DOCUMENT 00001

PUBLIC WORKS DEPARTMENT
10300 TORRE AVENUE
CUPERTINO, CALIFORNIA 95014

PROJECT MANUAL

FOR THE

WILSON PARK BUILDING AND LANDSCAPE IMPROVEMENTS

Bid Date:

Tuesday, June 23, 2015

Project Number: 2015-08
File No.: 92,010.07

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DOCUMENT 00002

SIGNATURE PAGE

PROJECT MANUAL FOR
WILSON PARK BUILDING AND LANDSCAPE IMPROVEMENTS
PROJECT NO. 2015-08

REVIEWED BY:

Alex Acenas
Public Works Project Manager

APPROVED BY:

Timm Borden, P.E.
Director of Public Works

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DOCUMENT 00003

PROJECT DIRECTORY

Project Name: Wilson Park Building and Landscape Improvements

Project Number: 2015-08

Location: 19784 Wintergreen Dr.
Cupertino, CA 95014

City Representative:

City of Cupertino
Alex Acenas
Public Works Project Manager
Public Works Department
10300 Torre Avenue
Cupertino, CA 95014
PH: 408-777-3232
FX: 408-777-3333
E-mail: alexa@cupertino.org

Address for Stop Notices/Lien Notices:

City of Cupertino
Alex Acenas
Public Works Project Manager
Public Works Department
10300 Torre Avenue
Cupertino, CA 95014
PH: 408-777-3232
FX: 408-777-3333
E-mail: alexa@cupertino.org

Architect of Record:

Prodis Associates Architects
Attn: Jean Rose
991 W. Hedding St., Suite 101
San Jose, CA 95126
PH: (408) 984-1377

Construction Management:

Gilbane Building Company
1798 Technology Drive, Suite 120
San Jose, CA 95110
PH: (408) 660-4428

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SEALS PAGE

The Technical Specifications and Plans have been prepared by or under the direction of the following Registered Persons. All other sections have been prepared by the City in conjunction with the Technical Specifications contained herein and the Plans that are a part of the Contract Documents.

Pierre Prodis
Prodis Associates Architects

Licensed Architect No. C-4028
Expires 09/30/2015

LICENSED ARCHITECT
PIERRE PRODIS
NO. C-4028
9-15
REN. DATE
STATE OF CALIFORNIA

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DOCUMENT 00010

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00320	Geotechnical Data, Hazardous Materials Surveys and Existing Conditions
00400	Bid Form
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00430	Subcontractors List
00450	Statement of Qualifications
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END OF SECTION

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DOCUMENT 00012

CALTRANS/CITY CROSS-REFERENCE TABLE

Whenever Standard Specifications Section 1 through 9 are referenced, the referenced sections are hereby deleted and the corresponding Document and Section in the following table shall be substituted.

Caltrans Standard Specification - 2006		City Contract Documents - 2007		
Section #	**Title**	**Document #**	**Section #**	**Title**
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CALTRANS/CITY CROSS-REFERENCE TABLE

Caltrans Standard Specification - 2006		City Contract Documents - 2007		
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Caltrans Standard Specification - 2006		City Contract Documents - 2007		
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5-1.06	Superintendence	00700	4.6	General Conditions : Superintendence
5-1.07	Lines and Grades	00700	4.8	General Conditions : Layout of Work and Surveys
5-1.08	Inspection	00700	5.1 & 5.5	General Conditions: : Source of Supply and Quality of Materials & Plant Inspection
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5-1.11	Alternative Equipment	00700	4.11	General Conditions : Construction Equipment and Plant
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CALTRANS/CITY CROSS-REFERENCE TABLE

Caltrans Standard Specification - 2006		City Contract Documents - 2007		
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7-1.01A(2)(a)	Travel and Subsistence Payment	00700	3.4	General Conditions : Change in Contract Price & Labor Code
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7-1.01B	Fair Labor Standards Act			Fair Labor Standard Act of 1938
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CALTRANS/CITY CROSS-REFERENCE TABLE

Caltrans Standard Specification - 2006		City Contract Documents - 2007		
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CALTRANS/CITY CROSS-REFERENCE TABLE

Caltrans Standard Specification - 2006		City Contract Documents - 2007		
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9-1.03A(1c)	Subsistence and Travel Allowance	00700	3.4	General Conditions : Change in Contract Price
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CALTRANS/CITY CROSS-REFERENCE TABLE

Caltrans Standard Specification - 2006		City Contract Documents - 2007		
Section #	**Title**	**Document #**	**Section #**	**Title**
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9-1.03A(3a)	Equipment on the Work	00700	3.4	General Conditions : Change in Contract Price
9-1.03A(3b)	Equipment not on the Work	00700	3.4	General Conditions : Change in Contract Price
9-1.03A(3c)	Owner-Operated Equipment	00700	3.4	General Conditions : Change in Contract Price
9-1.03A(3d)	Dump Truck Rental			**NOT APPLICABLE**
9-1.03B	Work Performed by Special Forces or Other Special Services	00700	3.4	General Conditions : Change in Contract Price
9-1.03C	Records	00700	3.4	General Conditions : Change in Contract Price
9-1.03D	Payment	00700	3.4	General Conditions : Change in Contract Price
9-1.04	Notice of Potential Claim	00700	9	General Conditions : Claims by Contractor
9-1.05	Stop Notices			Civil Code
9-1.06	Partial Payments	00700	8.3	General Conditions : Progress Payment
9-1.065	Payment of Withheld Funds	00700	8.6	General Conditions : Substitution of Securities in Lieu of Retention
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9-1.07B	Final Payment and Claims	00700	8.4	General Conditions : Final Payment
9-1.08	Adjustment of Overhead Costs			**NOT APPLICABLE**
9-1.09	Clerical Errors			**NOT APPLICABLE**
9-1.10	Arbitration	00700	9.4	General Conditions : Mediation

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DOCUMENT 00100

ADVERTISEMENT FOR BIDS

NOTICE: THE CITY OF CUPERTINO, a Municipal Corporation of the State of California ("City") hereby gives notice that it will accept Bids for construction of the following public work:

CITY PROJECT NUMBER 2015-08
WILSON PARK BUILDING AND LANDSCAPE IMPROVEMENTS

1. **BID SUBMISSION:** The City uses a two-part Bid process with Bids in **Envelope "A"** and Statements of Qualification and Financial information in **Envelope "B"**. City will accept **Envelope "A" and Envelope "B"** before **2:00 p.m.** on **June 23, 2015 in the City Clerk's Office** in City Hall, 10300 Torre Avenue**.** City's representative will call out the designated time in the City Clerk's Office, stating that the period for accepting Bids is closed. Bids will be publicly read at 2:05 p.m. in the City Hall Lobby. The Bid opening will be in accordance with procedures set forth in Document 00200 (Instructions to Bidders).

2. **CONTACT INFORMATION:**
Public Works Department
408 777 3354 general
408 777 3333 fax
capitalprojects@cupertino.org
City Hall, 10300 Torre Avenue
Cupertino, CA 95014

3. **STATEMENT OF QUALIFICATIONS:** Each Bidder shall be required to submit a "Statement of Qualifications" in accordance with Document 00200 (Instructions to Bidders) and Document 00450 (Statement of Qualifications for Construction Work).

4. **DESCRIPTION OF THE WORK:** Work includes building and landscape improvements at the Recreation Building at Wilson Park.

5. **CONTRACT TIME:** Work shall be finally completed by or before October 2, 2015.

6. **Expected Expenditure:** The City's expected expenditure is $125,000. (This price is expected, not guaranteed)

7. **REQUIRED CONTRACTOR'S LICENSE:** A **California Class "B" General Building** contractor's license is required to Bid this Contract. Joint ventures must secure a joint venture license prior to award of this Contract. Removal, handling, and/or disposal of hazardous materials may, by law, require hazardous substance removal certification by the Contractor's State License Board.

8. **Required Contractor and Subcontractor Registration**

   a. Owner shall accept Bids only from Bidders that (along with all Subcontractors listed in Document 00430 (Subcontractor List) are currently registered and qualified to perform public work pursuant to Labor Code Section 1725.5.

   b. Subject to Labor Code Sections 1771.1(c) and (d), any Bid not complying with paragraph 1.01a above shall be returned and not considered; provided that if Bidder is a joint venture (Business & Professions Code Section 7029.1) or if federal funds are involved in the Contract (Labor Code Section 1771.1(a)), Owner may accept a non-complying Bid provided that Bidder and all listed Subcontractors are registered at the time of Contract award.

9. **PREVAILING WAGE LAWS:** The successful Bidder must comply with all prevailing wage laws applicable to the Project, and related requirements contained in the Contract Documents.

10. **INSTRUCTIONS:** Bidders shall refer to Document 00200 (Instructions to Bidders) for required documents and items to be submitted in sealed envelopes to City Clerk's office, as well as applicable times for submission.

11. **SUBSTITUTION OF SECURITIES:** City will permit successful Bidder to substitute securities for retention monies withheld to ensure performance of Contract, as set forth in Document 00680 (Escrow Agreement for Security Deposits in Lieu of Retention), in accordance with California Public Contract Code, Section 22300. By this reference, Document 00680 (Escrow Agreement for Security Deposits in Lieu of Retention) is incorporated in full in this Document 00100.

12. **NON-MANDATORY PRE-BID CONFERENCE:** City will conduct a Non-mandatory Pre-Bid Conference at **10:00 AM on Thursday, June 11, 2015** at the job site, Wilson Park Recreation Building, 19784 Wintergreen Dr., Cupertino, CA. Any Bidder wishing to investigate subsurface conditions at the site must schedule such a visit with the City in accordance with Document 00200 (Instructions to Bidders).

13. **PROCUREMENT OF BIDDING DOCUMENTS:** Bidders may examine a complete hard-copy set of bid documents at the City's Public Works Department, City Hall, 10300 Torre Avenue in Cupertino.

    To obtain a copy of the bid documents, Bidders must download a set of bid documents from the City of Cupertino Web site at: http://www.cupertino.org/index.aspx?page=119, or from a plan room or trade journal site that carries them. The City will post all addendums to the project on the City web site and it is the Contractor's sole responsibility to download the addendums for the project. If a Contractor wishes to be on the plan holders list for the project the Contractor must send an e-mail to: capitalprojects@cupertino.org and alexa@cupertino.org containing the following information: Contractor's name, address, phone and fax number, and e-mail address for future communications. The plan holders list will be updated daily. Bidder is responsible for printing all of the bidding documents.

14. **BID PREPARATION COST:** Bidders are solely responsible for the cost of plan and specification printing and preparing their Bids.

15. **RESERVATION OF RIGHTS:** City specifically reserves the right, in its sole discretion, to reject any or all Bids, or re-bid, or to waive inconsequential deviations from Bid requirements not involving time, price, or quality of the Work.

16. **PORTION OF WORK PERFORMED BY THE CONTRACTOR:** The Contractor shall perform no less than 30% of the Work, excluding Specialty Items, with its own organization. Specialty Items will be identified on the Bid Form.

CITY OF CUPERTINO

By. _____
Timm Borden, R.C.E. #45512
Director of Public Works

END OF DOCUMENT

DOCUMENT 00200

INSTRUCTIONS TO BIDDERS

Bids are requested for a general construction contract, or work described in general, as follows:

WILSON PARK BUILDING AND LANDSCAPE IMPROVEMENTS

1. **RECEIPT OF BIDS.** Sealed Bids will be received by the City at City's office (see paragraph 2 below) on **the date shown in the Advertisement for Bids.** City will receive Bids in two separate opaque sealed 10" x 13" envelopes, labeled **Envelope "A"** and **Envelope "B"** each containing the respective items described in paragraphs 4 and 5 below. All Bid envelopes will be time stamped to reflect their submittal time. **Envelope "A" and Envelope "B" shall be due before 2:00 p.m.** as determined by the clock on the wall of the office of the City Clerk. Bids will be publicly read at 2:10 p.m. in the City Hall lobby. City will reject all Bids received after the specified time and will return such Bids to Bidders unopened. Bidders must submit Bids in accordance with this Document 00200.

2. **CONTACT INFORMATION.**

   Mailing address:
   City of Cupertino
   City Hall
   10300 Torre Avenue
   Cupertino, CA 95014

   City's Authorized Representative:
   Alex Acenas, Public Works Project Manager

   Telephone:
   (408) 777-3232

   Email:
   alexa@cupertino.org

   Fax:
   (408) 777-3333

3. **BID SUBMISSION.** Bidder should mark its Bid envelopes as **BID FOR THE CITY, PROJECT NUMBER 2015-08, WILSON PARK BUILDING AND LANDSCAPE IMPROVEMENTS** Envelope "A" or "Envelope "B," as appropriate. Bids shall be deemed to include the written responses of the Bidder to any questions or requests for information of City made as part of Bid evaluation process after submission of Bid. Bidder's failure to submit all required documents strictly as required entitles City to reject the Bid as non-responsive.

4. **CONTENTS OF ENVELOPE "A" - BID PRICE.** Envelope "A" shall include:
   a. Document 00400 (Bid Form) completed in accordance with paragraph 6 of this Document 00200.
   b. Bid security supplied and completed in accordance with paragraph 7 of this Document 00200.
   c. Document 00430 (Subcontractors List) in accordance with paragraph 8 of this Document 00200.
   d. Document 00460 (Schedule of Major Equipment and Material Suppliers). Bidder must complete this form as indicated. If included in Documents.
   e. Document 00481 (Non-Collusion Affidavit).

5. **CONTENTS OF ENVELOPE "B" – BIDDER STATEMENT OF QUALIFICATIONS.** Envelope "B" shall include:
   a. Document 00450 (Statement of Qualifications for Construction Work) submitted in accordance with paragraph 9 of this Document 00200.
   b. Document 00482 (Bidder Certifications). Bidder must complete this form as indicated.

6. **REQUIRED BID FORMS.** All Bidders must submit Bids using, where applicable, documents supplied in this Project Manual, including without limitation Document 00400 (Bid Form), Document 00430 (Subcontractors List), Document 00450 (Statement of Qualifications for Construction Work), Document 00460 (Schedule of Major Equipment and Material Suppliers), Document 00481 (Non-Collusion Affidavit), and Document 00482 (Bidders Certifications). City will reject as non-responsive any Bid not submitted on the required forms. Bids must be full and complete. Bidders must complete all Bid items and supply all information required by Bidding Documents. Bidder must completely fill our all forms required for the bid. City reserves the right in its sole discretion to reject any Bid as non-responsive as a result of any error or omission in the Bid. Bidders may not modify the Bid Form or qualify their Bids. Bidders must submit clearly and distinctly written Bids. Bidders must clearly make any changes in their Bids by crossing out original entries, entering new entries, and initialing new entries. City reserves the right to reject any Bid not clearly written.

7. **REQUIRED BID SECURITY.** Bidders must submit with their Bids either cash, a cashier's check, or certified check from a responsible bank in the United States, or corporate surety bond furnished by a surety authorized to do business in the State of California, of not less than ten percent of amount of Base Bid, payable to City. All Bidders choosing to submit a surety bond must submit it on the required form, Document 00411 (Bond Accompanying Bid). City will reject as non-responsive any Bid submitted without the necessary Bid security.

   City may retain Bid securities and Bid bonds of other than the Apparent Low Bidder for a period of 90 Days after award or full execution of the Contract, whichever first occurs. Upon full execution of the Contract, and upon request by Bidder, City will return to the respective unsuccessful Bidders their Bid securities and Bid bonds.

8. **REQUIRED SUBCONTRACTORS LIST.** All Bidders must submit with their Bids the required information on all Subcontractors in Document 00430 (Subcontractors List) for those Subcontractors who will perform any portion of Work, including labor, rendering of service, or specially fabricating and installing a portion of the Work or improvement according to detailed drawings contained in the plans and specifications, in excess of one half of one percent of total Bid or ten thousand dollars ($10,000), whichever is greater. Violation of this requirement may result in Bid being deemed non-responsive and being rejected.

9. **REQUIRED STATEMENT OF QUALIFICATIONS.** In order for a Bidder to be eligible to Bid on this Contract, it must submit a Statement of Qualifications responsive to the requirements identified in Document 00450 (Statement of Qualification for Construction Work) ("SOQ"), including without limitation qualification information for Subcontractors and schedulers, if any. Except as otherwise provided in paragraphs 20 and 21 of this Document 00200 or in Document 00450 (Statement of Qualification for Construction Work), City will make final determinations regarding Bidder responsibility based solely upon the SOQ submitted as part of Envelope "B" on Bid day. Information in the SOQ shall be current.

   No engineering or architectural firm which has provided design services for a project shall be eligible to submit a proposal for the contract to construct the project nor to subcontract for any portion of the work. The ineligible firms include the prime contractor for design, subcontractors of portions of the design and affiliates of either. An affiliate is a firm which is subject to the control of the same persons, through joint ownership or otherwise.

10. **NON-MANDATORY PRE-BID CONFERENCE:** City will conduct a Non-mandatory Pre-Bid Conference at the time, date and location listed in the Document 00100, Advertisement for Bids.

    Any Bidder wishing to investigate subsurface conditions or otherwise conduct invasive investigations, explorations, tests, or studies at this Site, must schedule the visit with the City by giving the City at least seven (7) days written notice. Additionally, any such Bidder must deliver an executed Document 00210 (Indemnity and Release Agreement) and provide an insurance certificate as described therein by noon of the Day prior to the examination.

    Bidders who intend only to observe existing Site conditions and not conduct subsurface examinations are not required to provide an executed Document 00210 (Indemnity and Release Agreement) or an insurance certificate, but are requested to contact the Public Works Department to arrange for access to the fenced site.

Bidders are encouraged to submit written questions in connection with the Site Visit. City will transmit to all parties recorded, as having received Bidding Documents such Addenda, as City, in its discretion, considers necessary in response to written questions. Bidders shall not rely on oral statements. Oral statements will not be binding or legally effective. Other Pre-Bid Meetings may be scheduled at City's sole discretion, depending on staff availability.

11. OTHER REQUIREMENTS PRIOR TO BIDDING. Submission of Bid signifies Bidder's careful examination of Bidding Documents and complete understanding of the nature, extent, and location of Work to be performed. As a condition to Bidding, Bidder must complete tasks listed in Document 00520 (Contract), Article 5. Submission of Bid shall constitute Bidder's express representation to the City that Bidder has fully completed these tasks.

12. EXISTING DRAWINGS AND GEOTECHNICAL DATA. Bidders may examine any available existing conditions information (e.g., record documents, specifications, studies, drawings of previous work) by giving City reasonable advance notice, as well as applicable environmental assessment information (if any) regarding the Project. Document 00320 (Geotechnical Data and Existing Conditions) applies to all supplied existing conditions information and geotechnical reports and all other information supplied regarding existing conditions either above ground or below ground. Some information is included in the Appendix for Information Only.

13. ADDENDA. Bidders must direct all questions about the meaning or intent of Bidding Documents to City (Attention: City's Authorized Representative**) in writing**. Letters, Faxes or emails are acceptable forms of written questions. Interpretations or clarifications considered necessary by City in response to such questions will be issued by Addenda mailed, faxed, or delivered to all "Bid List" parties, recorded by City as having received a Bidding Documents CD. Addenda will be written and will be issued to each Bidder to the address or fax number supplied City by Bidder. City may not answer questions received less than ten Days prior to the date for opening Bids. Only questions answered by formal written Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.

a. Addenda may be issued to modify the Bidding Documents as deemed advisable by City.
b. Addenda shall be acknowledged by number with signature in Document 00400 (Bid Form) and shall be part of the Contract Documents. A complete listing of Addenda may be secured from City.

14. SUBSTITUTIONS. Bidders must base their Bids on products and systems specified in Contract Documents or Addenda.

a. Except as provided in paragraph 14.c below, City will consider substitution requests only for "or equal items." Bidders wanting to use "or equal" item(s) may submit Document 00660 (Substitution Request Form) no later than 35 Calendar Days after the due date for City receiving Bids. To assess "or equal" acceptability of product or system, substitution requests shall contain the information required in Document 00660 (Substitution Request Form) and set forth in Document 00700 (General Conditions). Insufficient information will be grounds for rejection of substitution. City shall, within a reasonable period of time after having received a request for substitution, issue in writing its decision as to whether the proposed substitute item is an "equal" item. City's decision shall be conclusive on all Bidders.
b. Approved substitutions shall be listed in Addenda and become part of the Contract Documents.
c. Substitutions may be requested after submitting Bids and the Award of Contract only in accordance with requirements specified in Document 00700 (General Conditions).
d. As further limitation on Bidder's privilege to substitute items, City has found that certain items are designed as City standards and certain items are designed to match existing items in use on a particular public improvement, either completed or in the course of completion. As to such items, City will not permit substitution. City will not permit substitutions for the following items: **NONE IN THIS PROJECT**

15. WAGE RATES. Copies of the general prevailing rates of per diem wages for each craft, classification, or type of worker needed to execute the Contract, as determined by Director of the State of California Department of Industrial Relations, are on file at City's Public Works office or may be obtained of the State of California web site http://www.dir.ca.gov/DLSR/PWD/Northern.html and are deemed included in the Bidding Documents. Upon request, City will make available copies to any interested party. Also, Contractor shall post the applicable prevailing wage rates at the Site.

16. EQUAL EMPLOYMENT OPPORTUNITY. Contractor shall comply with all applicable federal, state, and local laws, rules, and regulations in regard to nondiscrimination in employment because of race, color, ancestry, national origin, religion, sex, marital status, age, medical conditions, disability, or any other reason.

17. BID OPENING. City will open all Bidders' Envelopes "A," at the time and on the date specified in paragraph 1 above, initially evaluate them for responsiveness, and determine an Apparent Low Bidder as specified herein. City will not open Envelopes "B" publicly, and except for the Apparent Low Bidder's Envelope "B" (or as otherwise provided in this Document 00200), they will remain unopened.

18. DETERMINATION OF APPARENT LOW BIDDER (Envelope "A"). Pursuant to Public Contract code Section 20103.8, the following methods shall be used to determine the apparent low bid. Apparent Low Bid will be based solely on the total amount of all Bid items in the Base Bid, if there are not Alternate bid items. If there are Alternate bid items, the apparent low bidder will be determined by adding each of the Alternate bid items to the Base Bid in ascending numerical sequence, until a total is reached to which no further Alternate Bids may be added without exceeding the expected expenditure amount of $ 125,000. The low bidder will be the bidder whose total amount calculated under the preceding sentence (1) includes the greatest number of Alternates, or (2) offers an equal number of Alternates for the lowest price. If the addition of the first Alternative Bid to the Base Bid results in a figure greater than the above-stated dollar amount in the case of every responsive bidder, the lowest bid will be determined by the Base Bid alone. Once the lowest bidder has been identified in the preceding manner, the City may elect to award the Base Bid item alone or any or all Alternate items in any sequence to the low bidder, even if the resulting contract amount no longer represent the lowest total price for the particular items chosen. All Bidders are required to submit Bids on all Bid items including any and all Alternates items.

19. EVALUATION OF BIDDER RESPONSIBILITY (Envelope "B").

a. City will open Apparent Low Bidder's Envelope "B" and check its contents for compliance with paragraph 5 above and this paragraph 20. City will notify Apparent Low Bidder in writing of any deficiencies found and will provide Bidder the opportunity to respond in writing with reasonable clarifications but will not allow any changes in the nature of Bidder as a business entity.

b. If any Apparent Low Bidder is determined to be non-responsive or non-responsible, City may open the next Apparent Low Bidder's Envelope "B" pursuant to any procedures determined in its reasonable discretion, and proceed for all purposes as if this Apparent Low Bidder were the original Apparent Low Bidder. City shall use reasonable efforts to make the responsive responsible Apparent Low Bidder's Envelope "B" public on the fifth Day following opening of the Bidders' Envelope "A"s, subject to paragraph 27 below.

c. Document 00450 sets forth certain minimum criteria for a Bidder to be found responsible. Bidder's attention is called to the following minimum requirements for a Bidder to be found responsible to perform the Work:

1) Sufficient financial strength, stability and resources as measured by Bidder's equity, debt-to-assets ratio, and capability to finance the Work to be performed.

2) Ability to secure, in accordance with the Contract Documents, the required forms of Construction Performance Bond and Construction Labor and Material Payment Bond. Ability to obtain required insurance with coverage values that meet minimum requirements.

3) Subcontracting Prior Experience. Satisfactory experience on public works, including without limitation no history of default termination, excessively delayed completion or excessive defective work.

4) Projects Public Experience. Evidence that Bidder and its team, including without limitation its Subcontractors (hereafter, including Bidder if Bidder performs such Work itself, "designated Subcontractor(s)"), have the human and physical resources of sufficient quantity and quality to perform the Work under Contract Documents in a timely and Specification-compliant manner, to include:

i. Construction and management organizations with sufficient personnel and requisite disciplines, licenses, skills, experience, and equipment for the Project.

ii. Minimum licensing requirements including evidence of a valid California contractor's license as specified for the Bidder and evidence of requisite licenses for Key Personnel of Bidder or any designated Subcontractor(s).

iii. Sufficiency of proposed quality assurance plan to meet the requirements of the Contract Documents.

iv. Bidder's safety record.

v. Minimum experience requirements of the prime contractor including the completion of a suitable number of projects of similar nature and complexity for contract dollar amounts equal to what is specified in Document 00450 (Statement of Qualification).

vi. A field organization with skills, experience, and equipment sufficient to perform all on-Site work and necessary scheduling.

vii. Expertise of Key Personnel to accomplish the duties and responsibilities required to perform the Work under the Contract Documents. Minimum experience requirements of Key Personnel including the completion of projects of similar nature and complexity and having the number of years of experience on projects of similar nature and complexity as specified in Document 00450 (Statement of Qualifications).

Bidder shall expressly indicate which, if any, of the designated Subcontractor(s)' functions it will perform itself.

5) The following are general requirements for the designated Subcontractor(s) to be found responsible to perform the Work. (Unless the designated Subcontractor(s) is found responsible, Bidder will be found non-responsible.) See specific requirements in Document 00450.

i. Evidence that Bidder's named Subcontractor has the human and physical resources of sufficient quantity and quality to perform those aspects of the Contract in a timely and Specification-compliant manner.

ii. Construction and management organizations with sufficient personnel and requisite disciplines, licenses, skills, experience, and equipment for the Project.

iii. A field organization with skills, experience, and equipment sufficient to perform all on-Site work and necessary scheduling.

iv. Installation of a minimum number of projects over a period of several years for projects similar in nature and complexity to this Project.

v. The installation supervisor shall have worked in a similar capacity on a number of projects similar in nature and complexity to this Project.

