctions, including, but not limited to, those reporting requirements set forth in California Executive Order N-6-22 for all parties with one or more agreements with the State of California, the County of Riverside, or any other local agency, with a value of Five Million Dollars (\$5,000,000) or more. Notwithstanding any other provision in these documents, failure to comply with the economic sanctions and all applicable reporting requirements may result in disqualification or termination of the Construction Agreement, if awarded.

**COMPLIANCE WITH ECONOMIC SANCTIONS IN RESPONSE TO
RUSSIA'S ACTIONS IN UKRAINE**

The Contractor and subcontractors are required to comply with all applicable reporting requirements regarding compliance with the economic sanctions, including, but not limited to, those reporting requirements set forth in California Executive Order N-6-22 for all parties with one or more agreements with the State of California, the County of Riverside, or any other local agency, with a value of Five Million Dollars (\$5,000,000) or more. Notwithstanding any other provision in these documents, failure to comply with the economic sanctions and all applicable reporting requirements may result in disqualification or termination of the Construction Agreement, if awarded.

MUST BE SUBMITTED WITH BID PROPOAL IF BID AMOUNT IS \$5,000,000 OR MORE

Prior to bidding on, submitting a proposal, or executing a contract, a party/contractor must certify: 1) it is not a target of economic sanctions and 2) in compliance with economic sanctions imposed by the U.S. government in response to Russia's actions in Ukraine, as well as any requirements related to the Russian sanctions imposed by the California Governor's Executive Order N-6-22 issued on March 4, 2022 and under state law, if any.

To comply with this requirement, please insert the party/contractor name and Federal ID Number (if available), complete the information described below and execute by an authorized representative of the contractor.

CERTIFICATION

I, the authorized representative for contractor named below, certify I am duly authorized to execute this certification on behalf of the contractor below, and the contractor identified below has conducted a good faith review of existing contracts. I attest that the contractor is not a target of economic sanctions, and that contractor is in compliance with the economic sanctions imposed by the U.S. government in response to Russia's actions in Ukraine, as well as any requirements related to the Russian sanctions imposed by the California Governor's Executive Order N-6-22 issued on March 4, 2022 and under state law, if any.

<i>Party/Contractor Name (Printed)</i>		<i>Federal ID Number (or n/a)</i>	
<i>By (Authorized Signature)</i>			
<i>Printed Name and Title of Person Signing</i>			
<i>Date</i>			



APPENDIX F – MBE / WBE Forms

PARTICIPATION RESPONSIBILITIES FOR PRIME CONTRACTORS AND THEIR SUBCONTRACTORS

All recipients of federal funds from the U. S. Department of Treasury, as well as their prime contractors and subcontractors, must make every effort to solicit bids from eligible MBE/WBEs. This information must be documented and reported to the City as described in this document.

The MBE/WBE responsibilities of the Prime Contractor are:

1. To conduct a “Good Faith” effort to ensure maximum MBE/WBE participation in the project;
2. Complete or obtain from MBE/WBE subcontractors, all of the completed forms required in these guidelines (Forms 1-5) and submit them to the recipient; and
3. Report actual MBE/WBE participation on a quarterly basis to the recipient.

The MBE/WBE responsibilities of the Agency are:

1. To ensure that the prime contractor meets the responsibilities identified in these guidelines;
2. Submit all documentation identified in these guidelines to the City and maintain all records in the project files for later access or auditing; and
3. Provide quarterly reports on MBE/WBE procurements to the City.

Section 3: “Good Faith” Effort Process

Any public or private entity receiving federal funds must demonstrate that efforts were made to attract MBE/WBEs on any federal contracts. The process to attract MBE/WBEs is referred to as the “Good Faith” effort. This effort requires the recipient, prime contractor and any subcontractors to take the steps listed below to assure that MBE/WBEs are used whenever possible as sources of supplies, construction, equipment or services. Failure to take the steps outlined below and submit Form 4, Prime Contractor/Recipient Selected MBE/WBEs, prior to bid opening, shall cause the bid to be rejected as non-responsive. Use Forms **1 through 5** to document the process, **6 is completed by the Agency**. If it is not practical or possible to comply with one or more of the five steps, prepare an explanation and submit it with the ATA package.