20. BID EVALUATION. City may reject any or all Bids and waive any informalities or minor irregularities in the Bids. City also reserves the right, in its discretion, to reject any or all Bids and to re-Bid the Project. City reserves the right to reject any or all nonconforming, non-responsive, unbalanced, or conditional Bids, and to reject the Bid of any Bidder if City believes that it would not be in the best interest of Project to make an award to that Bidder, whether because the Bid is not responsive or the Bidder is unqualified or of doubtful financial ability or fails to meet any other pertinent standard or criteria established by City. For purposes of this paragraph, an "unbalanced Bid" is one having nominal prices for some work items and enhanced prices for other work items.

a. In evaluating Bids, City will consider Bidders' qualifications, whether or not the Bids comply with the prescribed requirements, unit prices and other data, as may be requested in Document 00400 (Bid Form) or prior to the Notice of Award.

b. City may conduct reasonable investigations and reference checks of Bidder, proposed Subcontractors, suppliers and other persons and organizations as City deems necessary to assist in the evaluation of any Bid and to establish Bidder's responsibility, qualifications, financial ability, proposed Subcontractors, suppliers, and other persons and organizations to perform and furnish the Work in accordance with the Contract Documents to City's satisfaction within the prescribed time. Submission of a Bid constitutes Bidder's consent to the foregoing. City shall have the right to consider information provided by sources other than Bidder. City shall also have the right to communicate directly with Bidder's surety regarding Bidder's bonds.

c. Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum. Discrepancies between written words and figures will be resolved in favor of the words.

d. Quantities stated in the Bidding Documents are approximate only and are subject to correction upon final measurement of the Work, and are subject further to the rights reserved by the City to increase or diminish the amount of work under any classification as advantages to design or construction needs require.

e. City may determine whether a Bidder is qualified in its sole discretionary judgment.

f. If identical apparent lowest bids are received the City may award the contract in accordance with Section 20166 of the Public Contract code.

g. **Required Contractor and Subcontractor Registration**

1) Owner shall accept Bids only from Bidders that (along with all Subcontractors listed in Document 00430, Subcontractors List) are currently registered and qualified to perform public work pursuant to Labor Code Section 1725.5.

2) Subject to Labor Code Sections 1771.1(c) and (d), any Bid not complying with paragraph 20g (1), above, shall be returned and not considered; provided that if Bidder is a joint venture (Business & Professions Code Section 7029.1) or if federal funds are involved in the Contract (Labor Code Section 1771.1(a)), Owner may accept a non-complying Bid provided that Bidder and all listed Subcontractors are registered at the time of Contract award.

21. AWARD. If the Contract is to be awarded, it will be awarded to the lowest responsible responsive Bidder. Following completion of all required City procedures and receipt of all City approvals, City will issue Document 00510 (Notice of Award) to successful Bidder. If two (2) or more bids are the same and found to be the lowest responsible responsive bidder, the City may accept either bid it chooses in its sole discretion.

22. BID PROTEST. Any Bid protest must be submitted in writing to the City's offices (Attention: City's Authorized Representative), before 3:30 p.m. of the third Calendar Day following opening of Bidders' Envelope "A"s.

a. The initial protest document must contain a complete statement of the basis for the protest.

b. The protest must refer to the specific portion of the document that forms the basis for the protest.

c. The protest must include the name, address, and telephone number of the person representing the protesting party.

d. Only Bidders who the City otherwise determines are responsive and responsible are eligible to protest a Bid; protests from any other Bidder will not be considered. In order to determine whether a protesting Bidder is responsive and responsible, City will open and evaluate information contained in any protesting Bidder's Envelope "B", and conduct the same investigation and evaluation as City is entitled to take regarding an Apparent Low Bidder. Any such opened Envelope "B" shall also be subject to all provisions of paragraph 27.

e. The party filing the protest must concurrently transmit a copy of the initial protest document and any attached documentation to all other parties with a direct financial interest that may be adversely affected by the outcome of the protest. Such parties shall include all other Bidders who appear to have a reasonable prospect of receiving an award depending upon the outcome of the protest.

f. The procedure and time limits set forth in this paragraph are mandatory and are Bidder's sole and exclusive remedy in the event of Bid protest. Bidder's failure to comply with these procedures shall constitute a waiver of any right to further pursue the Bid protest, including filing a Government Code Claim or legal proceedings. A Bidder may not rely on a protest submitted by another Bidder, but must timely pursue its own protest.

23. POST-NOTICE OF AWARD REQUIREMENTS. After Notice of Award, the successful Bidder must execute and submit the following documents as indicated below.

a. Submit the following documents to City by 5:00 p.m. of the 10th Calendar Day following Notice of Award. Execution of Contract by City depends upon approval of these documents:

1) Document 00520 (Contract): To be executed by successful Bidder. Submit four originals, each bearing an original signature.

2) Document 00610 (Construction Performance Bond): To be executed by successful Bidder and surety, in the amount set forth in Document 00610 (Construction Performance Bond). Submit one original.

3) Document 00620 (Construction Labor and Material Payment Bond): To be executed by successful Bidder and surety, in the amount set forth in Document 00620 (Construction Labor and Material Payment Bond). Submit one original.

4) Insurance certificates and endorsements required by Document 00700 (General Conditions). Submit one original set.

5) The Guaranty in the form set forth in Document 00630 (Guaranty). Submit four originals, each bearing an original signature.

b. City shall have the right to communicate directly with Apparent Low Bidder's proposed performance bond surety, to confirm the performance bond. City may elect to extend the time to receive faithful performance and labor and material payment bonds.

c. Successful Bidder's failure to submit the documents required herein, in a proper and timely manner, entitles City to rescind its award, and to cause Bidder's Bid security to be forfeited as provided herein.

24. FAILURE TO EXECUTE AND DELIVER DOCUMENTS. If Bidder, to whom Contract is awarded shall, within the period described in paragraph 23a of this Document 00200, fail or neglect to execute and deliver all required Contract Documents and file all required bonds, insurance certificates, and other documents, City may, in its sole discretion, foreclose on Bidder's deposit surety bond, or deposit Bidder's cashier's check or certified check for collection, and retain the proceeds thereof as liquidated damages for Bidder's failure to enter into the Contract Documents. Bidder agrees that calculating the damages City may suffer as a result of Bidder's failure to execute and deliver all required Contract Documents would be extremely difficult and impractical and that the amount of Bidder's required Bid security shall be the agreed and presumed amount of City's damages. In addition, upon such failure City may determine the next Apparent Low Bidder and proceed accordingly.

25. MODIFICATION OF COMMENCEMENT OF WORK. City expressly reserves the right to modify the date for the Commencement of Work under the Contract and to independently perform and complete work related to the Project. City accepts no responsibility to Contractor for any delays attributed to its need to complete independent work at the Site.

26. WITHDRAWAL OF BIDS. Bidders may withdraw their Bids at any time prior to the Bid opening time fixed in this Document 00200, only by written request for the withdrawal of Bid filed with the City at the City's office. Bidder or its duly authorized representative shall execute request to withdraw Bid. The submission of a Bid does not commit the City to award a contract for the Project, to pay costs incurred in the preparation of a Bid, or to procure or contract for any goods or services.

27. PUBLIC RECORDS ACT REQUESTS.

a. Per the Public Records Act, City will make available to the public, Bidder's SOQ (if Bidder's Envelope "B" is opened), all correspondence and written questions submitted during the Bid period, all Bid submissions opened in accordance with the procedures of this Document 00200, and all subsequent Bid evaluation information. All submissions not opened will remain sealed and will eventually be returned to the submitter.

b. Upon a request for records regarding this Bid, City will notify Bidder involved within ten Days from receipt of the request of a specific time when the records will be made available for inspection. City will make such information available to the extent required by applicable law, without restriction.

c. Information disclosed in the SOQ (if Envelope "B" is opened) and the attendant submissions are the property of City.

28. CONFORMED CONSTRUCTION DOCUMENTS. Following Award of Contract, City may prepare a conformed set of Contract Documents reflecting Addenda issued during bidding, which will, failing objection, constitute the approved set of Contract Documents.

29. DEFINITIONS. All abbreviations and definitions of terms used in this Document 00200 are set forth in Section 00700.

END OF DOCUMENT

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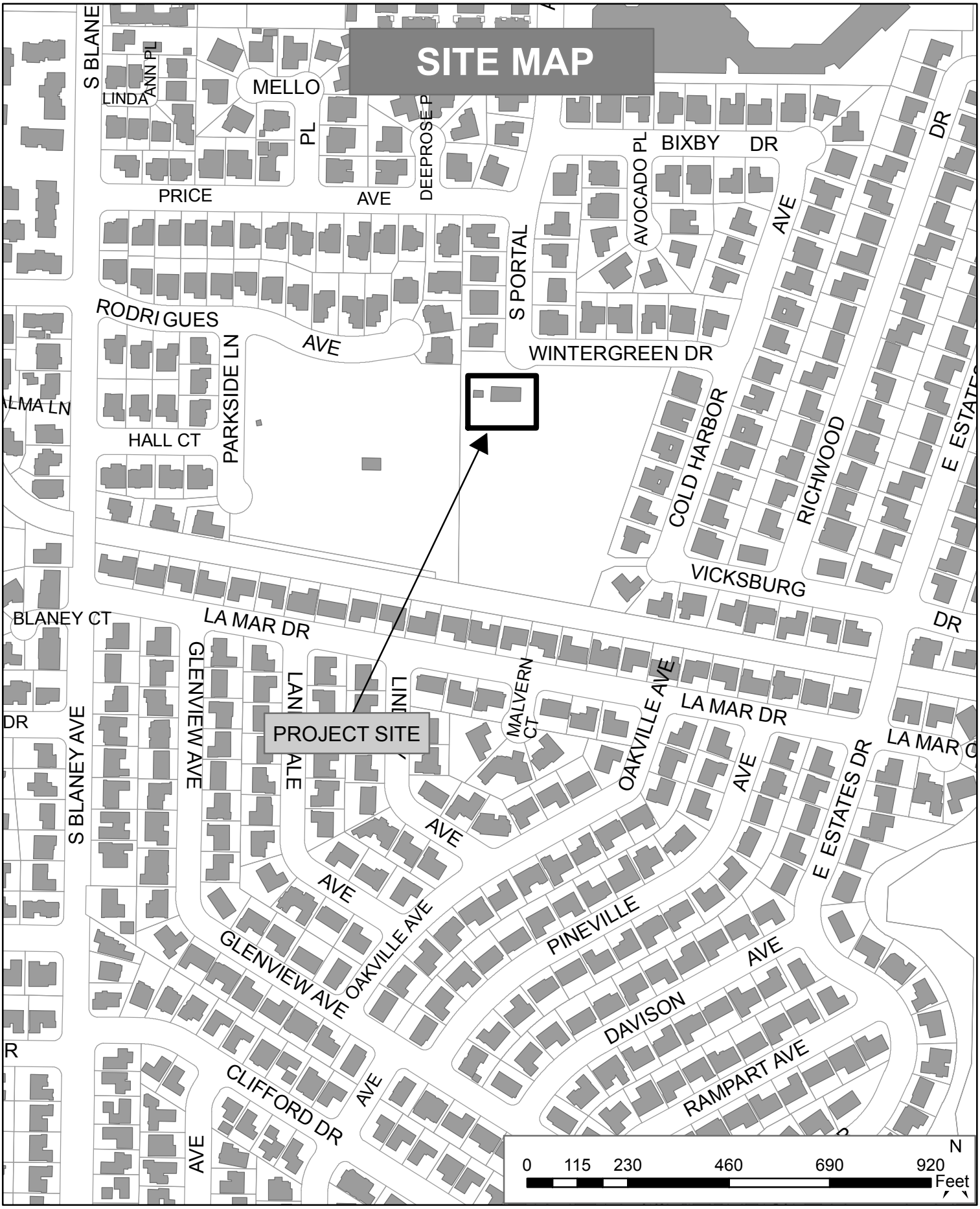
BID SUBMITTAL MAP
REINELL PL
STEVENS CREEK BLVD
ANN CT
CALI AVE
MACADAM LN
CITY HALL
10300 TORRE AVE
RODRIGUES AVE
DE ANZA BLVD
LAS ONDAS WAY
LAS ONDAS CT
BLANEY AVE
FARALLONE DR
SOMERSET DR
CIVIC PARK LN
TORRE AVE
PACIFICA DR
PACIFICA DR
SILVERADO AVE
WHITNEY WAY
SUISUN DR
0 140 280 560 840 1,120
Feet
N


SITE MAP
PROJECT SITE
S BLANE
ANN PL
LINDA
MELLO
PL
DEEPROSE P
PRICE
AVE
BIXBY
DR
AVOCADO PL
AVE
S PORTAL
WINTERGREEN DR
RODRIGUES
AVE
PARKSIDE LN
HALL CT
ALMA LN
COLD HARBOR
RICHWOOD
E ESTATES
VICKSBURG
DR
BLANEY CT
LA MAR DR
GLENVIEW AVE
LANE
LINE
MALVERN CT
OAKVILLE AVE
LA MAR DR
LA MAR
DR
S BLANEY AVE
AVE
AVE
AVE
E ESTATES DR
AVE
OAKVILLE AVE
PINEVILLE
GLENVIEW AVE
AVE
DAVISON
RAMPART AVE
CLIFFORD DR
AVE
AVE
N
0 115 230 460 690 920
Feet

DOCUMENT 00210

INDEMNITY AND RELEASE AGREEMENT

Dated _____

POTENTIAL BIDDER: _____

CITY: THE CITY OF CUPERTINO

SITE: 19784 Wintergreen Dr., Cupertino, CA

PROJECT: **WILSON PARK BUILDING AND LANDSCAPE IMPROVEMENTS**

In consideration of the above-referenced City's permitting the undersigned potential bidder ("Bidder") to have access to, and to conduct investigations, tests and/or inspections on, the Site, Bidder hereby agrees as follows:

1. To the greatest extent permitted by law, Bidder hereby releases, and shall defend, indemnify and hold harmless City, and its officers, employees, consultants (including without limitation Consulting Engineer), representatives, and agents, and all other parties having any other interest in the Site, against any claim or liability, including attorney's fees, arising from or relating to any Site-related access, investigation, test, inspection and/or other activity conducted by Bidder or any of Bidder's officers, employees, consultants, representatives, and/or agents, regardless of whether claim or liability is caused in part by the negligence of City or by any released and indemnified party.

2. Bidder hereby waives the provisions of California Civil Code Section 1542 which provides as follows:

   A general release does not extend to claims that the creditor does not know or suspect to exist in his favor at the time of executing the release, which if known by him, must have materially affected his settlement with the debtor.

3. Bidder shall repair any damage to the Site or adjacent property resulting from activities authorized hereunder, and comply with and be subject to all other requirements and obligations described or referenced in Document 00320 (Geotechnical Data and Existing Conditions).

4. Attached hereto (or to be delivered separately before Bidder's visit to the Site) is a certificate for comprehensive general liability insurance satisfying the requirements of Document 00700 (General Conditions).

5. Although this Indemnity and Release Agreement is not a Contract Document (see Document 00520 Contract), it shall be fully effective and binding regardless of whether Bidder submits a Bid for the subject Project, is awarded a contract for the Project, or otherwise.

_____
Name of Bidder

By: _____
Signature

Its: _____
Title (If Corporation: Chairman, President or Vice President)

By: _____
Signature

Its: _____
Title (If Corporation: Secretary, Assistant Secretary, Chief Financial Officer or Assistant Treasurer)

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DOCUMENT 00320

GEOTECHNICAL DATA, HAZARDOUS MATERIALS SURVEYS AND EXISTING CONDITIONS

1. SUMMARY

This Document 00320 sets forth the terms and conditions under which Bidder may review, study, use, or rely upon geotechnical data at or contiguous to the Site, and existing conditions information concerning existing conditions at or contiguous to the Site. This Document 00320, the available geotechnical, soil and asbestos data, and the supplied existing conditions information are not Contract Documents.

2. REPORTS AND INFORMATION

A. City, its consultants, and prior contractors may have collected documents providing a general description of the Site and conditions of the Work. These documents may consist of geotechnical reports for and around the Site, contracts, contract specifications, as-built drawings, utility drawings, and information regarding Underground Facilities. These reports, documents and other information are not part of the Contract Documents. They are provided in the Appendix and are "**For Information Only**".

Existing Condition surveys and reports consists of the following information in the Appendix:

NA

3. USE OF INFORMATION ON EXISTING CONDITIONS

A. Aboveground Existing Conditions. Under no circumstances shall City be deemed to make a warranty or representation of existing aboveground conditions, as-built conditions, or other aboveground actual conditions verifiable by reasonable independent investigation. These conditions are verifiable by Bidder by the performance of its own independent investigation that Bidder must perform prior to bidding and Bidder must not rely on the information supplied by City regarding existing conditions. Bidder represents and agrees that in submitting its Bid, it is not relying on any information regarding existing conditions supplied by City.

B. Underground Facilities. Information supplied regarding existing Underground Facilities at or contiguous to the Site is based on information furnished to City by others (e.g., the owners or builders of such Underground Facilities or others). Except as expressly set forth in this Document 00320, City does not assume responsibility for the accuracy, completeness or thoroughness of this information, and Bidder is solely responsible for any interpretation or conclusion drawn from this information. Except as expressly set forth in this Document 00320, City will be responsible only for the general accuracy of information regarding Underground Facilities, and only for those Underground Facilities that are owned by City. This express assumption of responsibility applies only if Bidder has conducted the independent investigation required of it and discrepancies were not apparent.

4. LIMITED RELIANCE PERMITTED ON CERTAIN INFORMATION

A. Geotechnical Data. ***For informational purpose only***. Except as expressly set forth in this Document 00320, City does not warrant, and makes no representation regarding, the accuracy or thoroughness of any geotechnical data. Bidder represents and agrees that in submitting its Bid, it is not relying on any geotechnical data supplied by City, except as specifically set forth herein.

B. Bidder may rely upon the general accuracy of the "technical data" contained in the geotechnical reports and drawings identified above, but only insofar as it relates to subsurface conditions, provided Bidder has conducted the independent investigation required of it and discrepancies were not apparent. The term "technical data" in the referenced reports and drawings shall be limited as follows:

1. The term "technical data" shall include actual reported depths, reported quantities, reported soil types, reported soil conditions, and reported material, equipment, or structures that were encountered during subsurface exploration.

2. The term "technical data" does not include, and Bidder may not rely upon, any other data, interpretations, opinions or information shown or indicated in such drawings or reports that otherwise relate to subsurface conditions or described structures.

3. The term "technical data" shall not include the location of Underground Facilities.

4. Bidder may not rely on the completeness of reports and drawings for the purposes of bidding or construction. Bidder may rely upon the general accuracy of the "technical data" contained in such reports or drawings.

5. Bidder is solely responsible for any interpretation or conclusion drawn from any "technical data" or any other data, interpretations, opinions, or information contained in supplied geotechnical data.

5. INVESTIGATIONS

A. Before submitting a Bid, each Bidder shall be responsible to obtain such additional or supplementary examinations, investigations, explorations, tests, studies and data concerning conditions (surface, subsurface, and Underground Facilities) at or contiguous to the Site or otherwise, which may affect cost, progress, performance or furnishing of Work or which relate to any aspect of the means, methods, techniques, sequences or procedures of construction to be employed by Bidder and safety precautions and programs incident thereto or which Bidder deems necessary to determine its Bid for performing and furnishing the Work in accordance with the time, price and other terms and conditions of Contract Documents. Bidders shall advise City in writing during the Bid period of any questions, suppositions, inferences or deductions Bidders may have for City's review and response.

B. City has provided time in the period prior to bidding for Bidder to perform these investigations.

6. ACCESS TO SITE FOR INVESTIGATIONS

Subject to reasonable scheduling, City will provide each Bidder access to the Site to conduct such examinations, investigations, explorations, tests, and studies, as each Bidder deems necessary for submission of a Bid. Bidders must fill all holes and clean up and restore the Site to its former conditions upon completion of such explorations, investigations, tests, and studies. Such investigations may be performed only under the provisions of Document 00200 (Instructions to Bidders) and Document 00700 (General Conditions) including, but not limited to, proof of insurance and obligation to indemnify against claims arising from such investigation work. Each Bidder shall supply all equipment required to perform any investigations as each Bidder deems necessary. City has the right to limit the number of pieces of machinery operating at one time due to safety concerns.

END OF DOCUMENT

DOCUMENT 00400

BID FORM

To be submitted as part of Envelope "A" by the time and date specified in Document 00200 (Instructions to Bidders).

TO THE HONORABLE CITY COUNCIL OF THE CITY OF CUPERTINO

THIS BID IS SUBMITTED BY:

_____

(Firm/Company Name)

Re: PROJECT NUMBER 2015-08
WILSON PARK BUILDING AND LANDSCAPE IMPROVEMENTS

1. The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into a contract with the City of Cupertino ("City") in the form included in the Contract Documents, Document 00520 (Contract), to perform and furnish all Work as specified or indicated in the Contract Documents for the Contract Sum and within the Contract Time indicated in this Bid and in accordance with all other terms and conditions of the Contract Documents. All portions of this Bid Form must be completed and signed before the bid is submitted. Failure to do so will result in the bid being rejected as non-responsive.

2. Bidder accepts all of the terms and conditions of the Contract Documents, Document 00100 (Advertisement for Bids), and Document 00200 (Instructions to Bidders), including, without limitation, those dealing with the disposition of Bid Security. **This Bid will remain subject to acceptance for 90 Days after the day of Bid opening.**

3. Bidder has visited the Site and performed all tasks, research, investigation, reviews, examinations, and analysis and given notices, regarding the Project and the Site, as set forth in Document 00520 (Contract), Article 5.

4. Bidder has given City prompt written notice of all conflicts, errors, ambiguities, or discrepancies that it has discovered in or among the Contract Documents and as-built drawings and actual conditions and the written resolution thereof through Addenda issued by City is acceptable to Contractor.

5. Bidder attended the mandatory Pre-Bid Meeting.

   YES ____ NO ____

6. Subcontractors for work included in all Bid items, in accordance with the criteria in the Public Contract Code, are listed on the attached Document 00430 (Subcontractors List).

7. The undersigned Bidder understands that City reserves the right to reject this Bid.

8. If written notice of the acceptance of this Bid, hereinafter referred to as Notice of Award, is mailed or delivered to the undersigned Bidder within the time described in paragraph 2 of this Document 00400 or at any other time thereafter before it is withdrawn, the undersigned Bidder will execute and deliver the documents required by Document 00200 (Instructions to Bidders) within the times specified therein. These documents include, but are not limited to, Document 00520 (Contract), Document 00610 (Construction Performance Bond), and Document 00620 (Construction Labor and Material Payment Bond).

9. Notice of Award or request for additional information may be addressed to the undersigned Bidder at the address set forth below on the signature page.

10. The undersigned Bidder herewith encloses cash, a cashier's check, or certified check of or on a responsible bank in the United States, or a corporate surety bond furnished by a surety authorized to do a surety business in the State of California, in form specified in Document 00200 (Instructions to Bidders), in the amount of ten percent (10%) of the total of Base Bid and made payable to the "City of Cupertino".

11. The undersigned Bidder agrees to commence Work under the Contract Documents on the date established in Document 00700 (General Conditions) and to complete all work within the time specified in Document 00520 (Contract). The undersigned Bidder acknowledges that City has reserved the right to delay or modify the commencement date. The undersigned Bidder further acknowledges City has reserved the right to perform independent work at the Site, the extent of such work may not be determined until after the opening of the Bids, and that the undersigned Bidder will be required to cooperate with such other work in accordance with the requirements of the Contract Documents.

12. The undersigned Bidder agrees that, in accordance with Document 00700 (General Conditions), liquidated damages for failure to complete all Work in the Contract within the time specified in Document 00520 (Contract) shall be as set forth in Document 00520 (Contract).

NOTICE

Required Contractor and Subcontractor Registration:

1. **Owner shall accept Bids only from Bidders that (along with all Subcontractors listed in Document 00430, Subcontractors List) are currently registered and qualified to perform public work pursuant to Labor Code Section 1725.5.**
2. **Subject to Labor Code Sections 1771.1(c) and (d), any Bid not complying with paragraph above shall be returned and not considered; provided that if Bidder is a joint venture (Business & Professions Code Section 7029.1) or if federal funds are involved in the Contract (Labor Code Section 1771.1(a)), Owner may accept a non-complying Bid provided that Bidder and all listed Subcontractors are registered at the time of Contract award.**

SCHEDULE OF BID PRICES

All Bid items, including lump sums and unit prices, must be filled in completely. Allowances and Alternative Bid items are described in Document 00800 (Special Conditions). Quote in figures only, unless words are specifically requested. **Please Note that time extensions will NOT be permitted with the acceptance of any or all of the Alternative Bid Items listed below.**

ITEM	DESCRIPTION	UNIT	EST QTY	UNIT PRICE	TOTAL
1	Building and Landscape Improvements as shown on the Plans and Specifications	LS	1		
TOTAL BASE BID PRICE					

SCHEDULE OF ALTERNATES

ALTERNATES

ITEM	DESCRIPTION	UNIT	EST QTY.	UNIT PRICE	TOTAL
1	Various landscape improvements as shown on the Plans and Specifications	LS	1		
TOTAL ALTERNATES					

Unit Legend

LS = Lump Sum
EA = Each
LF = Linear Feet
TON = Ton or 2,000 Pounds
CY = Cubic Yards
LB = Pounds
AL = Allowance
SF = Square Feet

ACKNOWLEDGEMENT OF RECEIPT OF ADDENDUMS
Bidder herby acknowledges receipt and examination of all Contract Documents and the following Addenda:

Addendum No.	Addendum Date

Bidder proposes and agrees to fully perform the Work within the time stated and in strict accordance with the Contract Documents for the sums of money listed in this Bid Form.

NAME OF BIDDER: _____

licensed in accordance with an act for the registration of Contractors, and with license number: _____
Expiration Date: _____.

_____ _____
Where incorporated, if applicable

_____

_____
Principals

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

_____
Signature of Bidder

NOTE: If Bidder is a corporation, set forth the legal name of the corporation, state where incorporated, together with the signature of the officer or officers authorized to sign contracts on behalf of the corporation. If Bidder is a partnership, set forth the name of the firm together with the signature of the partner or partners authorized to sign contracts on behalf of the partnership.

Business Address: _____
_____
_____

Officers authorized to sign contracts: _____
_____
_____
Typed Full Name:

Telephone Number(s): _____

Fax Number(s): _____

E-Mail Address: _____

END OF DOCUMENT

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DOCUMENT 00411

BOND ACCOMPANYING BID

KNOW ALL BY THESE PRESENTS:

That the undersigned _____ as Principal, and the undersigned as Surety, are held and firmly bound unto the CITY OF CUPERTINO, a Municipal Corporation of the State of California ("City"), as obligee, in the penal sum of _____ Dollars **($_____)** lawful money of the United States of America being at least ten percent (10%) of the aggregate amount of said Principal _____'s Base Bid, for the payment of which, well and truly to be made, we bind ourselves, our successors, executors, administrators, and assigns, jointly and severally, firmly by these presents.

WHEREAS, the said Principal is submitting a Bid for City **Project No. 2015-08; WILSON PARK BUILDING AND LANDSCAPE IMPROVEMENTS**

THE CONDITION OF THIS OBLIGATION IS SUCH that if the Bid submitted by the said Principal be accepted and the Contract be awarded to said Principal and said Principal shall within the required periods enter into the Contract so awarded and provide the required Construction Performance Bond, Construction Labor and Material Payment Bond, insurance certificates, and all other endorsements, forms, and documents required under Document 00200 (Instructions to Bidders), then this obligation shall be void, otherwise to remain in full force and effect.

IN WITNESS WHEREOF, the above bounden parties have executed this instrument this _____ day of _____, 20 ___.

(Corporate Seal)

By

_____
Principal

_____
Surety

(Corporate Seal)

By

_____
Attorney in Fact

END OF DOCUMENT

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DOCUMENT 00430

REQUIRED SUBCONTRACTORS LIST

Bidder must provide the following Listed Subcontractor information in conformance with the California Public Contract Code where the value of the Subcontractor's work is or exceeds ½ of one percent (.05%) of the Base Bid or ten thousand dollars ($10,000), whichever is greater, on Document 00400. Failure to do so will render Bid Non Responsive.

Bidder is reminded that Listed Subcontractors cannot be substituted by the Apparent Low Bidder after Bid has been submitted and opened, without City's formal approval.

Name of Subcontractor and Location of Place of Business	Description of Work	Subcontractor's License No.	DIR Registration Number

Attach additional sheets if necessary

NOTICE:

Required Contractor and Subcontractor Registration:

1) Owner shall accept Bids only from Bidders that (along with all Subcontractors listed in Document 00430, Subcontractors List) are currently registered and qualified to perform public work pursuant to Labor Code Section 1725.5.

2) Subject to Labor Code Sections 1771.1(c) and (d), any Bid not complying with paragraph above, shall be returned and not considered; provided that if Bidder is a joint venture (Business & Professions Code Section 7029.1) or if federal funds are involved in the Contract (Labor Code Section 1771.1(a)), Owner may accept a non-complying Bid provided that Bidder and all listed Subcontractors are registered at the time of Contract award.

END OF DOCUMENT

DOCUMENT 00450

STATEMENT OF QUALIFICATIONS

FOR

WILSON PARK BUILDING AND LANDSCAPE IMPROVEMENTS

Bidder's Full Corporate Name: _____

Bidder's Legal Structure

- _____ Sole Proprietor
- _____ Partnership
- _____ Non-Profit 501 C3
- _____ Corporation
- _____Other, please explain_____

Bidder's Federal I.D. Number_____

Bidder's Mailing Address_____

Bidder's Street Address_____

Owner of Bidder's Company _____

Bidder's Contact Person _____

Bidder's Address _____

Bidder's Phone _____, Fax _____, Email_____

(Bidder shall identify each partner and / or member of the Joint Venture, and their roles and responsibilities, if a Joint Venture is proposed.)

INSTRUCTIONS FOR THE SUBMITTAL OF THE STATEMENT OF QUALIFICATIONS

- Place the Statement of Qualifications Document, with all required materials, in a separate envelope labeled "**Envelope B", "STATEMENT OF QUALIFICATIONS" (SOQ)** with the project title and Contractors name and address. **Do Not place the SOQ in the same envelope as the Bid Proposal. The envelope will not be opened if only one is received; it will be returned to the Contractor.**
- Submittal of the Statement of Qualifications envelope is required at the same time as the Bid Proposal. The Bid Proposal, Envelope "A", will not be opened if the Statement of Qualifications, Envelope B, is not received on time.
- The City will open only Bid Proposals, Envelope "A", at the public bid opening. The Statement of Qualifications, Envelope "B", of the apparent low bidder, will be opened by the City to check its contents for compliance with the requirements. City will notify Apparent Low Bidder of any deficiencies found and will provide Bidder the opportunity to respond in writing with reasonable clarifications but will not allow any changes in the nature of Bidder as a business entity.
- If the Apparent Low Bidder is determined to be non-responsive or non-responsible, City may open the next Apparent Low Bidder's Statement of Qualification, Envelope B, pursuant to any procedures determined in its reasonable discretion, and proceed for all intents and purposes, as if the next Apparent Low Bidder were the original Apparent Low Bidder. City shall use reasonable efforts to make the responsive responsible Apparent Low Bidder's Statement of Qualifications public by the fifth work day following opening of the Bid Proposals.

GENERAL BIDDER EXPERIENCE

Any explanation requested by a Bidder regarding the meaning or interpretation of this Document must be requested in writing and with sufficient time allowed for a reply to reach Bidder before the submission of its SOQ. Oral explanations or instructions will not be binding. Any information provided to any prospective Bidder concerning this Document will be furnished to all prospective Bidders as an Addendum to the Bidding Documents.

Except as set forth herein, all abbreviations and definitions of terms used in this Document 00450 are as set forth in Document 00700 (General Conditions).

Bidders shall complete the entire Statement of Qualification. Failure to complete the questionnaire or the inclusion of any false statement(s) shall be grounds for immediate disqualification.

The SOQ shall be clear and concise to enable management-oriented personnel to make a thorough evaluation and arrive at a sound determination as to whether the SOQ meets City's requirements. To this end, the SOQ should be so specific, detailed and complete as to demonstrate clearly and fully that the Bidder has a thorough understanding of and has demonstrated knowledge of the requirements to perform the Work (or applicable portion thereof).

Bidder's compliance with the minimum qualification requirements of this Document, will also be measured by the experience of the supervisory personnel who will have responsible charge of the various major components of the Work.

If Bidder subcontracts portions of the Work, City, in its determination of whether the minimum qualification requirements have been met, will also consider the qualifications of the Subcontractor's supervisory personnel.

The Contract will require Bidder to construct the Project, all in accordance with the scope of Work set forth in the Contract. City will accept Bids only from Bidders duly licensed in accordance with the California Business & Professions Code. Additionally, Bidder must meet the following general requirements, at a minimum, in order to be considered by City to be qualified for award of the Contract:

Per the Public Records Act, City will make available to the public, Bidder's Statement of Qualifications and all correspondence and written questions submitted with the Bid. All submissions not opened will remain sealed and eventually be returned to the submitter.

Upon receipt of a request for copies of records regarding this Bid, City will notify Bidder involved within ten calendar Days from receipt of the request of a specific time when the records will be made available for inspection. City will make such information available to the extent required by applicable law, without restriction.

Information disclosed in the Statement of Qualifications and the attendant submissions are the property of City.

PART A
BIDDER'S GENERAL QUALIFICATIONS

1. Does Bidder have at least five years of experience as a continuously operating entity engaged in the performance of similar work? Yes_____ No_____

2. Has Bidder, within the past seven years, completed three projects, of similar nature and complexity, with a contract amount of at least $ 125,000 each? Yes_____ No_____

3. Does Bidder possess a valid and current California Class "B" General Building Contractor's License for the work proposed? Yes_____ No_____

4. Does Bidder have a minimum of $4,000,000 in the aggregate liability insurance coverage? Yes_____ No_____

5. Has Bidder's Contractor's license been revoked at any time in the last five years? Yes_____ No_____

6. Has Bidder been "default terminated" by an owner (i.e. not for convenience), or has a Surety completed a contract for Bidder within the last five years? Yes_____ No_____

7. Has Bidder had, within the last four years prior to the date of bid opening, any outstanding convictions or enforcement agency findings for failure to pay prevailing wages in the State of California? Yes_____ No_____

8. Has Bidder been determined to have violated any environmental or safety laws giving rise to civil or criminal penalties in excess of $50,000 for each violation during the last four years while performing contracting duties of the type specified for the contract within the State of California? Or has bidder had more than four civil penalties of $50,000 or less during the last four years while performing contracting duties of the type specified for the contract within the State of California? Yes_____ No_____

9. Has Bidder been convicted of violating a state or federal law respecting the employment of undocumented aliens within the preceding five years from the date of bid opening? Yes_____ No_____

Bidder will be immediately disqualified if any answer to questions 1, 2, 3, or 4 is No.
Bidder will be immediately disqualified if any answer to questions 5, 6, 7, 8 or 9 is Yes.

PART B
BIDDER'S SAFETY, PREVAILING WAGE, LICENSES, DISPUTES, BONDS AND INSURANCE

SAFETY

The following statements as to safety experience of Bidder are submitted with Bid, as part thereof, and Bidder guarantees the truthfulness and accuracy of the information.

1. Has Cal/OSHA, Federal OSHA, the EPA or any Air Quality Management District cited Bidder in the past five years? Yes _____No _____ If yes, attach description of each citation.

2. How often does Bidder require documented safety meetings be held for:

• Field Supervisor	Weekly ____	Biweekly ____	Monthly ____	Less than monthly ____
• Employees	Weekly ____	Bi-weekly ____	Monthly ____	Less than monthly ____
• New Hires	Weekly ____	Bi-weekly ____	Monthly ____	Less than monthly ____
• Subcontractors	Weekly ____	Bi-weekly ____	Monthly ____	Less than monthly ____

3. How often does Bidder conduct documented safety inspections? Quarterly ____, Semi-annually _____, Annually____, Other_____

4. Does Bidder have home office safety representatives who visit/audit the job site? Quarterly____, Semi-annually____, Annually _____, Other_____

5. What is Bidder's Interstate Experience Modification Rate? _____. (A rating in excess of 1 may constitute grounds for disqualification as non-responsible.)

6. List Bidder's Interstate Experience Modification Rate for the three calendar years listed below.
   - 2012:_____
   - 2013:_____
   - 2014:_____

7. Use Bidder's last year's Cal/OSHA log to fill in the following:
   - Number of lost workday cases _____
   - Number of medical treatment cases _____
   - Number of fatalities _____
   - Employee hours worked last year _____

8. State the name of Bidder's safety engineer/manager or Site Safety Officer._____

PREVAILING WAGE PROVISIONS

Has Bidder been fined, penalized or otherwise found to have violated any prevailing wage or labor code provision? If yes, attach description of each occurrence.

Yes_____ No_____
Description:_____
_____

LICENSE PROVISIONS

Has Bidder changed names or license numbers in the past seven years? If so, please state reason for change.

Yes_____No_____Reason:_____
_____
_____

DISPUTES

Has Bidder had any claims, litigation, or disputes ending in mediation or arbitration, or termination for cause associated with any project in the past seven years? If yes, attach description of each such instance including details of total claim amount, settlement amount, and owner's name and phone number.

Yes_____ No_____

BONDS

Provide information regarding the required Performance and Payment Bonds from a surety duly licensed to do business in the State of California, having a financial rating from A. M. Best Company of **B+, Class 7** or better or that is otherwise acceptable to the City. The surety will agreed to provide Bidder with the required performance and payment bonds in accordance with the requirements set forth in Documents 00610 (Construction Performance Bond) and 00620 (Construction Labor and Material Payment Bond). Such performance and payment bonds shall be in the minimum penal sums provided therein.

Bonding Capacity - Provide documentation from Bidder's surety identifying the following:

Name of bonding company/surety: _____

Name of Surety Agent: _____

Surety Agent address: _____

Surety Agent phone number: _____

Is surety a California-admitted surety? Yes _____ No _____

Is surety listed in the current edition of the California Department of the Treasury's Listing of approved sureties? Yes _____ No _____

List surety's A.M. Best Rating: _____

What is Bidder's total bonding capacity? _____

What percentage rate does Bidder pay for bonds? _____

Surety Letter Attached YES_____ NO_____

INSURANCE

Provide information regarding the required Insurance. having a financial rating from A. M. Best Company of **A, Class 7** or better or that is otherwise acceptable to the City, confirming that the insurer will provide Bidder the required coverages and amounts specified in Document 00700 (General Conditions).

Insurance verification – provide the following required information: **Fill out this form completely**.

Workers' Compensation:

Carrier: _____

Address: _____

Phone and Fax: _____

Policy Number: _____

Policy Limits: $ _____

Coverage Amount: Per Occurrence: $_____ A.M. Best Rating: _____

General Liability:

Carrier: _____

Address: _____

Phone and Fax: _____

Policy Number: _____

Policy Limits: $ _____

A.M. Best Rating: _____

Coverage Amount: Per Occurrence: _____ Per Aggregate: _____

Automotive Liability:

Carrier: _____

Address: _____

Phone and Fax: _____

Policy Number: _____

Policy Limits: $ _____

A.M. Best Rating: _____

Coverage Amount Per Occurrence: _____

If Bidder has had the general liability carrier identified in this Document (Bidder Registration and Safety Experience Form) for less than 5 years, please provide additional information below for balance of the past 5 years

Agency Name: _____

Contact Name: _____

Phone Number: _____

Carrier: _____ A.M. Best Rating _____

Carrier: _____ A.M. Best Rating _____

Carrier: _____ A.M. Best Rating _____

Has Bidder ever had insurance terminated by a carrier? Yes _____ No _____

If yes, explain on separate signed sheet marked with correlating cross-reference to this paragraph of the questionnaire.

PART C
DETAILED BIDDER EXPERIENCE

The nature of this Project requires prior similar experience by the firm and the Key Personnel assigned. **Contractor must have completed, within the last seven years, at least three contracts with a value of $125,000 or more. Bidder is precluded from self-performing any of the specific work listed under Designated Subcontractor, unless Bidder can conclusively demonstrate the necessary skill and experience for the Designated Subcontractor, Bidder shall provide the project experience information to support meeting the Designated Subcontractor's experience requirements.**

Similar projects would each include several of the following elements:

- Interior remodel
- Electrical and plumbing upgrades
- Site concrete, AC paving and accessibility upgrades
- Planting and irrigation

Summarize similar project experience below and provide the detailed project information requested:

Project No. 1, of similar nature and complexity, at or above $ 125,000 in construction cost.

Project name	Construction Cost ($)	Year completed

Location:_____

Owner name and phone no:_____

Engineer of Record name and phone no:_____

Owner's Const. Mgr. or Project Mgr. (name and phone number):_____

Work Performed Similar to Project:_____

_____

_____

Project No. 2, of similar nature and complexity, at or above $ 125,000 in construction cost.

Project name	Construction Cost ($)	Year completed

Location:_____

Owner name and phone no:_____

Engineer of Record name and phone no:_____

Owner's Const. Mgr. or Project Mgr. (name and phone number):_____

Work Performed Similar to Project:_____

_____

_____

Project No. 3, of similar nature and complexity, at or above $ 125,000 in construction cost.

Project name	Construction Cost ($)	Year completed

Location:_____

Owner name and phone no:_____

Engineer of Record name and phone no:_____

Owner's Const. Mgr. or Project Mgr. (name and phone number):_____

Work Performed Similar to Project:_____

_____

_____

BIDDER'S PROPOSED KEY PERSONNEL

Bidder shall provide specific information, as listed below, for each named Key Personnel of Bidder.

Project Manager: _____

Years of Employment with Bidder's Firm: _____

Years of experience _____

Education – degrees obtained, schools and years _____

Professional registration_____

Two client reference names and phone nos:_____

Project Superintendent: _____

Years of Employment with Bidder's Firm: _____

Years of experience_____

Education – degrees obtained, schools and years_____

Professional registration_____

Two client reference names and phone nos:_____

PART D
BIDDER REGISTRATION

BIDDER CERTIFIES, UNDER PENALTY OF PERJURY, THAT THE FOREGOING INFORMATION IN THIS DOCUMENT 00450 IS CURRENT AND ACCURATE AND AUTHORIZES THE CITY OF CUPERTINO AND ITS AGENTS AND REPRESENTATIVES TO OBTAIN A CREDIT REPORT AND/OR VERIFY ANY OF THE ABOVE INFORMATION.

_____
printed name

_____
signature

_____
date

END OF DOCUMENT

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DOCUMENT 00481

NON-COLLUSION AFFIDAVIT
PUBLIC CONTRACT CODE §7106

NON-COLLUSION AFFIDAVIT TO BE EXECUTED BY BIDDER AND SUBMITTED WITH BID

STATE OF CALIFORNIA)
) ss.
COUNTY OF _____)

_____, being first duly sworn, deposes and says that he or she is _____ **[Office of Affiant]** of _____ **[Name of Bidder]**, the party making the foregoing 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 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, and that the Bidder has not in any manner, directly or indirectly, sought by contract, communication or conference with anyone to fix the Bid price of 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 City of Cupertino, or anyone interested in the proposed contract; that all statements contained in the Bid are true; and further, that Bidder has not, directly or indirectly, submitted its 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.

Executed under penalty of perjury under the laws of the State of California:

_____
(Name of Bidder)

_____
(Signature of Principal)

Subscribed and sworn before me _____

This _____ day of _____, 20___

Notary Public of the State of _____
In and for the County of_____
My Commission expires_____ (Seal)

(If Bidder is a partnership or a joint venture, this affidavit must be signed and sworn to by every member of the partnership or venture.)

(If Bidder [including any partner or venturer of a partnership or joint venture] is a corporation, this affidavit must be signed by the Chairman, President, or Vice President and by the Secretary, Assistant Secretary, Chief Financial Officer, or Assistant Treasurer.)

(If Bidder's affidavit on this form is made outside the State of California, the official position of the person taking such affidavit shall be certified according to law.)

END OF DOCUMENT

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66DOCUMENT 00482

BIDDER CERTIFICATIONS

CITY OF CUPERTINO

WILSON PARK BUILDING AND LANDSCAPE IMPROVEMENTS

The undersigned Bidder certifies to the City of Cupertino as set forth in sections 1 through 7 below.

1. STATEMENT OF CONVICTIONS

By my signature hereunder, I hereby swear, under penalty of perjury, that no more than one final, unappealable finding of contempt of court by a Federal Court has been issued against Bidder within the past two years because of failure to comply with an order of a Federal Court or to comply with an order of the National Labor Relations Board.

2. CERTIFICATION OF WORKER'S COMPENSATION INSURANCE

By my signature hereunder, as the Bidder, I certify that I am aware of the provisions of Section 3700 of the Labor Code which require every employer to be insured against liability for worker's 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.

3. CERTIFICATION OF PREVAILING WAGE RATES AND RECORDS

By my signature hereunder, as the Bidder, I certify that I am aware of the provisions of Section 1773 of the California Labor Code, which requires the payment of prevailing wage on public projects. Also, that the Bidder and any sub bidders under the Bidder shall comply with California Labor Code §1776, regarding wage records, and with California Labor Code §1777.5, regarding the employment and training of apprentices. It is the Bidder's responsibility to ensure compliance by any and all subcontractors performing work under this Contract.

4. CERTIFICATION OF COMPLIANCE WITH PUBLIC WORKS CHAPTER OF LABOR CODE

By my signature hereunder, as the Bidder, I certify that I am aware of Sections 1777.1 and 1777.7 of the California Labor Code and Bidder and Subcontractors are eligible to bid and work on public works projects.

5. CERTIFICATE OF NON-DISCRIMINATION

By my signature hereunder, on behalf of the Bidder making this Bid, the undersigned certifies that there will be no discrimination in employment with regard to race, color, religion, gender, sexual orientation, age or national origin; that all federal, state, and local directives and executive orders regarding non-discrimination in employment will be complied with; and that the principle of equal opportunity in employment will be demonstrated positively and aggressively.

6. CERTIFICATION REGARDING PREVIOUS DISQUALIFICATIONS

By my signature hereunder, I hereby swear, under penalty of perjury, that the below indicated Bidder, any officer of such Bidder, or any employee of such Bidder who has a proprietary interest in such Bidder, has never been disqualified, removed or otherwise prevented from bidding on, or completing a Federal, State, or local government project because of a violation of law or a safety regulation except as indicated on the separate sheet attached hereto entitled "Previous Disqualifications." If such exceptions are attached, please explain the circumstances.

7. CERTIFICATION OF ADEQUACY OF CONTRACT AMOUNT

By my signature hereunder, as the Contractor, pursuant to Labor Code Section 2810(a), I certify that, if awarded the Contract based on the undersigned's Bid, the Contract will include funds sufficient to allow the Contractor to comply with all applicable local, state, and federal laws or regulations governing the labor or services to be provided. I understand that the City will be relying on this certification if it awards the Contract to the undersigned.

BIDDER: _____
(Name of Bidder)

Date: _____, 20

By:_____
(Signature)

Name:_____
(Print Name)

Its:_____
(Title)

END OF DOCUMENT

DOCUMENT 00510

NOTICE OF AWARD

Dated _____

TO: _____

ADDRESS: _____

CONTRACT NO.: _____

CONTRACT FOR:

WILSON PARK BUILDING AND LANDSCAPE IMPROVEMENTS

PROJECT NO. 2015-08

The Contract Sum of your contract is _____

_____ Dollars ($_____).

1. Three copies of each of the proposed Contract Documents (except Specifications and Drawings) accompany this Notice of Award.
2. You must comply with the following conditions precedent by 5:00 p.m. of the 10th Calendar Day following the date of this Notice of Award, that is, by _____ , _____.

   a. Deliver to City three fully executed counterparts of Document 00520 (Contract). Each of the Contract Documents must bear your signature on the cover page.
   b. Deliver to City three original Document 00610 (Construction Performance Bond), executed by you and your surety.
   c. Deliver to City three original Document 00620 (Construction Labor and Material Payment Bond), executed by you and your surety.
   d. Deliver to City three original set of the insurance certificates from Document 00530 (Insurance Forms) with endorsements required under Document 00700 (General Conditions).
   e. Deliver to City three original copies of Document 00630 (Guaranty), each executed by you.

3. Failure to comply with these conditions within the time specified will entitle City to consider your Bid abandoned, to annul this Notice of Award, and to declare your Bid security forfeited.

4. Within 21 Days after you comply with the conditions in paragraph 2 of this Document 00510, City will return to you one fully signed counterpart of Document 00520 (Contract) with the Contract Documents.

5. Upon commencement of the Work, you and each of your Subcontractors shall certify and make available for inspection payroll records on forms provided by the Division of Labor Standards Enforcement, in accordance with Section 1776 of the California Labor Code.

THE CITY OF CUPERTINO, a Municipal Corporation of the State of California ("City")

BY: _____
_____

ITS: _____
_____

AWARDED _____

by City Council of the City of Cupertino.

END OF DOCUMENT

DOCUMENT 00520

CONTRACT

THIS CONTRACT, dated this ____ day of _____, 20 ___ , by and between _____ **[Name of Contractor]** whose place of business is located at _____, _____ **[Address of Contractor]** ("Contractor"), and the CITY OF CUPERTINO, a Municipal Corporation of the State of California ("City") acting under and by virtue of the authority vested in the City by the laws of the State of California.

WHEREAS, City, on the _____ day of _____, 20___ awarded to Contractor the following Project:

PROJECT NUMBER 2015-08
WILSON PARK BUILDING AND LANDSCAPE IMPROVEMENTS

NOW, THEREFORE, in consideration of the mutual covenants hereinafter set forth, Contractor and City agree as follows:

Article 1. Work

1.1 Contractor shall complete all Work specified in the Contract Documents, in accordance with the Specifications, Drawings, and all other terms and conditions of the Contract Documents.

Article 2. Agency and Notices to City

2.1 City has designated Alex Acenas, Public Works Project Manager, to act as City's Authorized Representative(s), who will represent City in performing City's duties and responsibilities and exercising City's rights and authorities in Contract Documents. City may change the individual(s) acting as City's Authorized Representative(s), or delegate one or more specific functions to one or more specific City's Representatives, including without limitation engineering, architectural, inspection and general administrative functions, at any time with notice and without liability to Contractor. Each City's Representative is the beneficiary of all Contractor obligations to City, including without limitation, all releases and indemnities.

2.2 City has designated Prodis Associates Architects as the project Consultant. City may change the identity of the project Consultant at any time with notice and without liability to Contractor.

2.3 City has designated Gilbane Building Company to act as Construction Manager. City may change the identity of the Construction Manager at any time with notice and without liability to Contractor.

2.4 All notices or demands to City under the Contract Documents shall be to City's Authorized Representative at: 10300 Torre Avenue, Cupertino, California 95014 or to such other person(s) and address(es) as City shall provide to Contractor.

Article 3. Contract Time and Liquidated Damages

3.1 Contract Time.

The Contract Time will commence to run on the date indicated in the Notice to Proceed. City may give a Notice to Proceed at any time within 30 Days after the Notice of Award. Contractor shall not do any Work at the Site prior to the date on which the Contract Time commences to run.

Contractor shall achieve **Final Completion** of the entire Work and be ready for Final Payment in accordance with Section 00700 (General Conditions) by or before October 9, 2015.

3.2 Liquidated Damages.

City and Contractor recognize that time is of the essence of this Contract and that City will suffer financial loss in the form of contract administration expenses (such as project management and consultant expenses), if all or any part of the Work is not completed within the times specified above, plus any extensions thereof allowed in accordance with the Contract Documents. Consistent with Document 00700 (General Conditions), Contractor and City agree that because of the nature of the Project, it would be impractical or extremely difficult to fix the amount of actual damages incurred by City because of a delay in completion of all or any part of the Work. Accordingly, City and Contractor agree that as liquidated damages for delay Contractor shall pay City:

3.2.1 **$2,000** for each Calendar Day that expires after the time specified herein for Contractor to achieve **Final Completion** of the entire Work as specified above.