STEP 1: Divide the total requirements, when economically feasible, into small tasks or quantities to permit maximum participation. Evidence submitted must illustrate that the work was divided into small proprietary portions (e.g. paving, electrical, landscaping, revegetation).

STEP 2: Establish delivery schedules, when work requirements permit, that encourage maximum MBE/WBE participation.

STEP 3: Use the services of the U.S. Small Business Administration (SBA) and the Minority Business Development Agency (MBDA) of the U. S. Department of Commerce (DOC) in soliciting qualified MBE/WBEs. Utilization of these resources is required at no cost. These agencies offer several services, including Internet access to databases of MBE/WBEs. SBA’s database is <http://www.ccr.gov/>.

For additional assistance, the recipient or contractor can telephone the local offices of both agencies in their area (SBA Minority Enterprise Development Offices and DOC MBDA Regional Centers). The Internet web sites also include names, addresses, and phone or fax numbers of local SBA and MBDA centers. There are contact phone numbers listed in Step 5 that will assist you in reaching the two offices if the Internet is unavailable. **Do not write to these sources.**

The prime contractor must provide documentation that the local SBA/MBDA offices or web sites were notified of the contracting bid opportunity at least **twelve working days prior to bid opening (five working days for referrals from SBA/MBDA or web sites)** and solicitation to MBE/WBE subcontractors at least **seven working days prior to bid opening**. Documentation must not only include the efforts to contact the information sources and list the contract opportunity, but also the solicitation and response to the bid request.

STEP 4: Include qualified MBE/WBEs on solicitation lists (**Form 1**) and record the information. Solicitation should be as broad as possible. The following web sites include a list of available sources for expanding the search for eligible MBE/WBEs: <http://www.sba.gov> (<http://www.ccr.gov>) and (<http://www.mbda.gov>). If MBE/WBE sources are *not* located, explain why and describe the efforts made. See Step 5 for more detailed information.

For all contracts, the prime contractor must send invitations to at least three (or all, if less than three) MBE/WBE vendors for each item of work referred by sources contacted. The invitations must adequately specify the items for which bids are requested. The record of "good faith" efforts must indicate a real desire for a positive response, such as a certified mail receipt or a documented telephone conversation. **(A regular letter or an unanswered telephone call is not an adequate "good faith" effort)**. A list of all sub-bidders, including the bidders **not** selected and non-MBE/WBE subcontractors, and bid amount for each item of work must be submitted on Form 5. A sample list is shown in Form 5, Sample Summary of Bids Received from Subcontractors. If a low bid was not accepted, an explanation must be provided.

STEP 5: MBE/WBE potential resources centers.

Federal Agencies must be contacted:

Name and Address	Telephone and Website
U.S. Small Business Administration	(415) 744-6820 Extension 0
455 Market Street, Suite 600	PRO-Net Database: http://www.ccr.gov/
San Francisco, CA 94105	Bid Notification: http://web.sba.gov/subnet/
RE: Minority Enterprise Development Offices	
U.S. Department of Commerce	(415) 744-3001
Minority Business Development Agency	Phoenix/ Opportunity Database:
211 Main Street, Room 1280	http://www.mbd.gov
San Francisco, CA 94105	
RE: Business Development Centers	

State Agencies must be contacted:

Name and Address	Telephone and Website
California Department of Transportation	Mailing Address: PO Box 942874
(CALTRANS) Business Enterprise Program	Sacramento, CA 94274-0015
1820 Alhambra Blvd.	(916) 227-9599
Sacramento, CA 95816	www.dot.ca.gov/hq/bep
(CALTRANS) Business Enterprise Program	Mailing Address: PO Box 942874
CA Public Utilities Commission (CPUC)	
505 Van Ness Avenue	http://www.cpuc.ca.gov/static/supplierdiversity
San Francisco, CA 94102-3298	

Reporting Requirements:

All requests for services, supplies, equipment, or construction solicited by the City, other governmental agencies, non-profit agencies, or private businesses are subject to the MBE/WBE requirements. **These requirements apply to the prime contractor and all subcontractors.** The only exceptions to this requirement are contracts with governmental or non-profit agencies.

For the duration of the contract, all primary and subcontractors will be required to report progress made in fulfilling the “good faith” effort in their quarterly reports. Failure to provide this information as stipulated in the contract language will be cause for contract termination. City staff will provide recipients with the forms and instructions to report their “good faith” efforts when the award and contract is issued.