3.2.2 **$3,000** for each occurrence of a violation of Document 00800, Section 1.7 **WORK DAYS AND HOURS AND NOISE DISTURBANCES**.

3.2.3 Three Months Salary for each Key Personnel named in Contractor's SOQ pursuant to Article 2.G of Document 00450 (Statement of Qualifications for Construction Work) who leaves the Project and/or Contractor replaces at any point before Final Completion, for any reason whatsoever, that Contractor can demonstrate to City's satisfaction is beyond Contractor's control.

Liquidated damages shall apply cumulatively and, except as provided below, shall be presumed to be the damages suffered by City resulting from delay in completion of the Work.

Contractor should be aware that California Department of Fish and Game, and other State and Federal agencies, may also levy fines and penalties for the harming, harassing or killing of protected wildlife and endangered species. Contractor hereby agrees to become familiar with and adhere to wildlife and endangered species protection requirements.

3.3 Liquidated damages for delay shall only cover administrative, overhead, interest on bonds, and general loss of public use damages suffered by City as a result of delay. Liquidated damages shall not cover the cost of completion of the Work, damages resulting from defective Work, lost revenues or costs of substitute facilities, or damages suffered by others who then seek to recover their damages from City (for example, delay claims of other contractors, subcontractors, tenants, or other third-parties), and defense costs thereof.

Article 4. Contract Sum

4.1 City shall pay Contractor the Contract Sum for completion of Work in accordance with Contract Documents as set forth in Contractor's Bid, attached hereto: See Exhibit "A" attached

Article 5. Contractor's Representations

In order to induce City to enter into this Contract, Contractor makes the following representations and warranties:

5.1 Contractor has visited the Site and has examined thoroughly and understood the nature and extent of the Contract Documents, Work, Site, locality, actual conditions, as-built conditions, and all local conditions, and federal, state and local laws and regulations that in any manner may affect cost, progress, performance or furnishing of Work or which relate to any aspect of the means, methods, techniques, sequences or procedures of construction to be employed by Contractor and safety precautions and programs incident thereto.

5.2 Contractor has examined thoroughly and understood all reports of exploration and tests of subsurface conditions, as-built drawings, drawings, products specifications or reports, available for Bidding purposes, of physical conditions, including Underground Facilities, which are identified in Document 00320 (Geotechnical Data, Hazardous Materials Surveys and Existing Conditions), or which may appear in the Drawings. Contractor accepts the determination set forth in these Documents and Document 00700 (General Conditions) of the limited extent of the information contained in such materials upon which Contractor may be entitled to rely. Contractor agrees that except for the information so identified, Contractor does not and shall not rely on any other information contained in such reports and drawings.

5.3 Contractor has conducted or obtained and has understood all such examinations, investigations, explorations, tests, reports and studies (in addition to or to supplement those referred to in Section 5.2 of this Document 00520) that pertain to the subsurface conditions, as-built conditions, underground facilities, and all other physical conditions at or contiguous to the Site or otherwise that may affect the cost, progress, performance or furnishing of Work, as Contractor considers necessary for the performance or furnishing of Work at the Contract Sum, within the Contract Time and in accordance with the other terms and conditions of the Contract Documents, including specifically the provisions of Document 00700 (General Conditions); and no additional examinations, investigations, explorations, tests, reports, studies or similar information or data are or will be required by Contractor for such purposes.

5.4 Contractor has correlated its knowledge and the results of all such observations, examinations, investigations, explorations, tests, reports and studies with the terms and conditions of the Contract Documents.

5.5 Contractor has given City prompt written notice of all conflicts, errors, ambiguities, or discrepancies that it has discovered in or among the Contract Documents and as-built drawings and actual conditions and the written resolution thereof through Addenda issued by City is acceptable to Contractor.

5.6 Contractor is duly organized, existing and in good standing under applicable state law, and is duly qualified to conduct business in the State of California.

5.7 Contractor has duly authorized the execution, delivery and performance of this Contract, the other Contract Documents and the Work to be performed herein. The Contract Documents do not violate or create a default under any instrument, contract, order or decree binding on Contractor.

5.8 Contractor has listed Subcontractors pursuant to the Subcontractor Listing Law, California Public Contracting Code §4100 *et seq*. in document 00340 (Subcontractors List)

Article 6. Contract Documents

6.1 Contract Documents consist of the following documents, including all changes, addenda, and modifications thereto:

Document 00400 Bid Form
Document 00430 Subcontractors List
Document 00450 Statement of Qualifications
Document 00481 Non-Collusion Affidavit
Document 00482 Bidder Certifications
Document 00510 Notice of Award
Document 00520 Contract
Document 00530 Insurance Forms
Document 00550 Notice to Proceed
Document 00610 Construction Performance Bond
Document 00620 Construction Labor and Material Payment Bond
Document 00630 Guaranty
Document 00650 Agreement and Release of Any and All Claims
Document 00660 Substitution Request Form
Document 00680 Escrow Agreement for Security Deposit in Lieu of Retention
Document 00700 General Conditions
Document 00800 Special Conditions
Document 00820 Special Environmental Conditions
Document 00821 Insurance
Document 00822 Apprenticeship Program
Technical Specification/Special Provisions
Addenda(s)
Drawings/Plans

6.2 There are no Contract Documents other than those listed in this Document 00520, Article 6. Document 00320 (Geotechnical Data, Hazardous Material Surveys and Existing Conditions), and the information supplied therein, are not Contract Documents. The Contract Documents may only be amended, modified or supplemented as provided in Document 00700 (General Conditions).

Article 7. Miscellaneous

7.1 Terms used in this Contract are defined in Document 00700 (General Conditions) and will have the meaning indicated therein.

7.2 It is understood and agreed that in no instance are the persons signing this Contract for or on behalf of City or acting as an employee, agent, or representative of City, liable on this Contract or any of the Contract Documents, or upon any warranty of authority, or otherwise, and it is further understood and agreed that liability of the City is limited and confined to such liability as authorized or imposed by the Contract Documents or applicable law.

7.3 Contractor shall not assign any portion of the Contract Documents, and may subcontract portions of the Contract Documents only in compliance with the Subcontractor Listing Law, California Public Contracting Code §4100 *et seq*.

7.4 The Contract Sum includes all allowances (if any).

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

7.6 Copies of the general prevailing rates of per diem wages for each craft, classification, or type of worker needed to execute the Contract, as determined by Director of the State of California Department of Industrial Relations, are deemed included in the Contract Documents and on file at City's office, or may be obtained of the State of California web site http://www.dir.ca.gov/DLSR/PWD/Northern.html and shall be made available to any interested party on request. Pursuant to Section 1861 of the Labor Code, Contractor represents that it is 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 Contractor shall comply with such provisions before commencing the performance of the Work of the Contract Documents.

7.7 Should any part, term or provision of this Contract or any of the Contract Documents, or any document required herein or therein to be executed or delivered, be declared invalid, void or unenforceable, all remaining parts, terms and provisions shall remain in full force and effect and shall in no way be invalidated, impaired or affected thereby. If the provisions of any law causing such invalidity, illegality or unenforceability may be waived, they are hereby waived to the end that this Contract and the Contract Documents may be deemed valid and binding contracts, enforceable in accordance with their terms to the greatest extent permitted by applicable law. In the event any provision not otherwise included in the Contract Documents is required to be included by any applicable law, that provision is deemed included herein by this reference(or, if such provision is required to be included in any particular portion of the Contract Documents, that provision is deemed included in that portion).

7.8 This Contract and the Contract Documents shall be deemed to have been entered into in the County of Santa Clara, State of California, and governed in all respects by California law (excluding choice of law rules). The exclusive venue for all disputes or litigation hereunder shall be in Santa Clara County. Both parties hereby waive their rights under California Code of Civil Procedure Section 394 to file a motion to transfer any action or proceeding arising out of the Contract Documents to another venue. Contractor accepts the Claims Procedure in Document 00700, Article 12, established under the California Government Code, Title 1, Division 3.6, Part 3, Chapter 5.

IN WITNESS WHEREOF the parties have executed this Contract in quadruplicate the day and year first above written.

WILSON PARK BUILDING AND LANDSCAPE IMPROVEMENTS

CITY:
CITY OF CUPERTINO, a Municipal Corporation of the State of California

Attest:

_____
City Clerk: Grace Schmidt

Approved as to form by City Attorney:

_____
City Attorney: Carol Korade

I hereby certify, under penalty of perjury, that David Brandt, City Manager of the City of Cupertino was duly authorized to execute this document on behalf of the City of Cupertino.

Dated:_____

_____
David Brandt, City Manager of the City of Cupertino, a Municipal Corporation of the State of California

Designated Representative:

Name: Timm Borden

Title: Director of Public Works

Address: 10300 Torre Ave., Cupertino, CA 95014

Phone: 408-777-3354

Facsimile: 408-777-3333

AMOUNT: $
ACCOUNT NUMBER: 580-90-945-900-905-P W 003-03-01
FILE NO.: 92,010.07

CONTRACTOR:
[_Contractor's name_]

By: _____
[Signature]

_____
[Please print name here]

Title: _____
[If Corporation: Chairman , President, or Vice President]

By: _____
[Signature]

_____
[Please print name here]

Title: _____
[If Corporation: Secretary, Assistant Secretary, Chief Financial Officer, or Assistant Treasurer]

_____
State Contractor's License No. Classification

_____
Expiration Date

Taxpayer ID No._____

Name: _____

Title: _____

Address: _____

Phone: _____

Facsimile: _____

NOTARY ACKNOLEDGEMENT IS REQUIRED. IF A CORPORATION, CORPORATE SEAL AND CORPORATE NOTARY ACKNOWLEDEMENT AND FEDERAL TAX ID ARE REQUIRED. IF NOT A CORPORATION SOCIAL SECURITY NO. IS REQUIRED

END OF DOCUMENT

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DOCUMENT 00530

INSURANCE FORMS

INSURANCE FORMS INSTRUCTIONS

FOR ITEMS 3, 4 AND 5, THE FORMS PROVIDED BY THE CITY OF CUPERTINO MUST BE USED. FORMS OTHER THAN THESE WILL NOT BE ACCEPTED.

ALL DOCUMENTS MUST BE ORIGINALS - SUBMIT IN TRIPLICATE

1. Insurance Agreement - **Must** be signed by Contractor.

2. Certificate of Insurance to the City of Cupertino - **must** be completed by the insurance agent **or** **must** provide a certificate on the company's form. They **must** contain the same information.

3. Endorsement of Additional Insured and Primary Insurance and Notice of Cancellation - **must** be signed by the insurance agent for general liability and automobile liability only.

4. Comprehensive general liability/commercial general liability endorsement of aggregate limits of insurance per project - **must** be signed by the insurance agent for general liability only.

5. Waiver of subrogation endorsement worker's compensation insurance - **must** be signed by the insurance agent for worker's compensation only.

INSURANCE AGREEMENT

A. Contractor is aware of the provisions of Section 3700 of the Labor Code, which requires every employer to be insured against liability for worker's compensation or undertake self-insurance in accordance with the provisions of that Code, and will comply with such provisions before commencing the performance of the work of this Contract.

B. Contractor and all subcontractors will carry worker's compensation insurance for the protection of its employees during the progress of the work. The insurer shall waive its rights of subrogation against the City, the City's officers, agents and employees and shall issue an endorsement to the policy evidencing same.

C. Contractor shall carry at all times, on all operations hereunder, commercial general liability insurance, automobile liability insurance and builder's all risk insurance. All insurance coverage shall be in amounts required by the City and shall be evidenced by the issuance of a certificate in a form prescribed by the City and shall be underwritten by insurance companies satisfactory to the City for all operations, sub-contract work, contractual obligations, product or completed operations, all owned vehicles and non-owned vehicles. Said insurance coverage obtained by the Contractor, excepting worker's compensation coverage, shall name the City, its engineer, and each of its directors, officers, agents and employees, as determined by the City, as additional insureds on said policies. Insurers must be licensed to do business in the State of California. The Insurers must also have an "A" policyholder's rating and a financial rating of at least Class VII in accordance with the current Best's Guide Rating or that is otherwise acceptable to the City.

D. Before Contractor performs any work at, or prepares or delivers materials to, the site of construction, Contractor shall furnish certificates of insurance evidencing the foregoing insurance coverages and such certificates shall provide the name and policy number of each carrier and policy and that the insurance is in force and will not be canceled or modified without thirty (30) days written notice to the City. Contractor shall maintain all of the foregoing insurance coverages in force until the work under this Contract is fully completed. The requirement for carrying the foregoing insurance shall not derogate from the provisions for indemnification of the City by Contractor under this Contract and for the duration of the warranty period. Notwithstanding nor diminishing the obligations of Contractor with respect to the foregoing, Contractor shall maintain in full force and effect during the life of this Contract, the following insurance in amounts not less than the amounts specified and having a Best's Guide Rating of A, Class VII or better or that is otherwise acceptable to the City.

LIMITS

Worker's Compensation & Employers' Liability	In accordance with the Worker's Compensation Act of the State of California – Worker's comp "statutory" per CA Law; Employers' Liability $1,000,000 per occurrence.
General Liability - commercial general liability; including provisions for contractual liability, personal injury, independent contractors and products – completed operations hazard.	Combined single limit of $2.0 million per occurrence; $4.0 million in the aggregate
Automobile Liability - comprehensive covering owned, non-owned and hired automobiles.	Combined single limit of $1.0 million per occurrence.

_____ By:_____

(Contractor's Name)

Dated:_____20___

CERTIFICATE OF INSURANCE TO THE CITY OF CUPERTINO

This certifies to the City of Cupertino that the following described policies have been issued to the insured named below and are in force at this time.

Insured: _____

Address: _____

_____

Description of operations/locations/products insured (show contract name and/or number, if any):

_____

_____

==========

WORKER'S COMPENSATION

_____
(name of insurer)

* Statutory Min.		
* Employer's Liability		
$ _____	$ _____	$ _____

Insurance Company's State License No. _____

==========

Check Policy Type:	Each Occurrence	$_____
COMPREHENSIVE GENERAL LIABILITY		
[ ] Premises/Operations	General Aggregate (if applicable)	$_____
[ ] Owners & Contractors Protective	Aggregate	$_____
[ ] Contractual for Specific Contract $_____	Personal Injury	
[ ] Products Liability		
[ ] XCU Hazards		
[ ] Broad Form P.D.	Fire Damage (any one fire)	$_____
[ ] Severability of Interest Clause		
[ ] Personal Injury with Employee Exclusion Removed	Medical Expense (any one person)	$_____
or	Self-Insured	
COMMERCIAL GENERAL LIABILITY	Retention	$_____

_____
(name of insurer)

Policy No. _____ Expiration Date_____

==========

AUTOMOTIVE/VEHICLE LIABILITY Commercial Form Liability Coverage	BODILY INJURY Each Person	PROPERTY DAMAGE Each Accident
_____ (name of insurer)	$_____ Each Accident $_____	$_____ or
	Combined Single Limit	$_____

Policy No. _____ Expiration Date _____

==========

BUILDER'S RISK "ALL RISK"
This is to certify that the following policy has been issued by the below-stated company in conformance with the requirements of the project documents and is in force at this time.

_____**N/A**_____
(Name of insurer)
Policy No. _____ Expiration Date_____
Limits of Liability: _____ Deductible: _____
==========
_____ A copy of all Endorsements to the policy(ies) which in any way
(agent's initial) limit the above-listed types of coverage are attached to this

Certificate of Insurance.

This Certificate of Insurance is not an insurance policy and does not amend, extend or alter the coverage afforded by the policies listed herein. Notwithstanding any requirement, term, or condition of any contract or any other document with respect to which this Certificate of Insurance may be issued or may pertain, the insurance afforded by the policies described herein is subject to all the terms, exclusions and conditions of such policies.

IT IS HEREBY CERTIFIED that the above policy(ies) provide liability insurance as required by the Agreement between the City and the insured.

By:_____ Dated:_____20____

Attach Certificate of Insurance and Additional Insured Endorsement on company forms.

ADDITIONAL INSURED ENDORSEMENT
and
ENDORSEMENT OF PRIMARY INSURANCE
and
NOTICE OF POLICY
CANCELLATION ENDORSEMENT

Project Title and Number:_____

In consideration of the policy premium and notwithstanding any inconsistent statement in the policy to which this Endorsement is attached or any other Endorsement attached thereto, it is agreed as follows:

The City of Cupertino ("City") and its directors, officers, engineers, agents and employees, and all public agencies from whom permits will be obtained and their directors, officers, engineers, agents and employees, and the State of California, and its officers, agents and employees, are hereby declared to be additional insureds under the terms of this policy, but only with respect to the operations of the Contractor at or upon any of the premises of the City in connection with the Contract with the City, or acts or omissions of the additional insureds in connection with, but limited to its general supervision or inspection of said operations.

The insurance afforded by this policy is primary insurance, and no additional insurance held or owned by the designated additional insured(s) shall be called upon to cover a loss under said additional policy.

Cancellation Notice. The insurance afforded by this policy shall not be suspended, voided, canceled, reduced in coverage or in limits, or materially altered, except after thirty (30) days' prior written notice by certified mail, return receipt requested, has been given to the City of Cupertino ("City"). Such notice shall be addressed to the City as indicated below.

POLICY INFORMATION

1. Insurance Company:_____

2. Insurance Policy Number:_____

3. Effective Date of this Endorsement:_____20____

4. Insured:_____

All notices herein provided to be given by the Insurance Company to the City in connection with this policy and these Endorsements, shall be mailed to or delivered to the City at 10300 Torre Avenue; Cupertino, California 95014.

I, _____(print/type name) warrant that I have authority to bind the below listed Insurance Company and by my signature hereon do so bind this Company.

Signature of Authorized Representative:_____
(Original signature required on all Endorsements furnished to the District)

Names of
Agent/Agency:_____ Title:_____

Address:_____ Telephone: _____ _____ _____

_____ Facsimile: _____ _____ _____

COMPREHENSIVE GENERAL LIABILITY
COMMERCIAL GENERAL LIABILITY
ENDORSEMENT OF AGGREGATE LIMITS OF INSURANCE PER PROJECT

Project Title and Number:_____

In consideration of the policy premium and notwithstanding any inconsistent statement in the policy to which this Endorsement is attached or any other Endorsement attached thereto, it is as follows:

This Endorsement modifies the insurance provided under the General Liability Coverage part of the below-referenced policy of insurance.

The general aggregate limit under LIMITS OF INSURANCE applies separately to the project described as _____

POLICY INFORMATION

1. Insurance Company:_____

2. Insurance Policy Number:_____

3. Effective Date of this Endorsement:_____20____

4. Insured:_____

5. Additional Insured: City of Cupertino, its directors, officers, agents and employees.

All notices herein provided to be given by the Insurance Company to the City in connection with this policy and this Endorsement, shall be mailed to or delivered to the City at 10300 Torre Avenue; Cupertino, California 95014.

I, _____(print/type name) warrant that I have authority to bind the below listed Insurance Company and by my signature hereon do so bind this Company.

Signature of Authorized Representative:_____
(Original signature required on all Endorsements furnished to the District)

Names of
Agent/Agency:_____ Title:_____
Address:_____ Telephone: _____ _____ _____
_____ Facsimile: _____ _____ _____

WAIVER OF SUBROGATION ENDORSEMENT
WORKER'S COMPENSATION INSURANCE

Project Title and Number:_____

In consideration of the policy premium and notwithstanding any inconsistent statement in the policy to which this Endorsement is attached or any other Endorsement attached thereto, it is agreed as follows:

It is agreed that with respect to such insurance as is afforded by the policy, the Insurance Company waives any right of subrogation against the City of Cupertino, and each of its directors, officers, agents, consultants and employees by reason of any payment made on account of injury, including death resulting therefrom, sustained by any employee of the insured, arising out of the performance of the above-referenced Contract.

POLICY INFORMATION

1. Insurance Company:_____

2. Insurance Policy Number:_____

3. Effective Date of this Endorsement:_____20____

4. Insured:_____

All notices herein provided to be given by the Insurance Company to the City in connection with this policy and this Endorsement, shall be mailed to or delivered to the City at 10300 Torre Avenue; Cupertino, California 95014.

I, _____(print/type name) warrant that I have authority to bind the below listed Insurance Company and by my signature hereon do so bind this Company.

Signature of Authorized Representative:_____
(Original signature required on all Endorsements furnished to the District)

Names of
Agent/Agency:_____ Title:_____

Address:_____ Telephone: _____ _____ _____

_____ Facsimile: _____ _____ _____

END OF DOCUMENT

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DOCUMENT 00550

NOTICE TO PROCEED

Dated: _____

To: _____
(Contractor)

Address: _____

_____

CONTRACT FOR:

WILSON PARK BUILDING AND LANDSCAPE IMPROVEMENTS

You are notified that the Contract Time under the above Contract will commence to run on _____ 20___. On that date, you are to start performing your obligations with respect to Work at the Site under the Contract Documents. In accordance with Article 3 of Document 00520 (Contract), the dates of Substantial Completion and Final Completion for the entire Work are _____, 20 , and _____, 20 , respectively.

Before you may start any Work at the Site, you must:

1. Submit certified Safety Program and related information, and comply with all requests of the City's safety officer.
2. Submit copies of applicable permits
3. Submit approved fire protection plan, if applicable
4. Attend preconstruction conference. The preconstruction conference may be arranged through [_____].

_____

CITY OF CUPERTINO, a Municipal Corporation of the State of California

By : _____

Its: _____

END OF DOCUMENT

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DOCUMENT 00610

CONSTRUCTION PERFORMANCE BOND

THIS CONSTRUCTION PERFORMANCE BOND ("Bond") is dated _____**,** is in the penal sum of _____ _____ [which is one hundred percent of the Contract Price]**,** and is entered into by and between the parties listed below to ensure the faithful performance of the Construction Contract listed below. This Bond consists of this page and the Bond Terms and Conditions, paragraphs 1 through 12, attached to this page. Any singular reference to _____ ("Contractor"), _____ ("Surety"), the City of Cupertino, a Municipal Corporation of the State of California ("City") or other party shall be considered plural where applicable.

CONTRACTOR:	SURETY:
_____	_____
Name	Name
_____	_____
Address	Principal Place of Business
_____	_____
City/State/Zip	City/State/Zip

CONSTRUCTION CONTRACT:

WILSON PARK BUILDING AND LANDSCAPE IMPROVEMENTS

PROJECT NUMBER 2015-08

at Cupertino, California.

DATED _____, 20____ in the Amount of $_____ (the "Penal Sum")

CONTRACTOR AS PRINCIPAL	SURETY
Company: (Corp. Seal)	Company: (Corp. Seal)
Signature:_____	Signature: _____
Name and Title: _____	Name and Title:_____
_____	_____

BOND TERMS AND CONDITIONS

1. Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to City for the complete and proper performance of the Construction Contract, which is incorporated herein by reference.

2. If Contractor completely and properly performs all of its obligations under the Construction Contract, Surety and Contractor shall have no obligation under this Bond.

3. If there is no City Default, Surety's obligation under this Bond shall arise after:

   3.1 City has declared a Contractor Default under the Construction Contract pursuant to the terms of the Construction Contract; and

   3.2 City has agreed to pay the Balance of the Contract Sum:

      3.2.1 To Surety in accordance with the terms of this Bond and the Construction Contract; or

3.2.2 To a contractor selected to perform the Construction Contract in accordance with the terms of this Bond and the Construction Contract.

4. When City has satisfied the conditions of paragraph 3, Surety shall promptly (within 30 days) and at Surety's expense elect to take one of the following actions:

4.1 Arrange for Contractor, with consent of City, to perform and complete the Construction Contract (but City may withhold consent, in which case the Surety must elect an option described in paragraphs 4.2, 4.3 or 4.4, below); or

4.2 Undertake to perform and complete the Construction Contract itself, through its agents or through independent contractors; provided, that Surety may not select Contractor as its agent or independent contractor without City's consent; or

4.3 Undertake to perform and complete the Construction Contract by obtaining bids from qualified contractors acceptable to City for a contract for performance and completion of the Construction Contract, and, upon determination by City of the lowest responsible bidder, arrange for a contract to be prepared for execution by City and the contractor selected with City's concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract; and, if Surety's obligations defined in paragraph 6, below, exceed the Balance of the Contract Sum, then Surety shall pay to City the amount of such excess; or

4.4 Waive its right to perform and complete, arrange for completion, or obtain a new contractor and with reasonable promptness under the circumstances, and, after investigation and consultation with City, determine in good faith its monetary obligation to City under paragraph 6, below, for the performance and completion of the Construction Contract and, as soon as practicable after the amount is determined, tender payment therefor to City with full explanation of the payment's calculation. If City accepts Surety's tender under this paragraph 4.4, City may still hold Surety liable for future damages then unknown or unliquidated resulting from the Contractor Default. If City disputes the amount of Surety's tender under this paragraph 4.4, City may exercise all remedies available to it at law to enforce Surety's liability under paragraph 6, below.

5. If Surety does not proceed as provided in paragraph 4, above, then Surety shall be deemed to be in default on this Bond ten days after receipt of an additional written notice from City to Surety demanding that Surety perform its obligations under this Bond. At all times City shall be entitled to enforce any remedy available to City at law or under the Construction Contract including, without limitation, and by way of example only, rights to perform work, protect work, mitigate damages, advance critical work to mitigate schedule delay, or coordinate work with other consultants or contractors.

6. Surety's monetary obligation under this Bond is limited by the Amount of this Bond identified herein as the Penal Sum. This monetary obligation shall augment the Balance of the Contract Sum. Subject to these limits, Surety's obligations under this Bond are commensurate with the obligations of Contractor under the Construction Contract. Surety's obligations shall include, but are not limited to:

6.1 The responsibilities of Contractor under the Construction Contract for completion of the Construction Contract and correction of defective work;

6.2 The responsibilities of Contractor under the Construction Contract to pay liquidated damages, and for damages for which no liquidated damages are specified in the Construction Contract, actual damages caused by non-performance of the Construction Contract including, but not limited to, all valid and proper backcharges, offsets, payments, indemnities, or other damages;

6.3 Additional legal, design professional and delay costs resulting from Contractor Default or resulting from the actions or failure to act of the Surety under paragraph 4, above (but excluding attorney's fees incurred to enforce this Bond).

7. No right of action shall accrue on this Bond to any person or entity other than City or its successors or assigns.

8. Surety hereby waives notice of any change, alteration or addition to the Construction Contract or to related subcontracts, purchase orders and other obligations, including changes of time. Surety consents to all terms of the Construction Contract, including provisions on changes to the Contract. No extension of time, change, alteration, modification, deletion, or addition to the Contract Documents, or of the work required thereunder, shall release or exonerate Surety on this Bond or in any way affect the obligations of Surety on this Bond.

9. Any proceeding, legal or equitable, under this Bond shall be instituted in any court of competent jurisdiction where a proceeding is pending between City and Contractor regarding the Construction Contract, or in the courts of the County of Santa Clara, or in a court of competent jurisdiction in the location in which the work is located. Communications from City to Surety under paragraph 3.1 of this Bond shall be deemed to include the necessary contracts under paragraph 3.2 of this Bond unless expressly stated otherwise.

10. All notices to Surety or Contractor shall be mailed or delivered (at the address set forth on the signature page of this Bond), and all notices to City shall be mailed or delivered as provided in Document 00520 (Contract). Actual receipt of notice by Surety, City or Contractor, however accomplished, shall be sufficient compliance as of the date received at the foregoing addresses.

11. Any provision in this Bond conflicting with any statutory or regulatory requirement shall be deemed deleted herefrom and provisions conforming to such statutory requirement shall be deemed incorporated herein.

12. Definitions.

    12.1 Balance of the Contract Sum: The total amount payable by City to Contractor pursuant to the terms of the Construction Contract after all proper adjustments have been made under the Construction Contract, for example, deductions for progress payments made, and increases/decreases for approved modifications to the Construction Contract.

    12.2 Construction Contract: The contract between City and Contractor identified on the signature page of this Bond, including all Contract Documents and changes thereto.

    12.3 Contractor Default: Material failure of Contractor, which has neither been remedied nor waived, to perform or otherwise to comply with the terms of the Construction Contract including, but not limited to, “default” or any other condition allowing a termination for cause as provided in Document 00700 (General Conditions).

    12.4 City Default: Material failure of City, which has neither been remedied nor waived, to pay Contractor progress payments due under the Construction Contract or to perform other material terms of the Construction Contract, if such failure is the cause of the asserted Contractor Default and is sufficient to justify Contractor termination of the Construction Contract.

END OF DOCUMENT

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DOCUMENT 00620

CONSTRUCTION LABOR AND MATERIAL PAYMENT BOND

THIS CONSTRUCTION LABOR AND MATERIAL PAYMENT BOND ("Bond") is dated _____, is in the penal sum _____ [one hundred percent of the Contract Price], and is entered into by and between the parties listed below to ensure the payment of claimants under the Construction Contract listed below. This Bond consists of this page and the Bond Terms and Conditions, paragraphs 1 through 14, attached to this page. Any singular reference to _____ ("Contractor"), _____ ("Surety"), the City of Cupertino, a Municipal Corporation of the State of California ("City") or other party shall be considered plural where applicable.

CONTRACTOR:	SURETY:
_____	_____
Name	Name
_____	_____
Address	Principal Place of Business
_____	_____
City/State/Zip	City/State/Zip

CONSTRUCTION CONTRACT:

WILSON PARK BUILDING AND LANDSCAPE IMPROVEMENTS

PROJECT NUMBER 2015-08

at Cupertino, California.

DATED _____, 20____ in the Amount of $_____(the "Penal Sum")

CONTRACTOR AS PRINCIPAL	SURETY
Company: (Corp. Seal)	Company: (Corp. Seal)
Signature:_____	Signature: _____
Name and Title: _____	Name and Title:_____
_____	_____

BOND TERMS AND CONDITIONS

1. Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to City and to Claimants, to pay for labor, materials and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference.

2. With respect to City, this obligation shall be null and void if Contractor:

   2.1 Promptly makes payment, directly or indirectly, for all sums due Claimants; and

   2.2 Defends, indemnifies and holds harmless City from all claims, demands, liens or suits by any person or entity who furnished labor, materials or equipment for use in the performance of the Construction Contact, provided City has promptly notified Contractor and Surety (at the address set forth on the signature page of this Bond) of any claims, demands, liens or suits and tendered defense of such claims, demands, liens or suits to Contractor and Surety, and provided there is no City Default.

3. With respect to Claimants, this obligation shall be null and void if Contractor promptly makes payment, directly or indirectly through its Subcontractors, for all sums due Claimants. If Contractor or its Subcontractors, however, fail to pay any of the persons named in Section 3181 of the California Civil Code, 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 from the wages of employees of Contractor or Subcontractors pursuant to Section 13020 of the Unemployment Insurance Code, with respect to such Work and labor, then Surety shall pay for the same, and also, in case suit is brought upon this Bond, a reasonable attorney's fee, to be fixed by the court.

4. Consistent with the California Mechanic's Lien Law, Civil Code §3082, *et seq*., Surety shall have no obligation to Claimants under this Bond unless the Claimant has satisfied all applicable notice requirements.

5. Surety's total obligation shall not exceed the amount of this Bond, and the amount of this Bond shall be credited for any payments made in good faith by Surety under this Bond.

6. Amounts due Contractor under the Construction Contract shall be applied first to satisfy claims, if any, under any Construction Performance Bond and second, to satisfy obligations of Contractor and Surety under this Bond.

7. City shall not be liable for payment of any costs, expenses, or attorney's fees of any Claimant under this Bond, and shall have under this Bond no obligations to make payments to, give notices on behalf of, or otherwise have obligations to Claimants under this Bond.

8. Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders and other obligations. Surety further hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Construction Contract, or to the Work to be performed thereunder, or materials or equipment to be furnished thereunder or the Specifications accompanying the same, shall in any way affect its obligations under this Bond, and it does hereby waive any requirement of notice or any such change, extension of time, alteration or addition to the terms of the Construction Contract or to the Work or to the Specifications or any other changes.

9. Suit against Surety on this Bond may be brought by any Claimant, or its assigns, at any time after the Claimant has furnished the last of the labor or materials, or both, but, per Civil Code §3249, must be commenced before the expiration of six months after the period in which stop notices may be filed as provided in Civil Code §3184.

10. All notices to Surety or Contractor shall be mailed or delivered (at the address set forth on the signature page of this Bond), and all notices to City shall be mailed or delivered as provided in Document 00520 (Contract). Actual receipt of notice by Surety, City or Contractor, however accomplished, shall be sufficient compliance as of the date received at the foregoing addresses.

11. This Bond has been furnished to comply with the California Mechanic's Lien Law including, but not limited to, Civil Code §§3247, 3248, *et seq*. Any provision in this Bond conflicting with said statutory requirements shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirements shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

12. Upon request by any person or entity appearing to be a potential beneficiary of this Bond, Contractor shall promptly furnish a copy of this Bond or shall permit a copy to be made.

13. Contractor shall pay to persons performing labor in and about Work provided for in the Contract Documents an amount equal to or more than the general prevailing rate of per diem wages for (1) work of a similar character in the locality in which the Work is performed and (2) legal holiday and overtime work in said locality. The per diem wages shall be an amount equal to or more than the stipulated rates contained in a schedule that has been ascertained and determined by the Director of the State Department of Industrial Relations and City to be the general prevailing rate of per diem wages for each craft or type of workman or mechanic needed to execute this Contract. Contractor shall also cause a copy of this determination of the prevailing rate of per diem wages to be posted at each Site.

14. Definitions.

14.1 Claimant: An individual or entity having a direct contract with Contractor or with a Subcontractor of Contractor to furnish labor, materials or equipment for use in the performance of the Contract, as further defined in California Civil Code §3181. The intent of this Bond shall be to include without limitation in the terms "labor, materials or equipment" that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the Work of Contractor and Contractor's Subcontractors, and all other items for which a stop notice might be asserted. The term Claimant shall also include the Unemployment Development Department as referred to in Civil Code §3248(b).

14.2 Construction Contract: The contract between City and Contractor identified on the signature page of this Bond, including all Contract Documents and changes thereto.

14.3 City Default: Material failure of City, which has neither been remedied nor waived, to pay the Contractor as required by the Construction Contract, provided that failure is the cause of the failure of Contractor to pay the Claimants and is sufficient to justify termination of the Construction Contract.

END OF DOCUMENT

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DOCUMENT 00630

GUARANTY

TO THE CITY OF CUPERTINO, a Municipal Corporation of the State of California ("City"), for construction of

WILSON PARK BUILDING AND LANDSCAPE IMPROVEMENTS

PROJECT NUMBER 2015-08

CUPERTINO, CALIFORNIA

The undersigned guarantees all construction performed on this Project and also guarantees all material and equipment incorporated therein.

Contractor hereby grants to City for a period of one year following the date of Final Acceptance, or such longer period specified in the Contract Documents, its unconditional warranty of the quality and adequacy of all of the Work including, without limitation, all labor, materials and equipment provided by Contractor and its Subcontractors of all tiers in connection with the Work.

Neither final payment nor use or occupancy of the Work performed by the Contractor shall constitute an acceptance of Work not done in accordance with this Guaranty or relieve Contractor of liability in respect to any express warranties or responsibilities for faulty materials or workmanship. Contractor shall remedy any defects in the Work and pay for any damage resulting therefrom, which shall appear within one year, or longer if specified, from the date of Final Acceptance.

If within one year after the date of Final Acceptance, or such longer period of time as may be prescribed by laws or regulations, or by the terms of Contract Documents, any Work is found to be defective, Contractor shall promptly, without cost to City and in accordance with City's written instructions, correct such defective Work. Contractor shall remove any defective Work rejected by City and replace it with Work that is not defective, and satisfactorily correct or remove and replace any damage to other Work or the work of others resulting therefrom. If Contractor fails to promptly comply with the terms of such instructions, or in an emergency where delay would cause serious risk of loss or damage, City may have the defective Work corrected or the rejected Work removed and replaced. Contractor shall pay for all claims, costs, losses and damages caused by or resulting from such removal and replacement. Where Contractor fails to correct defective Work, or defects are discovered outside the correction period, City shall have all rights and remedies granted by law.

Inspection of the Work shall not relieve Contractor of any of its obligations under the Contract Documents. Even though equipment, materials, or Work required to be provided under the Contract Documents have been inspected, accepted, and estimated for payment, Contractor shall, at its own expense, replace or repair any such equipment, material, or Work found to be defective or otherwise not to comply with the requirements of the Contract Documents up to the end of the guaranty period.

All abbreviations and definitions of terms used in this Agreement shall have the meanings set forth in the Contract Documents, including, without means of limitation, Section 00700 (General Conditions).

The foregoing Guaranty is in addition to any other warranties of Contractor contained in the Contract Documents, and not in lieu of, any and all other liability imposed on Contractor under the Contract Documents and at law with respect to Contractor's duties, obligations, and performance under the Contract Documents. In the event of any conflict or inconsistency between the terms of this Guaranty and any warranty or obligation of the Contractor under the Contract Documents or at law, such inconsistency or conflict shall be resolved in favor of the higher level of obligation of the Contractor.

_____
Contractor's Name

_____
Address

_____ _____
City/State/Zip Date

END OF DOCUMENT

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DOCUMENT 00650

AGREEMENT AND RELEASE OF ANY AND ALL CLAIMS

WILSON PARK BUILDING AND LANDSCAPE IMPROVEMENTS
PROJECT NUMBER 2015-08

THIS AGREEMENT AND RELEASE OF ANY AND ALL CLAIMS ("Agreement and Release"), made and entered into this [_____] day of [_____], 20___, by and between the _____("City"), and _____ ("Contractor"), whose place of business is at _____.

RECITALS

A. City and Contractor entered into Contract Number _____ (the "Contract").

B. The Work under the Contract has been completed.

Now, therefore, it is mutually agreed between City and Contractor as follows:

AGREEMENT

1. Contractor will not be assessed liquidated damages except as detailed below:

Original Contract Sum	$ _____
Modified Contract Sum	$ _____
Payment to Date	$ _____
Liquidated Damages	$ _____
Payment Due Contractor	$ _____

2. Subject to the provisions of this Agreement and Release, City will forthwith pay to Contractor the sum of $_____ Dollars and _____ Cents ($_____) under the Contract, less any amounts withheld under the Contract or represented by any Notice to Withhold Funds on file with City as of the date of such payment.

3. Contractor acknowledges and hereby agrees that there are no unresolved or outstanding claims in dispute against City arising from the Contract, except for the claims described in paragraph 4 of this Document 00650. It is the intention of the parties in executing this Agreement and Release that this Agreement and Release shall be effective as a full, final and general release of all claims, demands, actions, causes of action, obligations, costs, expenses, damages, losses and liabilities of Contractor against City, and all if its agents, employees, consultants (including without limitation Consulting Cupertino), inspectors, representatives, assignees and transferees except for the Disputed Claims set forth in paragraph 4 of this Document 00650. Nothing in this

Agreement and Release shall limit or modify Contractor's continuing obligations described in paragraph 6 of this Document 00650.

4. The following claims are disputed (hereinafter, the "Disputed Claims") and are specifically excluded from the operation of this Agreement and Release:

Claim No.	Date Submitted	Description of Claim	Amount of Claim

[Insert information, including attachment if necessary]

5. Consistent with California Public Contract Code Section 7100, Contractor hereby agrees that, in consideration of the payment set forth in paragraph 2 of this Document 00650, Contractor hereby releases and forever discharges City, and all of its agents, employees, consultants, inspectors, assignees and transferees from any and all liability, claims, demands, actions or causes of action of whatever kind or nature arising out of or in any way concerned with the Work under the Contract

6. Guarantees and warranties for the Work, and any other continuing obligation of Contractor, shall remain in full force and effect as specified in the Contract Documents.

7. Contractor shall immediately defend, indemnify and hold harmless the City of Cupertino, Santa Clara County, its Architect, any of their Representatives, and all of their agents, employees, consultants, inspectors, assignees and transferees, from any and all claims, demands, actions, causes of action, obligations, costs, expenses, damages, losses and liabilities that may be asserted against them by any of Contractor's suppliers and/or Subcontractors of any tier and/or any suppliers to them for any and all labor, materials, supplies and equipment used, or contemplated to be used in the performance of the Contract, except for the Disputed Claims set forth in paragraph 4 of this Document 00650.

8. Contractor hereby waives the provisions of California Civil Code Section 1542, which provides as follows:

> **A general release does not extend to claims that the creditor does not know or suspect to exist in his favor at the time of executing the release, which if known by him, must have materially affected his settlement with the debtor.**

9. The provisions of this Agreement and Release are contractual in nature and not mere recitals and shall be considered independent and severable, and if any such provision or any part thereof shall be at any time held invalid in whole or in part under any federal, state, county, municipal or other law, ruling, or regulation, then such provision, or part thereof shall remain in force and effect only to the extent permitted by law, and the remaining provisions of this Agreement and Release shall also remain in full force and effect, and shall be enforceable.

10. Contractor represents and warrants that it is the true and lawful owner of all claims and other matters released pursuant to this Agreement and Release, and that it has full right, title and authority to enter into this instrument. Each party represents and warrants that it has been represented by counsel of its own choosing in connection with this Agreement and Release.

11. All rights of City shall survive completion of the Work or termination of the Contract, and execution of this Agreement and Release.

* * * CAUTION: THIS IS A RELEASE - READ BEFORE EXECUTING * * *

THE CITY OF CUPERTINO,
a Municipal Corporation of the State of California

By: _____

Its: _____

ATTEST:

_____
City Clerk

[CONTRACTOR]

By: _____

Name: _____

Its: _____

By: _____

Name: _____

Its: _____

REVIEWED AS TO FORM:

_____
City Attorney

_____, 20 _____

END OF DOCUMENT

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DOCUMENT 00660

SUBSTITUTION REQUEST FORM

To: The City of Cupertino,
A Municipal Corporation of the State of California ("City")

Project: **WILSON PARK BUILDING AND LANDSCAPE IMPROVEMENTS**

Contractor:_____

Subcontractor/Supplier:_____

Drawing Sheet Reference/Detail No:_____

The undersigned Bidder submits for consideration the following equipment instead of the specified item for the above project:

Section	Paragraph	Specified Item
_____	_____	_____
_____	_____	_____

Proposed Substitution:_____

_____

The undersigned encloses the information required herein. If this Document 00660 is being submitted by a Bidder wishing to use "or equal" item(s) as provided in Document 00200 (Instructions to Bidders), the undersigned Bidder must also enclose the technical information (other than cost) otherwise required for a post-Award of Contract Request for Substitution ("RFS") under Section 00700 (General Conditions). However, If this Document 00660 is being submitted under provisions of Contract Documents after Award of Contract, the undersigned Contractor must include all information required under Section 00700 (General Conditions).

The undersigned has (a) attached manufacturer's literature, including complete technical data and laboratory test results, if applicable, (b) attached an explanation of why proposed substitution is a true equivalent to specified item, (c) included complete information on changes to Drawings and Specifications that the proposed substitution will require for its proper installation, and (d) filled in the blanks below:

A. Does the substitution affect dimensions shown on Drawings?

_____

B. Are the manufacturer's guarantees and warranties on the proposed substitution items identical to those on the specified items? If there are differences, please specify each and every difference in detail.

_____

C. What effect does the substitution have on other contractors, trades, or suppliers?

_____

D. What are the differences between the proposed substitution and the specified item? If proposed substitution has a color or pattern, provide a color board showing proposed substitution in relation to the other adjacent colors and patterns.

_____

E. Will granting the requested substitution cause any schedule delay? (If yes, please explain)

_____

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

Submitted by:

_____
Bidder/Contractor
[note applicable]

_____
Signature

_____
Name

_____
Address

_____
City/State/Zip

Telephone: _____

Date: _____

For Use by City:

_____ Accepted _____Accepted as Noted

_____ Not Accepted _____Received Too Late

By: _____
City's Representative

Date: _____

Remarks: _____

_____

_____

_____

END OF DOCUMENT

DOCUMENT 00680

ESCROW AGREEMENT FOR SECURITY DEPOSITS IN LIEU OF RETENTION
P.C.C. §22300

THIS ESCROW AGREEMENT ("Escrow Agreement") is made and entered into this _____ day of _____, 20__, by and between the CITY OF CUPERTINO, a Municipal Corporation of the State of California (hereinafter "City"), whose address is 10300 Torre Avenue, Cupertino, California 95014; _____ ("Contractor"), whose place of business is located at _____; and **[City, as escrow agent …OR… [_____]**, a state or federally chartered bank in the State of California, whose place of business is located at _____] ("Escrow Agent").

For the consideration hereinafter set forth, City, Contractor and Escrow Agent agree as follows: its

1. Pursuant to Section 22300 of Public Contract Code of the State of California, Contractor has the option to deposit securities with Escrow Agent as a substitute for retention earnings required to be withheld by City pursuant to **Project Number 2015-08** entered into between City and Contractor for the **WILSON PARK BUILDING AND LANDSCAPE IMPROVEMENTS** in the amount of **_____** dated **_____** (the "Contract"). Alternatively, on written request of Contractor, City shall make payments of the retention earnings directly to Escrow Agent. When Contractor deposits the securities as a substitute for Contract earnings, Escrow Agent shall notify City within ten Days of the deposit. The market value of the securities at the time of substitution shall be at least equal to the cash amount then required to be withheld as retention under terms of Contract between City and Contractor. Securities shall be held in name of _____, and shall designate Contractor as the beneficial owner.

2. City shall make progress payments to Contractor for those funds which otherwise would be withheld from progress payments pursuant to Contract provisions, provided that Escrow Agent holds securities in form and amount specified in paragraph 1 of this Document 00680.

3. When City makes payment(s) of retention earned directly to Escrow Agent, Escrow Agent shall hold said payment(s) for the benefit of Contractor until the time that the escrow created under this Escrow Agreement is terminated. Contractor may direct the investment of the payments into securities. All terms and conditions of this Escrow Agreement and the rights and responsibilities of the parties shall be equally applicable and binding when City pays Escrow Agent directly.

4. Contractor shall be responsible for paying all fees for the expenses incurred by Escrow Agent in administering the Escrow Account, and all expenses of City. Such expenses and payment terms shall be determined by City, Contractor, and Escrow Agent.

5. Interest earned on securities or money market accounts held in escrow and all interest earned on that interest shall be for sole account of Contractor and shall be subject to withdrawal by Contractor at any time and from time to time without notice to City.

6. Contractor shall have the right to withdraw all or any part of the principal in the Escrow Account only by written notice to Escrow Agent accompanied by written authorization from City to Escrow Agent that City consents to withdrawal of amount sought to be withdrawn by Contractor.

7. City shall have the right to draw upon the securities in event of default by Contractor. Upon seven Days written notice to Escrow Agent from City of the default, Escrow Agent shall immediately convert the securities to cash and shall distribute the cash as instructed by City.

8. Upon receipt of written notification from City certifying that the Contract is final and complete, and that Contractor has complied with all requirements and procedures applicable to the Contract, Escrow Agent shall release to Contractor all securities and interest on deposit less escrow fees and charges of the Escrow Account. The escrow shall be closed immediately upon disbursement of all moneys and securities on deposit and payments of fees and charges.

9. Escrow Agent shall rely on written notifications from City and Contractor pursuant to paragraphs 5 through 8, inclusive, of this Document 00680 and City and Contractor shall hold Escrow Agent harmless from Escrow Agent's release and disbursement of securities and interest as set forth.

10. Names of persons who are authorized to give written notice or to receive written notice on behalf of City and on behalf of Contractor in connection with the foregoing, and exemplars of their respective are as follows:

On behalf of City:

_____
Title

_____
Name

_____
Signature

_____
Address

_____
City/State/Zip

On behalf of Contractor:

_____
Title

_____
Name

_____
Signature

_____
Address

_____
City/State/Zip

On behalf of Escrow Agent:

_____
Title

_____
Name

_____
Signature

_____
Address

_____
City/State/Zip

At the time the Escrow Account is opened, City and Contractor shall deliver to Escrow Agent a fully executed counterpart of this Document 00680.

IN WITNESS WHEREOF, the parties have executed this Escrow Agreement by their proper officers on the date first set forth above.