Once a bidder is selected, the prime contractor should compile the information required by the “good faith” effort process. **All information supporting the “good faith” effort must be submitted within ten working days after the bid opening.** Recipient shall review the successful bidder’s records closely to be sure that, prior to bid opening, all required “good faith” efforts were made. Failure of either the bidder or prime contractor/subcontractor to follow the process and provide the necessary information to the City could jeopardize the bidding process. The following situations and circumstances require actions as indicated:

1. If the apparent successful low bidder was rejected a complete explanation must be provided.
2. Each MBE/WBE firm utilized must complete and submit the **Form 3**, Contractor Self-Certification within ten (10) days after the bid opening date.
3. If additional subcontracts become necessary after the award of the prime contract, provide Form 3 to the City within ten (10) working days following the award of each new subcontract.
4. Any deviation from the information provided at the time of the bid shall not result in a reduction of MBE/WBE participation without prior approval of the City’s Project Manager.
5. Failure of the apparent low bidder to perform the five “good faith” effort steps *prior* to bid opening and submittal of Form 4 with the bid, will result in its bid being declared non-responsive. The contract may then be awarded to the next low, responsive, responsible bidder that meets the requirements or the recipient may re-advertise the project.
6. The apparent successful low bidder must submit documentation to the recipient within ten working days following bid opening showing that, prior to the bid opening, all required “good faith” efforts were made.

MBE/WBE Forms:

The following forms are provided to report project MBE/WBE information. These forms may be obtained electronically from the City Principal Engineer, Dustin Christensen at (951) 572-3192 or dchristensen@beaumontca.gov. If you have any questions about completing these forms or when to turn them in, please contact the Principal Engineer.

All Forms, where applicable, must have original signature and date.

The following table provides information on who completes each form and where the forms are to be sent:

Form #	Description	Completed By:	Submit To:
1	Solicitation	Prime	City with Bid
2	Bids Received List	Prime	City with Bid
3 (Att. A)	Self-Certification	MBE/WBE Subs	Prime Contractor
4 (Att. B)	Selected Subcontractors	Prime (with bid)	City with Bid
5	Summary & Sample	Prime	City with Bid
6	Positive Effort Certification	Recipient	City with Bid

**FORM 3 (Attachment A)
MINORITY- OR WOMEN-OWNED BUSINESS ENTERPRISE
(MBE/WBE)**

CONTRACTOR SELF CERTIFICATION

Firm Name: _____ Phone: _____

Address: _____

Principal Service or Product: _____ Bid Amount \$ _____

PLEASE INDICATE PERCENTAGE OF OWNERSHIP

MBE _____% Ownership WBE _____% Ownership

Prime Contractor Supplier of Material/Service

Subcontractor Broker

Sole Ownership Corporation

Partnership Joint Venture

I hereby certify that this firm is a Minority or Women Business Enterprise as defined in Public Contract Code, Section 10115.1. In making this certification, I am aware of Sections 12650 et seq. of the Government Code, providing for the imposition of treble damages for making false claims against the State and Section 10115.10 of the Public Contract Code, making it a crime to intentionally make an untrue statement in this certificate.

Certified by: _____ Title: _____
MBE/WBE Sub _____ (ORIGINAL SIGNATURE AND DATE REQUIRED)

Name: _____ Date: _____

Additional proof may be required upon written challenge of this certification by any person or agency. Falsification of this certification by a firm selected to perform federally funded work may result in a determination that the firm is non-responsive and ineligible for future contracts.

This form must be submitted within 10 working days after the bid opening date.

FORM 4 (Attachment B)
PRIME CONTRACTOR/RECIPIENT
SELECTED MINORITY- AND WOMEN-OWNED BUSINESS ENTERPRISES (MBE/WBEs)