City

_____

_____
Title

_____
Name

_____
Signature

Contractor

_____

_____
Title

_____
Name

_____
Signature

Escrow Agent

_____

_____
Title

_____
Name

_____
Signature

REVIEWED AS TO FORM:

_____
City Attorney

_____
Date

END OF DOCUMENT

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DOCUMENT 00700

GENERAL CONDITIONS

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ABBREVIATIONS AND DEFINITIONS

Whenever in these Specifications and other Contract Documents the following abbreviations and terms or pronouns in place of them are used, the intent and meaning shall be interpreted as follows:

ABBREVIATIONS--General

AA	Aluminum Association
AABC	Associated Air Balance Council
AAMA	American Architectural Manufacturers Association
AAN	American Association of Nurserymen
AAP	Affirmative Action Program
AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
ACPA	American Concrete Pipe Association
ACS	Acoustical Society of America
AFPA	American Forest and Paper Assoc.
AGA	American Gas Association
AHA	American Hardboard Association
AI	Asphalt Institute
AIA	American Institute of Architects
A.I.A.	American Insurance Association
AIHA	American Industrial Hygiene Association
AISI	American Iron and Steel Institute
AIEE	American Institute of Electrical Engineers
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
AITC	American Institute of Timber Construction
ALSC	American Lumber Standards Committee
AMCA	Air Movement and Control Association
ANSI	American National Standards Institute
APA	American Plywood Association
APHA	American Public Health Association
API	American Petroleum Institute
AREA	American Railway Engineering Association
ARI	Air Conditioning and Refrigeration Institute
ARMA	Asphalt Roofing Manufactures Association
ASC	Adhesive and Sealant Council
ASCE	American Society of Civil Engineers
ASHRAE	American Society of Heating, Refrigerating and Air Conditioning Engineers
ASME	American Society of Mechanical Engineers
ASPE	American Society of Plumbing Engineers
ASTM	American Society of Testing and Materials
AWG	American Wire Gage
AWI	Architectural Woodwork Institute
AWPA	American Wood-Preservers' Association
AWS	American Welding Society
AWWA	American Water Works Association
BAAQMD	Bay Area Air Quality Management District
BHMA	Builders' Hardware Manufacturers Association
CAEPA	California Environmental Protection Agency
Cal/OSHA	California Occupational Safety and Health Administration
Caltrans	State of California, Department of Transportation
CBC	California Building Code
CCC	Carpet Cushion Council
CCD	Construction Change Directive
CCR	California Code of Regulations
CE	Corps of Engineers

CEC	California Electric Code
CFR	Code of Federal Regulations
CIH	Certified Industrial Hygienist
CISPI	Cast Iron Soil Pipe Institute
CLMFI	Chain Link Fence Manufacturers Institute
CO	Change Order
CPM	Critical Path Method
CPSC	Consumer Product Safety Commission
CPUC	California Public Utilities Commission
CRI	Carpet and Rug Institute
CRSI	Concrete Reinforcing Steel Institute
CS	Commercial Standards, U.S. Department of Commerce
CTI	Ceramic Tile Institute
DHI	Door and Hardware Institute
DHS	California Department of Health Services
DIPRA	Ductile Iron Pipe Research Assoc.
DLPS	Decorative Laminate Products Assoc.
DOC	Department of Commerce
DOT	Department of Transportation
DSA	Division of State Architect (formerly known as the Office of the State Architect)
EIA	Electronic Industries Association
EPA	Environmental Protection Agency
FS	Federal Specifications
GA	Gypsum Assoc.
HMA	Hardwood Manufacturers Assoc.
HSC	California Health and Safety Code
I.D.	Identification
IEEE	Institute of Electrical and Electronics Engineers
IES	Illuminating Engineering Society
IESNA	Illuminating Engineering Society of North America
IILP	International Institute for Lath & Plaster
JATC	Joint Apprenticeship Training Committee
JV	Joint Venture
LBE	Local Business Enterprise
M.I.	Middle Initial
M/WBE	Minority and/or Woman-Owned Business Enterprise
MBE	Minority Business Enterprise
MBMA	Metal Building Manufacturer’s Assoc.
MCAA	Mechanical Contractors Assoc. of America
MFMA	Maple Flooring Manufacturers Assoc.
MIA	Masonry Institute of America
ML/SFA	Metal Lath/Steel Framing Assoc.
MSDS	Material Safety Data Sheet
NAAMM	National Assoc. of Architectural
NBHA	National Builders Hardware Assoc.
NBS	National Bureau of Standards
NEC	National Electric Code
NEII	National Elevator Industry, Inc.
NEMA	National Electrical Manufacturers Association
NESC	National Electrical Safety Code
NFPA	National Fire Protection Assoc.
N.F.P.A.	National Forest Products Association
NIOSH	National Institute for Occupational Safety and Health
NIST	National Institute of Science and Technology (formerly the National Bureau of Standards)
NFPA	National Fire Protection Association
NRCA	National Roofing Contractors Assoc.
NSF	National Sanitation Foundation
OSHA	Occupational Safety and Health Administration
OSHPD	Office of Statewide Health Planning and Department

PCA	Portland Cement Association
PCI	Prestressed Concrete Institute
PG&E	Pacific Gas and Electric Company
PM	Preventive Maintenance
PR	Proposal Request
PS	Product Standard, U. S. Department of Commerce
RFCI	Resilient Floor Covering Institute
RFI	Request for Information
RFIR	Request for Information Reply
RFP	Request for Proposals
RFS	Request for Substitution
RIS	Redwood Inspection Service
RMA	Rubber Manufacturers Assoc.
RWQCB	California Regional Water Quality Control Council
SAE	Society of Automotive Engineers
S.D.I.	Steel Door Institute
SFM	State of California, Office of State Fire Marshal
SJI	Steel Joint Institute
SMACNA	Sheet Metal & Air Conditioning
SSPC	Steel Structures Painting Council
SWI	Steel Window Institute
SWRCB	California State Water Resources Control Council
TCA	Tile Council of America
TIE	Time Impact Evaluation
UBC	Uniform Building Code
UFC	Uniform Fire Code
UL	Underwriters Laboratories
UMC	Uniform Mechanical Code
UPC	Uniform Plumbing Code
USA	Underground Service Alert
USC	United States Code
USDA	U.S. Department of Agriculture
USPS	U.S. Postal Service
USEPA	United States Environmental Protection Agency
WA	Wallcovering Assoc.
WCLB	West Coast Lumber Inspection Bureau
WCLIB	West Coast Lumber Inspection Bureau
WIC	Woodwork Institute of California
WLPDIA	West Coast Lumber Inspection Bureau
WRI	Wire Reinforcement Institute
WWPA	Western Wood Products Association

ABBREVIATIONS—in Specifications

AWG	American Wire Gauge
Accord	Accordance
Co.	Company
Corp.	Corporation
cm.	centimeter (centimeters)
cu.	Cubic
Div.	Division
dia.	Diameter
EA	each
ft.	foot (feet)
g./gr.	gram (grams)
gal.	gallon (gallons)
gpd	gallons per day
gpm	gallons per minute
hr.	hour

kg.	kilogram (kilograms)
in.	inch (inches)
Inc.	Incorporated
km.	kilometer (kilometers)
Kw	Kilowatt
LS	lump sum
l.	liter (liters)
lbs.	pounds
M/m	meter (meters)
Mfg.	manufacturing
Mg.	milligram (milligrams)
ml./mls.	milliliter (milliliters)
mm.	millimeter (millimeters)
m^2	square meter
m^3	cubic meter
No.	number
o.c.	on centers
O.D.	outside diameter
Psi	pounds per square inch
Psf	pounds per square foot
sq.	square
T & G	tongue and groove
tonne	metric ton (1000 kg.)
U.S.	United States
yd.	yard (yards)

SYMBOLS in Specifications

[for consideration]

:	“shall be” or “shall” - where used within sentences or paragraphs
#1	Number
1#	Pound
&	And
%	Percent
C	Centigrade
F	Fahrenheit
°	Degree
/	per, except where used to combine words; example: power/fuel, and in that case it means and
“	inch (inches)
‘	foot (feet)
@	At

SYMBOLS in Drawings

As indicated therein.

DEFINITIONS

Acceptance: The formal written acceptance by City of a contract which has been completed in all respects in accordance with the Drawings and Specifications and any modifications thereof previously approved.

Addendum or Letter of Clarification: A change in the Specifications or Drawings issued prior to the opening of Bids.

Agency: City.

Alternate: Work added to or deducted from the Base Bid, if accepted by City.

Application for Payment: Written application for monthly or periodic progress or final payment made by Contractor complying with the Contract Documents.

Approved, Directed, Ordered, or Required: Whenever these words or their derivatives are used, it is the intent, unless otherwise clearly stated, that approval or direction by City is indicated.

Approved Equal: Approved in writing by City as being of equivalent quality, utility and appearance.

Asbestos: Any material that contains more than one percent asbestosis and is friable or is releasing asbestos fibers into the air above current action levels established by OSHA or Cal/OSHA.

Attorney or Attorney General: The attorney selected by City.

Bid: The offer or proposal of the Bidder submitted on the proscribed forms setting forth the prices for the Work to be performed.

Bidder: Any individual, firm, partnership, corporation or combination thereof, submitting a proposal for the Work contemplated, acting directly or through a duly authorized representative.

Bidding Documents: All documents comprising the Project Manual (including all documents and specification sections listed on Document 00010 [Table of Contents]), including documents supplied for bidding purposes only and Contract Documents.

Board or Council: City's governing body, its City Council.

Business Day: Any Day other than Saturday, Sunday, and the following days that have been designated as holidays by City. If a holiday falls on a Saturday, the preceding Friday will be the holiday. If a holiday falls on a Sunday, the following Monday will be the holiday.

a. New Year's Day, January 1;
b. Martin Luther King Jr.'s Birthday, third Monday in January;
c. Lincoln's Birthday, February 12;
d. Presidents' Day, third Monday in February;
e. Memorial Day, last Monday in May;
f. Independence Day, July 4;
g. Labor Day, first Monday in September;
h. Veterans' Day, November 11;
i. Thanksgiving Day, as designated by the President;
j. The Day following Thanksgiving Day;
k. Christmas Day, December 25; and
l. Each day appointed by the Governor of California and formally recognized by the Santa Clara County Board of Supervisors as a day of mourning, thanksgiving, or special observance.

By City: Work that will be performed by City or its agents at the City's expense.

By Others: Work that is outside scope of Work to be performed by Contractor under this Contract, which will be performed by City, other contractors, or other means.

Calendar Day: Any Day of the year, without exception.

Change Order: A written instrument prepared by City and signed by City and Contractor, stating their agreement upon all of the following:

a. a change in the Work;
b. the amount of the adjustment in the Contract Sum, if any; and
c. the amount of the adjustment in the Contract Time, if any.

Certified Hazardous Materials Testing Laboratory: A laboratory certified by the California Department of Health Services to perform specific chemical and physical analysis for hazardous materials.

Certified Industrial Hygienist: A professional who is certified by the American Council of Industrial Hygienists as trained to evaluate safety and health hazards and determine safety measures necessary for personnel working under hazardous conditions.

Chief Engineer: The Program Manager selected by City.

City: City of Cupertino, , a Municipal Corporation of the State of California.

City-Furnished, Contractor-Installed: Items furnished by City at its cost for installation by Contractor at its cost under Contract Documents.

City's Representative(s): See Document 00520 (Contract).

Claim: As defined in Section 9 of this Document 00700.

Code: Codes of the State of California, including but not limited to, Government Code, Labor Code, etc.

Concealed: Work not exposed to view in the finished Work, including within or behind various construction elements.

Contract: (Document 00520): Contract is the basic agreement document that binds the parties to construction Work. Contract defines relationships and obligations between City and Contractor and by reference incorporates Standard Provisions, Special Provisions, Drawings and Specifications and contains Addenda and all Modifications subsequent to execution of Contract Documents.

Construction Change Directive (CCD): A letter, signed by the City's Director of Public Works, or his designated representative, directing the Contractor to proceed with additive or deductive changes to the contract when that Work or its value is contested by the Contractor. The Work, as directed by a Construction Change Directive, will be completed under the terms of Force Account as explained in Document 00700, General Conditions.

Construction Equipment: Equipment used for the performance of Work but not incorporated into the project.

Construction Manager: See Document 00520 (Contract) (if this term is used).

Consulting Engineer: See Document 00520 (Contract) (if this term is used).

Contract or Contract Documents: The written agreement between Contractor and City consisting of the Contract Documents as defined in the Document 00520 (Contract).

Contract Modification: Either:

a. a written amendment to Contract signed by Contractor and City; or

b. a Change Order.

Contract Prices: The prices for the Work set forth in the Contract. Contract Price (or Contract Sum) shall mean the aggregate price for all Work set forth in the Contract.

Contract Sum: The sum stated in the Contract and, including authorized adjustments, the total amount payable by City to Contractor for performance of the Work and the Contract Documents. The Contract Sum is also sometimes referred to as the Contract Price or the Contract Amount.

Contract Time: The number of days for Substantial Completion and/or Final Completion the Work including any milestones specifically identified in the Contract.

Contractor: The entity or person entering a contract with City.

Contractor's Employees: Persons engaged in execution of Work under Contract as direct employees of Contractor, as Subcontractors, or as employees of Subcontractors.

Controlling Item of Work: Any feature or combination of features of the Work, which if delayed, will delay the time of completion of a contract. Also known as critical work or critical path work.

County: The County of Santa Clara, State of California.

Day: One calendar day of 24 hours measured from midnight to the next midnight, unless the word "day" is specifically modified to the contrary.

Defective: An adjective which, when modifying the word "Work," refers to Work that is unsatisfactory or unsuited for the use intended, faulty, or deficient, that does not conform to the Contract Documents, or does not meet the requirements of any inspection, reference standard, test or approval referred to in the Contract Documents (including but not limited to approval of samples and "or equal" items), or has been damaged prior to final payment (unless responsibility for the protection thereof has been assumed by City). City is the judge of whether Work is defective.

Department: City.

Director or Director of the Department of Transportation: City's City Public Works Director.

District: City.

Division: City.

Drawings: The official drawings, Working drawings, detail drawings, and supplemental drawings, or reproductions thereof, which show the location, character, dimensions, and details of the Work to be done, and which are to be considered as part of the Contract.

Engineer or Engineer of the Department of Transportation: City of Cupertino and any designated person or entity by City

Equal: Equal in opinion of City. Burden of proof of equality is responsibility of Contractor.

Equipment: Equipment incorporated or to be incorporated into the project.

Exposed: Work exposed to view in the finished Work, including behind louvers, grilles, registers and various other construction elements.

Field Authorization (FA): An authorization issued by City to Contractor to allow additive or deductive work to proceed when Change Order process time may delay the Work.

Final Acceptance: City's acceptance of the Work as satisfactorily completed in accordance with Contract Documents.

Final Completion: Shall be achieved when the entire work is complete, except for minor punch list items, as determined by City.

Fixed Costs: Any necessary labor, material, and equipment costs directly expended on the item or items under consideration which remain constant regardless of the quantity of Work done.

Force Account: Work directed to be performed without prior agreement as to lump sum or unit price cost thereof, and which is to be billed at cost for labor, materials, equipment, taxes, and other costs, plus a specified percentage for overhead and profit.

Furnish: Supply only, do not install.

Hazardous Material: (A) Any substance, product, waste or other material of any nature whatsoever which is or becomes listed, regulated, or addressed pursuant to any federal, state or local statute, law, ordinance, resolution, code, rule, regulation, order or decree regulating, relating to, or imposing liability (including, but not limited to response, removal, and remediation costs) or standards of conduct or performance concerning any hazardous, toxic, explosive, corrosive, flammable, infectious, radioactive, carcinogenic, mutagenic or as otherwise dangerous waste, substance or material; (B) any substance, product, waste, or other material of any nature whatsoever whose presence in and of itself may give rise to liability under any of the above statutes or under any statutory or common law theory based on negligence, trespass, intentional tort, nuisance, strict or absolute liability or under any reported decisions of a state or federal court; (C) any substance without limitation, which contains petroleum or crude oil, including but not limited to, petroleum and petroleum products.

Hazardous Waste: Any substance or material, as defined in the California Hazardous Waste Control Act, Health and Safety Code Section 25, or the Resource Conservation and Recovery Act, 42 U.S.C. 6901 et seq.

Indicated: Shown or noted on the Drawings.

Install: Install or apply only, do not furnish.

Laboratory: The independent testing organization or organizations selected by City.

Latent: Not apparent by reasonable inspection, including but not limited to, the inspections and research required as a condition to bidding under the General Provisions.

Law: Unless otherwise limited, all applicable laws including without limitation all federal, state, and local laws, statutes, standards, rules, regulations, ordinances, and judicial and administrative decisions

Liquidated Damages: The amount stated in Document 00520 (Contract), to be paid to City or to be deducted from any payments due or to become due Contractor as provided in the Contract Documents.

Material: This word shall be construed to embrace machinery, manufactured articles, materials of construction (fabricated or otherwise), and any other classes of material to be furnished in connection with Contract, except where a more limited meaning is indicated by context.

Milestone: A principal event specified in Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all Work.

Modification: Same as Contract Modification.

Not in Contract: Work that is outside the scope of Work to be performed by Contractor under Contract Documents – shown as NIC.

Notice of Completion: Shall have the meaning provided in California Civil Code Section 3093, and any successor statute.

Off Site: Outside geographical location of the Project.

Northern Region: City.

Office of Materials and Foundations: Laboratory.

Office of Structure Design: When specifications require working drawings to be submitted to the Office of Structure Design, the drawings shall be submitted to the Resident Engineer.

***Owner*:** City.

Partial Utilization: Use by City of a substantially completed part of the Work for the purpose for which it is intended (or a related purpose) prior to Substantial Completion of all of the Work.

PCBs: Polyclorinated byphenyls.

Personnel Protection: Equipment and procedures which minimize human exposure to regulated materials, hazardous materials, hazardous wastes, or unsafe situations.

Phase: A specified portion of the Work (if any) specifically identified as a Phase in Document 00520 (Contract).

Plans, Construction Plans: The Drawings.

Product Data: That information (including brochures, catalogue cuts, MSDS, etc.) supplied by the vendor describing the technical and commercial characteristics of the supplier equipment or materials, and accompanying commercial terms such as warranties, instructions and manuals.

Progress Report: A periodic report submitted by Contractor to City with progress payment invoices accompanying actual work accomplished to the Progress Schedule. See Document 00700 (General Conditions).

Project: The erection, construction, alteration, repair, or improvement to be accomplished under the Contract and performing the Work.

Project Float: Neither City nor Contractor owns float. The Project owns the float. As such, liability for delay of any Substantial Completion or Final Completion date rests with the party whose actions, last in time, actually cause delay to a Substantial Completion or Final Completion date.

A. For example, in the event of unexcused delay by Party A and Party B, and if Party A uses some, but not all of the float and Party B later uses remainder of the float as well as additional time beyond the float, Party B shall be liable for the time that represents a delay to the Substantial Completion date.

B. Under this scenario, Party A would not be responsible for the time since it did not consume all of the float and additional float remained; therefore, the Substantial Completion Date was unaffected.

Project Manual: Project Manual consists of Bidding Requirements, Contract, Bonds, Certificates, Standard Provisions and Special Provisions, and Specifications.

Project Record Documents: All Project deliverables required under Section 00700, including without limitation, as-built drawings, operations and maintenance manuals Installation, Operation, and Maintenance Manuals, and Machine Inventory Sheets.

Provide: Furnish and install.

Reasonable Accuracy: Within the tolerances as shown on the Drawings or indicated in the Specifications.

Regulated Material: Any substance or combination of substances for which federal, state, or local regulations require special management, storage, disposal or handling practices. This shall include, but not be limited to, materials defined as: Hazardous Materials and Waste; Designated Wastes (CCR, Title 23, Section 23-2522); and Special Waste (CCR, Title 22, Section 22-66195).

Request for Information ("RFI"): A document prepared by Contractor requesting information regarding the Project or Contract Documents. The RFI system is also a means for City to submit Contract Document clarifications or supplements to Contractor.

Request for Proposals ("RFP"): A document issued by City to Contractor whereby City may initiate changes in the Work or Contract Time as provided in Contract Documents.

Request for Substitution ("RFS"): A document prepared by Contractor requesting substitution of materials as permitted and to the extent permitted in Contract Documents.

RFI-Reply: A document consisting of supplementary details, instructions, or information issued by City that clarifies or supplements Contract Documents, and with which Contractor shall comply. RFI-Replies do not constitute changes in Contract Sum or Contract Time except as otherwise agreed in writing by City. RFI-Replies will be issued through the RFI administrative system.

Remediation: Restoration of the contaminated soil, groundwater, or other materials to its pre-contaminated level or to a level acceptable to City and local, state and federal agencies.

***Resident Engineer*:** Authorized representative for the City. Also identified as Engineer.

Responsible Bidder: A bidder who has demonstrated the attribute of trustworthiness, as well as quality, fitness, capacity, and experience to satisfactorily perform the Work.

Samples: Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.

Section: A numbered portion of a title section of the Specifications.

Shop Drawings: All drawings, diagrams, illustrations, schedules and other data or information which are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work.

Shown: As indicated on Drawings.

Site: The particular geographical location of Work performed pursuant to Contract Documents.

Specifications: The directions, provisions and requirements contained in the Contract Documents, including but not limited to, the State Specifications, Special Provisions, and Technical Provisions.

Standard Plans: The Standard Plans, Metric, of the State of California Department of Transportation, July 2004.

State: City.

***State Furnished Materials*:** Materials furnished by City.

State of California: City except where in the context of the Contract Documents it is clear the reference is to the State of California.

State Specifications (or Standard Specifications): See Section 1.05 in this Document 00700.

Special Conditions or Special Provisions: Document 00800 (Supplemental General Conditions) and Document 00805 (Supplemental Conditions – Hazardous Materials) (if included).

Standard Provisions: Document 00700 (General Conditions)

Subcontractor: An entity or person contracting with Contractor or another subcontractor to perform any portion of Work.

Substantial Completion: The Work (or a specified part thereof) has progressed to the point where, in the opinion of City as evidenced by a Certificate of Substantial Completion and can be utilized for the purpose for which it is intended.

Supplemental Instruction: A written directive from City to Contractor ordering alterations or modifications that do not result in change in Contract Sum or Contract Time, and do not substantially change Drawings or Specifications.

Supplier/Vendor: A person or entity that has a direct contract with the Contractor or a Subcontractor to provide, fabricate, deliver or install materials, products or assemblies.

Technical Provisions: Provisions and or clauses specific to the Work of the Project, generally found in Sections 10 thru 95 of the State Specifications.

Testing and Special Inspection Agency: An independent entity engaged by City to inspect and/or test the workmanship, materials, or manner of construction of buildings or portions of buildings, to determine if such construction complies with the Contract Documents and applicable codes.

Ton: 2,000 pounds avoirdupois.

Underground Facilities: All pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels or other such facilities or attachments, and any encasements containing such facilities that have been installed underground to furnish any of the following services or materials: Electricity, gases, chemicals, steam, liquid petroleum products, telephone or other communications, cable television, sewage and drainage removal, traffic or other control systems or water.

Unit Price Work: Shall be the portions of the Work for which a unit price is provided in Document 00520 (Contract).

Work: The entire completed construction of the Work or of the various separately identifiable parts thereof required to be furnished under the Contract Documents within the Contract Time. Work includes and is the result of performing or furnishing administrative services, labor and professional services, furnishing and incorporating materials and equipment into the construction, and performing or furnishing construction services and furnishing documents, all as required by the Contract Documents including the Plans and Specifications. Wherever the word “work” is used, rather than the word “Work”, it shall be understood to have its ordinary and customary meaning.

Work Day: All Days, other than Saturdays, Sundays, and public holidays, unless specifically modified to the contrary.

Wherever words “as directed,” “as required,” “as permitted,” or words of like effect are used, it shall be understood that direction, requirements, or permission of City is intended. Words “sufficient,” “necessary,” “proper,” and the like shall mean sufficient, necessary, or proper in judgment of City. Words “approved,” “acceptable,” “satisfactory,” “favorably

reviewed," or words of like import, shall mean approved by, or acceptable to, or satisfactory to, or favorably reviewed by City.

Wherever the word "may" or "ought" is used, the action to which it refers is discretionary. Wherever the word "shall" or "will" is used, the action to which it refers is mandatory.

SECTION 1. INTERPRETATION OF CONTRACT

1.1 Precedence of Contract

In resolving conflicting requirements between the Contract Documents order of precedence shall be as follows:

A Change orders
B Addenda or Letters of Clarification
C Document 00520 (Contract)
D Special Conditions
E Technical Specifications/Special Provisions
F Drawings
G General Conditions
H State Specifications
I State Standard Plans

With reference to the Drawings:

A Figures govern over scaled dimensions
B Detail drawings govern over general drawings

1.2 Clarification of Contract

Should it appear that the work to be done or any of the matters relative thereto is not sufficiently detailed or explained in the Specifications or on the Drawings, or if Contractor discovers during the course of the Work any discrepancies between the Contract Drawings and conditions in the field, or any errors or omissions in the Contract or in the layout given by stakes, points, or instructions, the bidder or Contractor shall apply in writing to City for such further explanations as may be necessary and shall conform to them as part of the Contract. Any work done after such discovery until authorized by City, will be done at Contractor's risk.

All corrections of readily apparent errors or omissions in the Contract may be made by City when such corrections are necessary for the proper fulfillment of their intention as construed by City. The misplacement, addition, or omission of any word, letter, figure, or punctuation mark which has no substantive legal effect will in no way change the due spirit, intent, or meaning of Contract.

1.3 Contract Documents Complementary

Any part of the Work not shown on the Drawings or described in these Specifications but which is reasonably or ordinarily implied by either, shall be furnished and installed by Contractor as if fully described in these Specifications and shown upon the Drawings. All disputes shall be administered under Section 9 herein.

1.4 Contract Interpretation

In the event of any doubt or questions arising respecting the true meaning of the Contract, reference shall be made in writing to City, whose decision thereon shall be final.

1.5 State Specifications

The Work set forth in these Specifications shall be accomplished in accordance with appropriate provisions of construction details, Section 10 to Section 95, inclusive, of the Standard Specifications of the State of California, Business, Transportation And Housing Agency, Department of Transportation, May, 2006. These Specifications are herein referred to as the State Specifications (or Standard Specifications) and are by reference made a part of these Specifications the same as though set out in full.

1.6 Conflicts Involving State Specifications

In the event of conflict between the State Specifications and the Standard, Special, or Technical Provisions of these Specifications or the Drawings or any Contract Document other than the State Specifications, then such non-State Specification shall have precedence.

SECTION 2. BONDS AND INSURANCE

2.1 Contractor's Insurance

A General

Contractor shall not perform Work under this Contract unless all insurance required by this Section has been obtained; and such insurance and insurers have been approved by City; and such insurance remains in full force and effect. Approval of insurance by City shall neither relieve nor decrease the liability of Contractor hereunder. Any delay in performing Work caused by Contractor's failure to comply with the insurance requirements specified in these Specifications, is the responsibility of Contractor. Failure by Contractor to maintain all required insurance at all times during the performance of this Contract, and until Final Acceptance by City, shall constitute a material breach of this Contract and shall not be a basis for a time extension.

For insurance requirements and forms see Document 00821 and 00530.

B Workers' Compensation and Liability Insurance

Without limiting any of the other obligations or liabilities of Contractor, Contractor shall, at Contractor's sole cost and expense, keep in force at all times during the performance of this Contract, and until Acceptance by City, the following minimum insurance coverages, unless otherwise specified in the Special Provisions:

For insurance requirements and forms see Document 00821 and 00530.

C Insurance on Work and Materials

Contractor shall secure and maintain such direct damage insurance against such perils as Contractor may deem necessary to protect the Work called for in this Contract including Work completed, material in place or to be used in the performance of this Contract and such other miscellaneous items as may be necessary to the performance of this Contract.

For insurance requirements and forms see Document 00821 and 00530.

D Certificates of Insurance

Contractor shall furnish certificates of insurance to City for all required insurance coverages.

For insurance requirements and forms see Document 00821 and 00530.

2.2 Contractor's Bonds

A Filing of Bonds

At or before the date indicated in Document 00200 (Instructions to Bidders), Contractor shall file with City the following bonds:

1. Corporate surety bond, in the form of Document 00610 (Construction Performance Bond), in the penal sum of 100% of Contractor's Bid as accepted, to guarantee faithful performance of the Work; and

2. Corporate surety bond, in the form of Document 00620 (Construction Labor and Material Payment Bond), in the penal sum of 100% of Contractor's Bid as accepted, to guarantee payment of wages for services engaged and of bills contracted for materials, supplies, and equipment used in performance of Contract Documents.

3. The Payment bond will be released six (6) months after the recording of the Notice of Completion, and the Faithful Performance shall be reduced by ninety percent (90%) at the recording of the Notice of Completion. The remaining ten percent (10%) will be released at the end of one (1) year from acceptance of the project provided any deficiencies in the work have been corrected.

B Surety Qualifications

Sureties shall be satisfactory to City. Corporate sureties on these bonds and on bonds accompanying Bids shall be duly licensed to do business in the State of California and shall have an A.M. Best Company financial rating of B+,VII or better.

SECTION 3. SCOPE OF WORK

3.1 Work to be Done

The Work to be done consists of furnishing all labor, methods or processes, implements, tools, machinery, construction equipment, materials of any kind, and installed manufactured equipment, except as otherwise specified herein, to be furnished by City or from sources provided by City, which are required to construct in a good and worker-like manner all the work herein specified. The intent of the plans and specifications is to describe the details for the construction and completion of the work which Contractor undertakes to perform in accordance with the terms of the contract. Where the plans or specifications describe portions of the work in general terms, but not in complete detail, it is understood that only the best general practice is to prevail and that only materials and workmanship of first class quality are to be used.

Bidder should take particular notice that any and all items of Work, called for in the Construction Documents, but not included in a description of any specific bid item, shall be considered as included in one (1) or more of the bid items and that no additional compensation for those items of Work, beyond the Base Bid, will be allowed. Work of this nature includes, but is not limited to, such items as flagmen, water, all safety requirements, or work and materials required to provide public convenience and safety, barricades, lights, vehicular detours, and pedestrian walkways.

See Document 00800 for more detail of work and requirements.

3.2 Cleaning

Before final inspection Contractor shall clean the premises, and unless otherwise specified remove all rubbish, excess materials, false work, temporary structures, and equipment. All parts of the Work shall be left in a neat and presentable condition to the satisfaction of City. Contractor shall perform final cleanup in phases whenever the work is completed in phases, and/or turned over to City in phases, and/or where the Work is exposed. Additionally, all areas of the work may in any manner interface with the public shall be maintained in a neat, orderly, sanitary, and safe condition, and contractor shall at all times maintain the work area in a neat and orderly condition.

Nothing herein, however, shall require Contractor to remove warning, regulatory, and guide signs prior to Final Acceptance by City.

A Progress Cleaning

Contractor shall perform periodic cleaning to ensure that any streets and other City and public properties are maintained free from accumulation of waste materials, dust, mud, and debris.

Where required, Contractor shall wet down surfaces to lay dust and prevent the blowing of dust to nearby residences or public properties.

Contractor shall keep all streets clean and free of dust, mud, and debris resulting from Contractor's operations. Daily cleanup throughout the job will be necessary as Contractor progresses with its Work,

but extra attention to cleanup shall be made prior to weekends and holidays. Without limiting the foregoing, Contractor shall remove trench spoil along traveled ways daily; grade and vacuum broom surfaces initially where applicable and later water flush with high-pressure sprays, being careful to avoid downstream contamination.

All dust, mud, spoils, and construction debris shall be removed daily from all roadways, ditches, shoulders, and private property (fills or spoils placed on private property at private property owner's written request excepted).

Disposal of Materials:

1. As part of the scope of Work included within the Contract Sum, Contractor shall be fully responsible for disposing of all construction debris, dirt and spoils resulting from the Work.
2. All waste materials, debris, dirt and rubbish shall be disposed of at sites to be chosen by Contractor in accordance with applicable local, state, and federal regulations.
3. Contractor is cautioned that the County of Santa Clara and cities within the county have regulations governing the disposal of rubble, broken pavement, and similar materials.
4. Contractor shall become familiarized with the requirements of the agency having jurisdiction over any contemplated disposal site and shall comply with all such requirements.

All excess soil from performance of Work shall be disposed at sites to be chosen by Contractor in accordance with applicable local, state, and federal regulations. If Contractor elects to dispose of soil on any private property, prior to any dumping, a letter allowing such dumping shall be obtained from the property owner and presented to City. Contractor is advised that the property owner is required to obtain a fill permit from the applicable government agency(ies). In addition, placement of fill in wetland areas is subject to permit procedures of the US Army Corps of Engineers. At the completion of Work, a letter from each affected property owner will be required releasing Contractor**,** Santa Clara County, City and any City consultant from future liability.

If Contractor does not properly clean the Site, in the opinion of City, then City shall have the option of using outside equipment to perform the cleanup and such cost will be withheld from the Contract Sum.

B Final Cleaning

Contractor shall execute final cleaning prior to final inspection, using only properly skilled workers.
Remove grease, dust, dirt, stains, labels, fingerprints, and other foreign materials from exposed finished surfaces.
Repair, patch, and touch up marred surfaces to match adjacent finishes.
Clean Site; mechanically sweep paved areas.
Remove waste and surplus materials, rubbish, and construction facilities from Site.

3.3 Change in Work

A General

City may, at any time or from time to time, order additions, deletions, or revisions in the Work, any portion of the Work, unit price item, or the Contract Time. These changes will be set forth in a contract change order which will specify, in addition to the work to be done in connection with the change made, the adjustment of Contract Time, if any, and the basis of compensation for that work. A contract change order will not become effective until approved by City. Upon receipt of an approved contract change order, Contractor shall proceed with the ordered work. If ordered in writing by the City, Contractor shall proceed with the work so ordered prior to actual receipt of an approved contract change order therefore. In those cases, City will, as soon as practicable, issue an approved contract change order for the ordered work and, if the parties cannot agree, then the contract claims procedure in Section 9 shall apply. When the compensation for an item of work is subject to adjustment, Contractor shall, furnish City with adequate detailed cost data for that item of work showing actual costs incurred with direct costs, indirect costs, and any overhead claims. If Contractor requests an adjustment in compensation for an item of work as provided herein, the cost data shall be submitted with the request.

Any change in scope of Work or deviation from Contract Documents including, without limitation, extra work, or alterations or additions to or deductions from the original Work, shall not invalidate the original Contract, and shall be performed under the terms of the Contract Documents.

Only Contractor or City may initiate changes in scope of Work or deviation from Contract Documents.

Contractor may only initiate changes by submitting RFIs, Notice of Concealed or Unknown Conditions, or Notice of Hazardous Waste Conditions.

RFIs shall be submitted to seek clarification of or request changes in the Contract Documents.
Notices of Concealed or Unknown Conditions shall be submitted in accordance with Document 00700 (General Conditions).
Notices of Hazardous Waste Conditions shall be submitted in accordance with Document 00700 (General Conditions).

Contractor shall be responsible for its costs to implement and administer RFIs throughout the Contract duration. Regardless of the number of RFIs submitted, Contractor shall not be entitled to additional compensation. Contractor shall be responsible for both City and it's Engineer's administrative costs for answering RFIs where the answer could reasonably be found by reviewing the Contract Documents, as determined by City; at City's discretion, such costs may be deducted from progress payments or final payment.

City may initiate changes by issuing a Supplemental Instruction, which may revise, add to or subtract from the Work.

City may initiate changes in the Work or Contract Time by issuing RFPs to Contractor. Such RFPs will detail all proposed changes in the Work and request a quotation of changes in Contract Sum and Contract Time from Contractor.

City may also, by Construction Change Directive ("CCD"), order changes in the Work within the general scope of the Contract consisting of additions, deletions, or other revisions, the Contract Sum and Contract Time being adjusted accordingly. A CCD shall be used in the absence of total agreement on the terms of a Change Order and may, upon notice, consist of a Change Order executed by City only.

B Procedures

1 Cost Proposal and Procedures:

Whenever Contractor is required to prepare a Cost Proposal, and whenever Contractor is entitled to submit a Cost Proposal and elects to do so, Contractor shall prepare and submit to City for consideration a Cost Proposal using the forms approved by the City. All Cost Proposals must contain a complete breakdown of costs of credits, deducts and extras; itemizing materials, labor, taxes, overhead and profit. All Subcontractor Work shall be so indicated. Individual entries on the Cost Proposal form shall be determined as provided in this section. After receipt of a Cost Proposal with a detailed breakdown, City will act promptly thereon.

If City accepts a Cost Proposal, City will prepare Change Order for City and Contractor signatures.

If Cost Proposal is not acceptable to City because it does not agree with cost and/or time included in Cost Proposal, City will submit in a response what it believes to be a reasonable cost and/or adjustment, if any. Except as otherwise provided in this Document, Contractor shall have seven Days in which to respond to City with a revised Cost Proposal.

When necessity to proceed with a change does not allow the City sufficient time to conduct a proper check of a Cost Proposal (or revised Cost Proposal), City may order Contractor to proceed on basis to be determined at earliest practical date. In this event, value of change, with corresponding equitable adjustment to Contract, shall not be more than increase or less than decrease proposed.

2 Request for Information (RFI):

Whenever Contractor requires information regarding the Project or Contract Documents, or receives a request for information from a Subcontractor, Contractor may prepare and deliver an RFI to City. Contractor shall use RFI format provided by City. Contractor must submit time critical RFIs at least 30 days before scheduled start date of the affected Work activity. Contractor shall reference each RFI to an activity of Progress Schedule and shall note time criticality of the RFI, indicating time within which a response is required. Contractor's failure to reference RFI to an activity on the Progress Schedule and note time criticality on the RFI shall constitute Contractor's waiver of any claim for time delay or interruption to the Work resulting from any delay in responding to the RFI.

City will respond within seven Days from receipt of RFI with a written response to Contractor. Contractor shall distribute response to all appropriate Subcontractors. RFI received after 12:00 pm will be considered as received the following day, for Fridays, the following day will be considered to be Monday.

If Contractor is satisfied with the response and does not request change in Contract Sum or Contract Time, then the response shall be executed without a change.

If Contractor believes the response is incomplete, Contractor shall issue another RFI (with the same RFI number with the letter "A" indicating if it is a follow-up RFI) to City clarifying original RFI. Additionally, City may return RFI requesting additional information should original RFI be inadequate in describing condition.

If Contractor believes that the response results in change in Contract Sum or Contract Time, Contractor shall notify City in writing within seven Days after receiving the response. If City disagrees with Contractor, then Contractor may give notice of intent to submit a Claim as described in this Document and submit its Claim within 30 days. If City agrees with Contractor, then Contractor must submit a Cost Proposal within 21 Days of receiving the response to the RFI. Contractor's failure to deliver either the foregoing notice and Claim or Cost Proposal by the respective deadlines stated in the foregoing sentences shall result in waiver of the right to file a Cost Proposal or Claim.

3 Field Authorization (FA):

A letter issued and signed by the City's Director of Public Works, or his designated representative, authorizing the Contractor to proceed with additive or deductive changes to the contract, exclusive of time extensions, which value does not exceed $50,000, which will become a part of a subsequent Contract Change Order. The Field Authorization is issued during the course of construction when it is known or believed that the changes in the Work being requested cannot be processed in a timely way as a Contract Change Order without risk of causing a delay to the project. The contractor cannot include work performed under a Field Authorization in an Application for Payment until the Field Authorization is fully incorporated into an approved Contract Change Order.

4 Supplemental Instruction:

City may issue Supplemental Instruction to Contractor.

If Contractor is satisfied with Supplemental Instruction and does not request change in Contract Sum or Contract Time, then Supplemental Instruction shall be executed without a Change Order.

If Contractor believes that Supplemental Instruction results in change in Contract Sum or Contract Time, then Contractor must submit a Cost Proposal to City within 21 Days of receiving the Supplemental Instruction.

5 Construction Change Directives (CCD):

If at any time City believes in good faith that a timely Change Order will not be agreed upon using the foregoing procedures, City may issue a CCD with its recommended cost and/or time adjustment. Upon receipt of CCD, Contractor shall promptly proceed with the change of Work involved and concurrently respond to City's CCD within 10 Days.

Contractor's response must be any one of following:

Return CCD signed, thereby accepting City's response, time and cost.
Submit a (revised if applicable) Cost Proposal with supporting documentation (if applicable, reference original Cost Proposal number followed by letter A, B, etc. for each revision), if City so requests.
Give notice of intent to submit a Claim as described in this Document and submit its Claim with 30 days.

If the CCD provides for an adjustment to the Contract Sum, the adjustment shall be based on one of the following methods:

Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation.
Unit prices stated in the Contract Documents or subsequently agreed upon.
Cost to be determined in a manner agreed.

CCD signed by Contractor indicates the agreement of Contractor therewith, including adjustment in Contract Sum and Contract Time or the method for determining them. Such agreement shall be effective immediately and shall be recorded as a Change Order.

If Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, the method and the adjustment shall be determined by City on the basis of reasonable expenditures and savings of those performing the Work attributable to the change including, in case of an increase in the Contract Sum, a reasonable allowance for overhead and profit. If the parties still do not agree on the price for a CCD, Contractor may file a Claim. Contractor shall keep and present, in such form as City may prescribe, an itemized accounting together with appropriate supporting data. Unless otherwise provided in the Contract Documents, costs for the purposes of this paragraph shall be limited to those provided in this Section.

Pending final determination of cost to City, amounts not in dispute may be included in Applications for Payment. The amount of credit to be allowed by Contractor to City for a deletion or change which results in a net decrease in the Contract Sum shall be actual net cost as confirmed by City. When both additions and credits covering related Work or substitutions are involved in a change, the allowance for overhead and profit shall be figured on the basis of net increase, if any, with respect to that change.

6 City Requested RFP:

Contractor shall furnish a Cost Proposal within 21 Business Days of City's RFP. Upon approval of RFP, City will issue a Change Order directing Contractor to proceed with extra Work. If the parties do not agree on the price for an RFP, City may either issue a CCD or decide the issue per the claims section of this Document. Contractor shall perform the changed Work notwithstanding any claims or disagreements of any nature.

7 Differing Site Conditions:
Contractor shall submit Notices of Differing Site Conditions to resolve problems regarding differing underground Site conditions encountered in the execution of the Work pursuant to section 3 of this Document, which shall govern. If City determines that a change in Contract Sum or Contract Time is justified, City will issue RFP or CCD.

8 Hazardous Waste Conditions:
Contractor shall submit Notices of Hazardous Waste Conditions to resolve problems regarding hazardous materials encountered in the execution of the Work pursuant to this Document, which shall govern. If City determines that a change in Contract Sum or Contract Time is justified, City will issue RFP or CCD.

9 All Changes:
Documentation of Change in Contract Sum and Contract Time:

Contractor shall maintain detailed records of Work performed on a time-and-material basis. Contractor shall document each proposal for a change in cost or time with sufficient data to allow evaluation of the proposal.
Contractor shall, on request, provide additional data to support computations for:

a. Quantities of products, materials, labor and equipment.

b. Taxes, insurance, and bonds.

c Overhead and profit.

d Justification for any change in Contract Time and new Progress Schedule showing revision due, if any.

e. Credit for deletions from Contract, similarly documented.

f. Contractor shall support each claim for additional costs, and for Work performed on a cost-and-percentage basis, with additional information including:

(1) Credit for deletions from Contract, similarly documented.

(2) Origin and date of claim.

(3) Dates and times Work was performed and by whom.

(4) Time records and wage rates paid.

(5) Invoices and receipts for products, materials, equipment and subcontracts, similarly documented.

10 Correlation of Other Items:
Contractor shall revise Schedule of Values and Application for Payment forms to record each authorized Change Order or CCD as a separate line item and adjust the Contract Sum as shown thereon prior to the next monthly pay period.

Contractor shall revise the Progress Schedules prior to the next monthly pay period.

Contractor shall enter changes in Project Record Documents prior to the next monthly pay period.

11 Responses:
For all responses for which the Contract Documents, including without limitation this Document, do not provide a specific time period, recipients shall respond within a reasonable time.

C Allowable Quantity Variations
Increases or decreases in the quantity of a Contract item of Work for unit price items will be determined by comparing the actual pay quantity of an item of Work with the approximate quantity in the listing of the bid items contained in the Bid.

If the actual pay quantity of an item of Work varies from the approximate quantity by 25 percent or less, payment will be made for the actual quantity of Work performed at the Contract unit price listed in the Bid.

If the actual pay quantity of an item of Work varies from the approximate quantity by more than 25 percent, in the absence of an executed Contract Change Order specifying the compensation to be paid, the compensation payable to Contractor will be determined in accordance with this Section.

1. **Increases of More Than 25 Percent**: If the actual pay quantity of an item of Work exceeds the approximate quantity by more than 25 percent, the amount of Work in excess of 125 percent of the approximate quantity will be paid for by adjusting the Contract unit price. Such adjustment of the Contract unit price will be the positive or negative difference between the Contract unit price and the actual unit cost of the total pay quantity of the item. At the sole option of City, the actual unit cost of the Work involved in such excess will be determined in accordance with Section 3.4 (by mutual acceptance of a lump sum amount) or Section 3.4 (cost of Work, based on time and materials).

   If the cost of an item of Work includes fixed costs or overhead, the fixed costs will be deemed to have been recovered by Contractor by the payments made for 125 percent of the approximate quantity at the Contract unit price for the item and in computing the actual unit cost, the fixed costs will be excluded.

   When the compensation payable for the quantity of Work performed in excess of 125 percent of the approximate quantity is less than $5,000 at the Contract unit price, no adjustment in the Contract unit price will be made unless requested in writing by Contractor within 14 days from the date Contractor became aware, or should have reasonably become aware, of the increase in quantity.

2. **Decreases of More Than 25 Percent**: If the actual pay quantity of an item of Work is less than 75 percent of the approximate quantity, an adjustment in compensation will not be made unless Contractor makes a request in writing within 14 days from the date Contractor became aware, or should have reasonably become aware, of the decrease in quantity. If Contractor makes a request, the actual pay quantity of said item of Work performed will be paid for by adjusting the Contract unit price. Such adjustment of the Contract unit price will be the positive or negative difference between the Contract unit price and the actual unit cost of the total pay quantity of the item, including fixed costs. At the sole option of City, payment for the actual quantity of Work will be made by mutual acceptance of a lump sum amount or cost of Work based on time and materials in accordance with Section 3.4.

3. Payment for the actual pay quantity of such item of Work will in no case exceed the payment which would have been made for the performance of 75 percent of the approximate quantity of such item at the Contract unit price.

B Eliminated Items:

If any Contract item of the Work is eliminated in its entirety, payment will be made to Contractor for the actual cost incurred in connection with the eliminated Contract item if incurred prior to the date of notification in writing by City of such elimination.

If acceptable material is ordered by Contractor for an eliminated Contract item prior to the date of notification of such elimination by City, and if orders for such material cannot be canceled, payment for such material will be made at the actual cost to Contractor. In such case, the material shall become the property of City. If the materials can be returned to the vendor and if City so directs, the material shall be returned and Contractor will be paid for the actual cost for returning the material.

The actual costs to be paid by City to Contractor in accordance with this Section will be computed based on Time and Materials in accordance with Section 3.4.

C. Alternative Contract Items

Items identified as Alternative in the Bid may be deleted entirely or in part at the sole discretion of City. The unit price of an Alternative contract item shall not be subject to adjustment due to any increase or decrease in actual quantity.

See Document 00800 for more detail.

D. Change in Character of Work

If an ordered change in the plans or specifications materially changes the character of the work of a contract item from that on which the Contractor based the bid price, and if the change increases or decreases the actual unit cost of the changed item as compared to the actual or estimated actual unit cost of performing the work of that item in accordance with the plans and specifications originally applicable thereto, in the absence of an executed contract change order specifying the compensation payable, an adjustment in compensation therefore will be made in accordance with the following.

The basis of the adjustment in compensation will be the difference between the actual unit cost to perform the work of that item or portion thereof involved in the change as originally planned and the actual unit cost of performing the work of the item or portion thereof involved in the change, as changed. Actual unit costs will be determined by the Engineer in the same manner as if the work were to be paid for on a force account basis as provided in Section 3.4; or the adjustment will be as agreed to by the Contractor and the Engineer. The adjustment will apply only to the portion of the work of the item actually changed in character. At the option of the Engineer, the work of the item or portion of item which is changed in character will be paid for by force account as provided in Section 3.4.

If the compensation for an item of work is adjusted under this Section, the costs recognized in determining that adjustment shall be excluded from consideration in making an adjustment for that item of work under the provisions in Section 3.3.

Failure of the Engineer to recognize a change in character of the work at the time the approved contract change order is issued shall in nowise be construed as relieving the Contractor of the duty and responsibility of filing a written protest within the limit as provided in Doc. 00700.

3.4 Change in Contract Price

A General

The Contract Price constitutes the total compensation payable to Contractor for performing the Work. All duties, responsibilities. and obligations assigned to or undertaken by Contractor to perform the Work shall be at Contractor's expense without change in the Contract Price.

The Contract Price may only be changed by a change order. Any request for an increase in the Contract Price shall be based on written notice delivered by Contractor to City promptly, but in no event later than 10 days after the date of the occurrence of the event giving rise to the request and stating the general nature of the request. Notice of the amount of the request with supporting data shall be delivered within 45 days after the date of the occurrence, unless City allows an additional period of time to ascertain more accurate data in support of the request, and shall be accompanied by Contractor's written statement that the amount requested covers all amounts (direct, indirect, and consequential) to which Contractor is entitled as a result of the occurrence of the event. No request for an adjustment in the Contract Price will be valid if not submitted in accordance with this Section.

The value of any Work covered by a change order or of any request for an increase or decrease in the Contract Price shall be determined in one of the following ways:

- Where the Work involved is covered by unit prices contained in the Contract documents, by application of unit prices to the quantities of the items involved; or
- By mutual acceptance of a lump sum, which may include an allowance for overhead and profit not necessarily in accordance with Section 3.4, provided Contractor submits documentation supporting the direct, indirect, overhead and profit components that compromise the lump sum amounts.

- On the basis of the cost of Work based on Time and Materials plus a Contractor's fee for overhead and profit, in accordance with this Section.

B Cost of Work (Based on Time and Materials)

The term "cost of Work" means the sum of all costs necessarily incurred and paid by Contractor for labor, materials, and equipment in the proper performance of Work. Except as otherwise may be agreed to in writing by City, such costs shall be in amounts no higher than those prevailing in the locality of the project.

1 Labor:

The cost of labor used in performing Work by Contractor, a Subcontractor, or other forces, will be the sum of the following:

The actual wages paid plus any employer payments to or on behalf of workers for fringe benefits, including health and welfare, pension, vacation, and similar purposes, not overlapping with the labor surcharge described below. The cost of labor may include the wages paid to foremen when it is determined by City that the services of foremen do not constitute a part of the overhead allowance.

There will be added to the actual wages as defined above, a percentage set forth in the latest "Labor Surcharge and Equipment Rental Rates" in use by the California State Department of Transportation which is in effect on the date upon which the work is accomplished. This percentage shall constitute full compensation for all payments imposed by State and Federal laws including, but not limited to, workers' compensation insurance and Social Security payments.

The amount paid for subsistence and travel required by collective bargaining agreements.

For equipment operators, payment for the actual cost of labor and subsistence or travel allowance will be made at the rates paid by Contractor to other workers operating similar equipment already on the work, or in the absence of such labor, established by collective bargaining agreements for the type of workers and location of the extra work, whether or not the operator is actually covered by such an agreement. A labor surcharge will be added to the cost of labor described herein, in accordance with the provisions of this Section, which surcharge shall constitute full compensation for payments imposed by State and Federal laws, and all other payments made to on behalf of workers other than actual wages.

2 Materials:

The cost of materials used in performing Work will be the cost to the purchaser, whether Contractor or subcontractor, from the supplier thereof, except as the following are applicable:

Trade discounts available to the purchaser shall be credited to City notwithstanding the fact that such discounts may not have been taken by Contractor.

For materials secured by other than a direct purchase and direct billing to the purchaser, the cost shall be deemed to be the price paid to the actual supplier as determined by City. Markup, except for actual costs incurred in the handling of such materials, will not be allowed.

Payment for materials from sources owned wholly or in part by the purchaser shall not exceed the price paid by the purchaser for similar materials from said sources on extra work items or the current wholesale price for such materials delivered to the Work Site, whichever price is lower.

If, in the opinion of City, the cost of material is excessive, or Contractor does not furnish satisfactory evidence of the cost of such material, then the cost shall be deemed to be the lowest current wholesale price for the quantity concerned delivered to the work Site, less trade discount. City reserves the right to furnish materials for the extra work and no claim shall be made by Contractor for costs and profit on such materials.

3 Equipment:

Contractor will be paid for the use of equipment at the rental rate listed for such equipment specified in the current edition of the Department of Transportation publication entitled, "Labor Surcharge and Equipment Rental Rates," which is in effect on the date upon which the work is accomplished. Such rental rates will be used to compute payments for equipment whether the equipment is under Contractor's control through direct ownership, leasing, renting, or another method of acquisition. The rental rate to be applied for use of each item of equipment shall be the rate resulting in the least total cost to City for the total period of use. If it is deemed necessary by Contractor to use equipment not listed in the foregoing publication, an equitable rental rate for the equipment will be established by City. Contractor may furnish cost data which might assist City in the establishment of the rental rate.

The rental rates paid, as above provided, shall include the cost of fuel, oil, lubrication supplies, small tools, necessary attachments, repairs and maintenance of all kinds, depreciation, storage, insurance, and all incidentals. Operators of equipment will be separately paid for as provided in this Section 3.4, "Labor".

All equipment shall be in good working condition and suitable for the purpose for which the equipment is to be used.

Before construction equipment is used on the extra work, Contractor shall plainly stencil or stamp an identifying number thereon at a conspicuous location, and shall furnish to City, in duplicate, a description of the equipment and its identifying number.

Unless otherwise specified, manufacturer's ratings and manufacturer-approved modifications shall be used to classify equipment for the determination of applicable rental rates. Equipment which has no direct power unit shall be powered by a unit of at least the minimum rating recommended by the manufacturer.

Individual pieces of equipment or tools having a replacement value of $500 or less, whether or not consumed by use, shall be considered to be small tools and no payment will be made therefore.

4 Owner-Operated Equipment:

When owner-operated equipment is used to perform Work and is to be paid for as extra work, Contractor will be paid for the equipment and operator as follows:

Payment for the equipment will be made in accordance with the provisions of Section 3.4, "Equipment."

Payment for the cost of labor and subsistence or travel allowance will be made at the rates paid by Contractor to other workers operating similar equipment already on the project, or, in the absence of such other workers, at the rates for such labor established by collective bargaining agreement for type of worker and location of the work, whether or not the owner-operator is actually covered by such an agreement. A labor surcharge will be added to the cost of labor described herein, in accordance with the provisions in Section 3.4, "Labor."

To the direct cost of equipment rental and labor, computed as provided herein, will be added the markup for equipment rental and labor as provided in Section 3.4, "Contractor's Fee."

5 Equipment Time:

The rental time to be paid for equipment on the Work shall be the time the equipment is in productive operation on the Work being performed and shall include the time required to move the equipment to the new location and return it to the original location or to another location requiring no more time than that required to return it to its original location; except that moving time will not be paid if the equipment is used on other than the extra work. Loading and transporting costs will be allowed, in lieu of moving time, when the equipment is moved by means other than its own power. No payment will be made for loading and transporting costs when the equipment is used at the Site of the extra work on other than the extra work. The following shall be used in computing the rental time of equipment on the work:

A. When hourly rates are listed, any part of an hour less than 30 minutes of operation shall be considered to be ½ -hour of operation, and any part of an hour in excess of 30 minutes will be considered 1-hour of operation.

B. When daily rates are listed, operation for any part of a day less than 4 hours shall be considered to be half-day of operation.