CONTRACT RECIPIENTS NAME		CONTRACT NO. OR SPECIFICATION NO.	
PROJECT DESCRIPTION		PROJECT LOCATION	
PRIME CONTRACTOR INFORMATION			
NAME AND ADDRESS (Include ZIP Code, Federal Tax ID #)		<input type="radio"/> MBE <input type="radio"/> WBE	
PHONE		AMOUNT OF CONTRACT\$	
MBE/WBE INFORMATION			
<input type="radio"/> NONE*			
<input type="radio"/> MBE <input type="radio"/> WBE		NAME AND ADDRESS (Include ZIP Code,)	
<input type="radio"/> SUBCONTRACTOR <input type="radio"/> JOINT VENTURE	<input type="radio"/> SUPPLIER/SERVICE <input type="radio"/> BROKER		
AMOUNT OF CONTRACT \$			
WORK TO BE PERFORMED			
<input type="radio"/> MBE <input type="radio"/> WBE		NAME AND ADDRESS (Include ZIP Code)	
<input type="radio"/> SUBCONTRACTOR <input type="radio"/> JOINT VENTURE	<input type="radio"/> SUPPLIER/SERVICE <input type="radio"/> BROKER		
AMOUNT OF CONTRACT \$			
WORK TO BE PERFORMED			
<input type="radio"/> MBE <input type="radio"/> WBE		NAME AND ADDRESS (Include ZIP Code,)	
<input type="radio"/> SUBCONTRACTOR <input type="radio"/> JOINT VENTURE	<input type="radio"/> SUPPLIER/SERVICE <input type="radio"/> BROKER		
AMOUNT OF CONTRACT \$			
WORK TO BE PERFORMED			
<input type="radio"/> MBE <input type="radio"/> WBE		NAME AND ADDRESS (Include ZIP Code,)	
<input type="radio"/> SUBCONTRACTOR <input type="radio"/> JOINT VENTURE	<input type="radio"/> SUPPLIER/SERVICE <input type="radio"/> BROKER		
AMOUNT OF CONTRACT \$			
WORK TO BE PERFORMED			
<input type="radio"/> MBE <input type="radio"/> WBE		NAME AND ADDRESS (Include ZIP Code)	
<input type="radio"/> SUBCONTRACTOR <input type="radio"/> JOINT VENTURE	<input type="radio"/> SUPPLIER/SERVICE <input type="radio"/> BROKER		
AMOUNT OF CONTRACT \$			
WORK TO BE PERFORMED			
TOTAL MBE AMOUNT: \$ _____		TOTAL WBE AMOUNT: \$ _____	
SIGNATURE OF PERSON COMPLETING FORM: _____			
TITLE: _____		PHONE: _____	DATE: _____

Negative reports are required. Original Signature and Date Required.
Failure to complete and submit Form 4 with the bid package will result in bid rejection as non-responsive.

FORM 6

**MINORITY BUSINESS ENTERPRISE/WOMEN BUSINESS ENTERPRISE (MBE/WBE)
POSITIVE EFFORT CERTIFICATION BY APPLICANT/RECIPIENT**

1. The apparent successful low bidder on the American Rescue Plan Act (ARPA) funded project number F-03 _____ is _____
(name of bidder)
2. Before the City of Beaumont can consider bid awards to any bidder the applicant/recipient must certify to the following:

MINORITY BUSINESS ENTERPRISE (MBE)

The bidder has obtained _____% of MBE participation for this contract.

WOMEN BUSINESS ENTERPRISE (WBE)

The bidder has obtained _____% of WBE participation for this contract.

Also submitted are Forms 3 and 4 that contain a complete list of those MBE and WBE firms subcontracted with or with whom other types of agreements were made. The list includes the names of the firm, address, phone number and dollar amount involved.

The following affirmative steps as required by 40 CFR 35.3150 (d) have been taken:

- (1) The contractor divided total requirements when economically feasible, into small tasks or quantities to permit maximum participation of minority and women's businesses.
- (2) The contractor established delivery schedules, where the requirements of the work permitted, which encouraged participation by minority and women's business.
- (3) The contractor included qualified minority and women's businesses on solicitation lists.
- (4) The contractor assures that minority and women's businesses were solicited, whenever they were potential sources.
- (5) The contractor used the services and assistance of the Small Business Administration and the Office of Minority Business Development Agency of the U.S. Department of Commerce.

It must be understood that the applicant/recipient in its role as a public trustee assumes primary responsibility to achieve an acceptable level of MBE/WBE utilization. This primary responsibility is a basic condition of the award of any ARPA financial assistance. Where an application/recipient fails to meet its obligations under these requirements the applicant/recipient may be declared non-responsive and may have funding either annulled, suspended or terminated.

In accepting these responsibilities, I hereby certify the above.

Name of Applicant/Recipient

Signature of Authorized Representative

Date

Name and Title of Authorized Representative