C. Rental time will not be allowed while equipment is inoperative due to breakdowns or Contractor caused delays.

6 Cost of Work Documentation:

Contractor shall furnish City Daily Extra Work Reports on a daily basis covering the direct costs of labor and materials and charges for equipment whether furnished by Contractor, subcontractor, or other forces. City will provide the Daily Extra Work Report forms to Contractor. Contractor or an authorized agent shall sign each Daily Extra Work Report. The Daily Extra Work Report shall provide names and classifications of workers and hours worked; size, type, and identification number of equipment; and the hours operated. Copies of certified payrolls and statement of fringe benefit shall substantiate labor charges. Valid copies of vendor's invoices shall substantiate material charges.

City will make any necessary adjustments. When these reports are agreed upon and signed by both parties, they shall become the basis of payment for the Work performed, but shall not preclude subsequent adjustment based on a later audit.

Contractor shall inform City when extra work will begin so that City inspector can concur with the Daily Extra Work Reports. Failure to conform to these requirements may impact Contractor's ability to receive proper compensation.

7 Detours:

Contractor shall construct and remove detours and detour bridges for the use of public traffic as provided in the Special Provisions, or as shown on the plans, or as directed by City. Payment for this work will be made as set forth in the Special Provisions or at the Contract Prices for the items of work involved if the work being performed is covered by contract items of work and no other method of payment therefore is provided in the Special Provisions, otherwise the work will be paid for as extra work as provided herein. The costs of repairing damaged detours caused by public traffic will be paid for as extra work as provided herein. When public traffic is routed through the work, provision for a passageway through construction operations will not be considered as detour construction or detour maintenance and this work shall conform to and be paid as basic scope of work, unless otherwise specified in the Special Provisions. Detours used exclusively by Contractor for hauling materials and equipment shall be constructed and maintained by Contractor at Contractor's expense. The failure or refusal of Contractor to construct and maintain detours at the proper time shall be sufficient cause for closing down the work until the detours are in satisfactory condition for use by public traffic. Where Contractor is hauling is causing such damage to the detour that its maintenance in a condition satisfactory for public traffic is made difficult and unusually expensive, City shall have authority to regulate Contractor's hauling over the detour.

8 Special Services

Special services are defined as that work characterized by extraordinary complexity, sophistication, or innovations, or a combination of the foregoing attributes which are unique to the construction industry. The following may be considered by City in making estimates for payment for special services:

A. When City and Contractor, by agreement, determine that a special service is required which cannot be performed by the forces of Contractor or those of any of its subcontractors, the special service may be performed by an entity especially skilled in the work to be performed. After validation of invoices and determination of market values by City, invoices for special services based upon the current fair market value thereof may be accepted without complete itemization of labor, material, and equipment rental costs.

B. When Contractor is required to perform work necessitating special fabrication or machining process in a fabrication or a machine shop facility away from the job-Site, the charges for that

portion of the work performed at the off Site facility may, by agreement, be accepted as a special service and accordingly, the invoices for the work may be accepted without detailed itemization.

C. All invoices for special services will be adjusted by deducting all trade discounts offered or available, whether the discounts were taken or not. In lieu of the allowances for overhead and profit on labor, materials, and equipment specified in Section 3.4 "Contractor's Fee", herein, a single allowance of ten (10) percent will be added to invoices for special services.

9 Contractor's Fee

A. Work ordered on the basis of time and materials will be paid for at the actual and necessary cost as determined by City, plus allowances for overhead and profit which allowances shall constitute the "Contractor's Fee". For extra work involving a combination of increases and decreases in the work, the actual necessary cost will be the arithmetic sum of the additive and deductive costs. The allowance for overhead and profit shall include compensation for superintendence, bond and insurance premiums, taxes, all field and home office expenses, and all other items of expense or cost not included in the cost of labor, materials, or equipment provided for under Sections 3.4, "Cost of Work", herein. The allowance for overhead and profit will be made in accordance with the following schedule:

Actual and Necessary Cost	**Overhead and Profit Allowance**
Labor	33 percent
Materials	15 percent
Equipment	15 percent

B. Labor, materials, and equipment may be furnished by Contractor or by the subcontractor on behalf of Contractor: When all or any part of the extra work is performed by a subcontractor, the allowance specified in "Contractor's Fee" shall only be applied to the labor, materials, and equipment costs of the subcontractors to which Contractor may add 5 percent of the subcontractor's total cost for the extra work. Regardless of the number of hierarchical tiers of subcontractors, the 5 percent increase above the subcontractor's total cost, which includes the allowances for overhead and profit specified herein, may be applied one time only for each separate work transaction.

10 Compensation for Time Extensions

Adjustments in compensation for time extension will be allowed only for causes identified in Section 3.5, Changes in Contract Time. No adjustments in compensation will be allowed when City-caused delays to a controlling item of work and Contractor-caused delays to a controlling item of work occur concurrently, or for causes identified in Section 3.5 Changes in Contract Time.

Compensation for idle time of equipment will be determined in accordance with the provisions in Section 3.4, Owner –Operated Equipment.

11 Force-Account Work

If it is impracticable because of nature of Work, or for any other reason, to fix an increase or decrease in price definitely in advance, the Contractor may be directed to proceed at a not-to-exceed (NTE) maximum price which shall not under any circumstances be exceeded. Subject to such limitation, such extra Work shall be paid for at actual necessary cost for Force-Account Work or at the negotiated cost, as determined by City. The cost for Force-Account Work shall be determined pursuant this Section.

Force-Account Work shall be used when it is not possible or practical to price out the changed Work prior to the start of that Work. In these cases, Force-Account Work will be utilized during the pricing and negotiation phase of the change. Once negotiations have been concluded and a bilateral agreement has been reached, the tracking of the Work under Force-Account is no longer necessary. Force-Account Work shall also be used when negotiations between City and Contractor have broken apart and a bilateral agreement on the value of the changed Work cannot be reached. City may approve other uses of Force-Account Work.

Whenever any Force-Account Work is in progress, definite price for which has not been agreed on in advance, Contractor shall report to City each Business Day in writing in detail amount and cost of labor and material used, and any other expense incurred in Force-Account Work on preceding Day, by using the Cost Proposal form attached hereto. No claim for compensation for Force-Account Work will be allowed unless report shall have been made.

Whenever Force-Account Work is in progress, definite price for which has not been agreed on in advance, Contractor shall report to City when 75 percent of the NTE amount has been expended.

Force-Account Work shall be paid as extra Work under this Section. Methods of determining payment for Work and materials provided in this Section shall not apply to performance of Work or furnishings of material that, in judgment of City, may properly be classified under items for which prices are otherwise established in Contract Documents.

12 Overhead Defined

The following constitutes charges that are deemed included in overhead for all Contract Modifications, including Force-Account Work or CCD Work, whether incurred by Contractor, Subcontractors, or suppliers, and Contractor shall not invoice or receive payment for these costs separately:

A. Drawings: field drawings, Shop Drawings, etc., including submissions of drawings

B. Routine field inspection of Work proposed

C. General Superintendence

D. General administration and preparation of cost proposals, schedule analysis, change orders and other supporting documentation as necessary

E. Computer services

F. Reproduction services

G. Salaries of project engineer, superintendent, timekeeper, storekeeper and secretaries

H. Janitorial services

I. Temporary on-Site facilities:

- Offices
- Telephones
- Plumbing
- Electrical: Power, lighting
- Platforms
- Fencing, etc.
- water

J. Home office expenses

K. Insurance and Bond premiums

L. Procurement and use of vehicles and fuel used coincidentally in Work otherwise included in the Contract Documents

M. Surveying

N. Estimating

O. Protection of Work

P. Handling and disposal fees

Q. Final cleanup

R. Other incidental Work

13 Records and Certifications

Force-Account (cost reimbursement) charges shall be recorded daily and summarized in Cost Proposal form attached hereto. Contractor or authorized representative shall complete and sign form each day. Contractor shall also provide with the form: the names and classifications of workers and hours worked by each; an itemization of all materials used; a list by size type and identification number of equipment and hours operated; and an indication of all Work performed by specialists.

No payment for Force-Account Work shall be made until Contractor submits original invoices substantiating materials and specialists charges.

City shall have the right to audit all records in possession of Contractor relating to activities covered by Contractor's claims for modification of Contract, including Force-Account Work and CCD Work.

Further, City will have right to audit, inspect, or copy all records maintained in connection with this Contract, including financial records, in possession of Contractor relating to any transaction or activity occurring or arising out of, or by virtue of, the Contract. If Contractor is a joint venture, right of City shall apply collaterally to same extent to records of joint venture sponsor, and of each individual joint venture member. This right shall be specifically enforceable, and any failure of Contractor to voluntarily comply shall be deemed an irrevocable waiver and release of all claims then pending that were or could have been subject to this Document.

3.5 Change of Contract Time

A General

The Contract time may only be changed by a change order. Any request for an extension of the Contract time shall be based on written notice delivered by Contractor to City promptly, but in no event later than 10 days after the date of the occurrence of the event giving rise to the request. Such written notice shall identify the controlling item of work that justifies the time extension, and shall state in reasonable detail the general nature of the request. Notice of the full extent of the request with a supporting time impact evaluation shall be delivered within 25 days after the date of such occurrence, unless City allows an additional period of time to ascertain more accurate data in support of the request, and shall be accompanied by Contractor's written statement that the adjustment requested is the entire adjustment to which Contractor has reason to believe it is entitled as a result of the occurrence of said event. No request for an adjustment in the Contract time will be valid if not submitted in accordance with the requirements of this Section, and Contractor waives any rights not pursued under this Section.

The Contract time will only be extended when a delay occurs which impacts a controlling item of work as shown on the progress schedule required herein. Time extensions will be allowed only if the cause is beyond the control and without the fault or negligence of Contractor. Time extensions (without compensation of any sort) will also be allowed when City-caused delays to a controlling item of work and Contractor-caused delays to a controlling item of work occur concurrently or for adverse weather caused delays discussed below. Contractor will be notified if City determines that a time extension is not justified.

The Contract time will be extended in an amount equal to time lost due to delays beyond the control of Contractor if a request is made therefore as provided in this Section. An extension of Contract time will only be granted for days on which (i) Contractor is prevented from proceeding with at least 75 percent of the normal labor and equipment force actually engaged on the said work, and (ii) by excusable occurrences or conditions resulting immediately therefrom which impact a controlling item of work as determined by City. Excusable delays shall include:

- Changes.
- Failure of City to furnish access, right of way, completed facilities of related projects, Drawings, materials, equipment, or services for which City is responsible.
- Survey error by City.
- Suspension of work pursuant to Section 7, Prosecution and Progress of Work.
- Occurrences of a severe and unusual nature, including, acts of God, fires, and excusable inclement weather. An "act of God" means an earthquake, flood, cloudburst, cyclone or other cataclysmic phenomena of nature beyond the power of Contractor to foresee or to make preparation in defense against, but does not include ordinary inclement weather. Excusable inclement weather is any weather condition, the duration of which varies in excess of the average conditions expected, which is unusual for the particular time and place where the

work is to be performed, or which could not have been reasonably anticipated by Contractor, as determined from National Oceanic and Atmospheric Administration ("NOAA") records for the proceeding 3-year period.

- Act of the public enemy, act of another governmental entity, public utility, epidemic, quarantine restriction, freight embargo, strike, or labor dispute. A delay to a subcontractor or supplier due to the above circumstances will be taken into consideration for extensions to the time of completion.

B Extensions of Time for Delay Due to Excusable Inclement Weather

The Contractor shall have no right to an adjustment in the time of completion due to weather conditions or industrial conditions which are normal for the locality of the site. The time period for the contract has been calculated with the consideration given to the average climate range and usual industrial conditions prevailing in the locality of the site.

Time extensions due to inclement weather will be allowed only for weather conditions that affect the progress of activities that are on the critical path. The Contractor shall exercise due diligence in protecting the work area from weather as well as take corrective action after the weather has passed. Time extensions will not be allowed until the average number of days for which precipitation exceeds 0.10 inch and the corresponding average precipitation in a given month or months has been exceeded. Delay due to inclement weather are not compensable.

Contractor shall give written notice of intent to claim an adverse weather day within one Day of the adverse weather day occurring.

Abnormal weather conditions are those that exceed the averages indicated in the following table:

Month	Days (1)	and	Precipitation (2)
January	6		3.06
February	6		2.49
March	6		2.31
April	3		1.06
May	1		0.40
June	0		0.09
July	0		0.04
August	0		0.09
September	1		0.21
October	2		0.73
November	4		1.73
December	5		2.28
Total	33		14.49

(1) The average number of days in which the precipitation exceeds 0.10 inches in the 24 hour period between midnight of one day and midnight of the next day.
(2) The mean precipitation, in inches, for the month indicated, recorded at San Jose station #047821 of the period from 1948 to 2000.

The Contract time will be extended for as many days in excess of the average number of days of excusable inclement weather, as defined above, as Contractor is specifically required under the Special Provisions to suspend construction operations, provided that on such days Contractor is prevented by such excusable inclement weather, or conditions resulting immediately therefrom, from proceeding with at least 75 percent of the normal labor and equipment force engaged on critical items of work as shown on the schedule.

Should Contractor prepare to begin work at the regular starting time at the beginning of any regular work shift on any day on which excusable inclement weather, or the conditions resulting from the weather prevents work from beginning at the usual starting time and the crew is dismissed as a result thereof, Contractor will be entitled to a 1-day credit for advance weather whether or not conditions change thereafter during said day and the major portion of the day could be considered to be suitable

for such construction operations. If Contractor starts work and then suspends work due to excusable inclement weather, then Contractor shall be entitled to a prorate credit based upon the number of work hours lost.

Contractor shall base the construction schedule upon the inclusion of the number of days of excusable inclement weather (for rain, in excess of 0.1 inch) specified by NOAA for the locality of the Project. Notwithstanding the foregoing, extension of the Contract time due to excusable inclement weather will be granted until after the said aggregate total number of days of excusable inclement weather has been reached; however, no reduction in Contract time will be made if said number of days of excusable inclement weather is not reached.

3.6 Changed Site Conditions

If any work involves digging trenches or other excavations below the surface, Contractor shall promptly and before the following conditions are disturbed, notify City in writing of any:

A. Material that Contractor believes may be a regulated material that is required to be removed to a Class I, Class II, or Class III disposal Site in accordance with provisions of existing law.

B. Subsurface or latent physical conditions at the Site differing from those indicated in this Contract.

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

City will promptly investigate the condition and if it finds that the conditions do materially so differ, or do involve regulated material, and cause a decrease or increase in Contractor's cost of, or the time required for, performance of any part of the work, City will issue a change order under the procedures described in this Contract. For regulated materials, City reserves the right to use other forces for exploratory work to identify and determine the extent of such material and for removing regulated material from such areas.

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

3.7 Cost Reduction Incentive

The Contractor may submit to the Engineer, in writing, proposals for modifying the plans, specifications or other requirements of the contract for the sole purpose of reducing the total cost of construction. The cost reduction proposal shall not impair, in any manner, the essential functions or characteristics of the project, including but not limited to service life, economy of operation, ease of maintenance, desired appearance, or design and safety standards.

Cost reduction proposals shall contain the following information:

A. A description of both the existing contract requirements for performing the work and the proposed changes.

B. An itemization of the contract requirements that must be changed if the proposal is adopted.

C. A detailed estimate of the cost of performing the work under the existing contract and under the proposed change. The estimates of cost shall be determined in the same manner as if the work were to be paid for on a force account basis as provided in Section 3.4, "Cost of Work."

D. A statement of the time within which the Engineer must make a decision thereon.

E. The contract items of work affected by the proposed changes, including any quantity variation attributable thereto.

The provisions of this Section 3.7 shall not be construed to require the Engineer to consider any cost reduction proposal which may be submitted hereunder; proposed changes in basic design of a bridge or of a pavement type will not be considered as an acceptable cost reduction proposal; and the City will not be liable to the

Contractor for failure to accept or act upon any cost reduction proposal submitted pursuant to this section nor for any delays to the work attributable to any cost reduction proposal. If a cost reduction proposal is similar to a change in the plans or specifications, under consideration by the City for the project, at the time the proposal is submitted or if the proposal is based upon or similar to Standard Specifications, standard special provisions or Standard Plans adopted by the City after the advertisement for the contract, the Engineer will not accept the proposal, and the City reserves the right to make the changes without compensation to the Contractor under the provisions of this section

The Contractor shall continue to perform the work in accordance with the requirements of the contract until an executed change order, incorporating the cost reduction proposal has been issued. If an executed change order has not been issued by the date upon which the Contractor's cost reduction proposal specifies that a decision thereon should be made, or such other date as the Contractor may subsequently have specified in writing, the cost reduction proposal shall be deemed rejected.

The Engineer shall be the sole judge of the acceptability of a cost reduction proposal and of the estimated net savings in construction costs from the adoption of all or any part of the proposal. In determining the estimated net savings, the right is reserved to disregard the contract bid prices if in the judgment of the Engineer, those prices do not represent a fair measure of the value of work to be performed or to be deleted.

The City reserves the right where it deems such action appropriate, to require the Contractor to share in the City's costs of investigating a cost reduction proposal submitted by the Contractor as a condition of considering the proposal. Where this condition is imposed, the Contractor shall indicate acceptance thereof in writing, and that acceptance shall constitute full authority for the City to deduct amounts payable to the City from any moneys due or that may become due to the Contractor under the contract.

If the Contractor's cost reduction proposal is accepted in whole or in part the acceptance will be by a contract change order. The change order shall incorporate the changes in the plans and specifications which are necessary to permit the cost reduction proposal or that part of it as has been accepted to be put into effect, and shall include any conditions upon which the City's approval thereof is based if the approval of the City is conditional. The change order shall also set forth the estimated net savings in construction costs attributable to the cost reduction proposal effectuated by the change order, and shall further provide that the Contractor be paid 50 percent of that estimated net savings amount. The Contractor's cost of preparing the cost reduction incentive proposal and the City's costs of investigating a cost reduction incentive proposal, including any portion thereof paid by the Contractor, shall be excluded from consideration in determining the estimated net savings in construction costs.

Acceptance of the cost reduction proposal and performance of the work thereunder shall not extend the time of completion of the contract unless specifically provided for in the contract change order authorizing the use of the cost reduction proposal.

The amount specified to be paid to the Contractor in the change order which effectuates a cost reduction proposal shall constitute full compensation to the Contractor for the cost reduction proposal and the performance of the work thereof pursuant to the change order.

The City expressly reserves the right to adopt a cost reduction proposal for general use on contracts administered by the City when it determines that the proposal is suitable for application to other contracts. When an accepted cost reduction proposal is adopted for general use, only the Contractor who first submitted that proposal will be eligible for compensation pursuant to this section, and in that case, only as to those contracts awarded to that Contractor prior to submission of the accepted cost reduction proposal and as to which the cost reduction proposal is also submitted and accepted. Cost reduction proposals identical or similar to previously submitted proposals will be eligible for consideration and compensation under the provisions of this Section 3.7 if the identical or similar previously submitted proposals were not adopted for general application to other contracts administered by the City. Subject to the provisions contained herein, the City or any other public agency shall have the right to use all or any part of any submitted cost reduction proposal without obligation or compensation of any kind to the Contractor.

Contractor may submit to City, in writing, proposals for modifying the Drawings, Specifications, or other requirements of the Contract for the sole purpose of reducing the total cost of construction.

Prior to preparing a written cost reduction proposal, Contractor shall request a meeting with City to discuss the proposal in concept. Items of discussion will also include permit issues, impact on other projects, impact on the project schedule, peer reviews, overall merit of the proposal, and review times required by City and other agencies.

If a cost reduction proposal submitted by Contractor, and subsequently approved by City, provides for a reduction in contract time, 50 percent of that contract time reduction shall be credited to City by reducing the contract working days, not including plant establishment.

If a cost reduction proposal submitted by Contractor, and subsequently approved by City, provides for a reduction in traffic congestion or avoids traffic congestion during construction, 60 percent of the estimated net savings in construction costs attributable to the cost reduction proposal will be paid to Contractor. Contractor shall provide detailed comparisons of the traffic handling between the existing contract and the proposed change, and estimates of the traffic volumes and congestion.

3.8 Dust Control

During the performance of all work under this Contract, Contractor shall assume all responsibility for dust control and shall furnish all labor, equipment, and means required to carry out proper and efficient measures wherever and whenever dust control is necessary to prevent operations from producing dust damage and nuisance to persons and property. Any claims resulting therefrom shall be borne solely by Contractor.

3.9 Excavation Safety Plans

Attention is directed to Section 6705 of the Labor Code concerning trench excavation safety plans. Excavations five (5) feet or more in depth shall not begin until Contractor has submitted and City has returned indicating "In Receipt Of'" Contractor's detailed plan for worker protection from the hazards of caving ground during such excavations. The plan may be reviewed by City for completeness in accordance with federal, state and local regulations. City will not be responsible for reviewing the accuracy of assumptions, data and information used, and procedures contained in the plan or the adequacy thereof. Such plans shall show the details of the design of shoring, bracing, sloping, or other provisions to be made for worker protection during such excavation. The plan shall not allow the use of shoring, sloping, or a protective system less effective than that required by the Construction Safety Orders; and if such plan varies from the shoring system standards established by the Construction Safety Orders, the plan (including calculations) shall be prepared, signed and stamped by an engineer registered as a Civil or Structural engineer and an engineer registered as a Geotechnical Engineer, in the State of California pursuant to Sections 6700 et seq. of the Business & Professions Code.

Such plans shall be accompanied by a copy of the Permit to Excavate that has been issued by the Division of Occupational Safety and Health as required by Labor Code Section 6500 and following.

To the extent applicable, the Construction Safety Orders of the Division of Occupational Safety and Health shall apply to all excavations.

This Section shall be applicable regardless of Contract Price.

3.10 Asbestos-Related Work

Contractor's attention is directed to Section 7058.5 of the Business and Professions Code which states that from and after January 1, 1987, no Contractor shall engage in asbestos-related work, as defined, who is not certified by Contractor's State License Council to do so.

Contractor's attention is also directed to Section 6501.5, and following, of the Labor Code relative to asbestos-related work and to provisions of the General Industry Safety Orders of Title 8 of the Code of Regulations and to the BAAQMD's Rule.

When the presence of asbestos or hazardous substances are not shown on the plans or indicated in the specifications and Contractor encounters materials which Contractor reasonably believes to be asbestos or a hazardous substance as defined in Section 25914.1 of the Health and Safety Code, and the asbestos or hazardous substance has not been rendered harmless, Contractor may continue work in unaffected areas reasonably believed to be safe. Contractor shall immediately cease work in the affected area and report the condition to City in writing.

In conformance with Section 25914.1 of the Health and Safety Code, removal of asbestos or hazardous substances including exploratory work to identify and determine the extent of the asbestos or hazardous substance will be performed by separate contract.

If delay of work in the area delays the current controlling operation, Contractor may be entitled to a time extension (without additional compensation) as provided in Section 3.5, Change in Contract Time.

3.11 Substitutions

This paragraph describes procedures for selecting products and requesting substitutions of unlisted materials in lieu of materials named in the Specifications or approved for use in Addenda that were not already the subject of a Document 00660 (Substitution Request Form) submittal as provided in Document 00200 (Instructions to Bidders).

Contractor's Options:

For products specified only by reference standard Contractor may select any product meeting that standard.

For products specified by naming one or more products or manufacturers, Contractor may select products of any named manufacturer meeting the Specifications.

If product becomes unavailable due to no fault of Contractor, submit Request for Substitution (RFS), including all information contained in this Document and a fully executed Document 00660 (Request for Substitution), but using the term "Contractor" each place the term "Bidder" appears in that form.

Substitutions:

Except as provided in Document 00200 (Instructions to Bidders) with respect to "or equal" items, City will consider Contractor's substitution requests only when product becomes unavailable due to no fault of Contractor. Requests for review of proposed substitute items will not be accepted from anyone other than Contractor. The RFS shall state the extent, if any, to which the evaluation and acceptance of the proposed substitute will prejudice Contractor's achievement of Substantial Completion on time, and whether or not acceptance of the substitute for use in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with City for work on the Project).

Submit separate RFS (and FOUR copies) for each product and support each request with:

A. Product identification.
B. Manufacturer's literature.
C. Samples, as applicable.
D. Name and address of similar projects on which product has been used, and dates of installation.
E. Name, address, and telephone number of manufacturer's representative or sales engineer.
F. For construction methods: Detailed description of proposed method; drawings illustrating methods.

Where required, itemize a comparison of the proposed substitution with product specified and list significant variations including, but not limited to dimensions, weights, service requirements, and functional differences. If variation from product specified is not pointed out in submittal, variation will be rejected even though submittal was favorably reviewed. Identify all variations of the proposed substitute from that specified in the RFS and indicate available maintenance, repair, and replacement service.

State whether the substitute will require a change in any of the Contract Documents (or provisions of any other direct contract with City for work on the Project) to adapt the design of the proposed substitute, and whether or not incorporation or use of the substitute in connection with Work is subject to payment of any license fee or royalty. Submit data relating to changes in construction schedule.

Include accurate cost data comparing proposed substitution with product and amount of net change in Contract Sum including, but not limited to, an itemized estimate of all costs or credits that will result directly or indirectly from acceptance of such substitute, including costs of redesign and claims of other contractors affected by the resulting change, all of which will be considered by City in evaluating the proposed substitute. City may require Contractor to furnish additional data about the proposed substitute.

City will not consider substitutions for acceptance (or, in City's sole discretion, City may make Contractor solely responsible for all resulting costs, expenses and other consequences) when a substitution:

A. Results in delay meeting construction Milestones or completion dates.

B. Is indicated or implied on submittals without formal request from Contractor.

C. Is requested directly by Subcontractor or supplier.

D. Acceptance will require substantial revision of Contract Documents.

E. Disrupts Contractor's job rhythm or ability to perform efficiently.

Substitute products shall not be ordered without written acceptance of City.

City will determine acceptability of proposed substitutions and reserve right to reject proposals due to insufficient information.

Accepted substitutions will be evidenced by a Change Order. All Contract Documents requirements apply to Work involving substitutions.

Contractor's RFS constitutes a representation and warranty that Contractor:

A. Has investigated proposed product and determined that it meets or exceeds, in all respects, specified product.

B. Will provide the same warranty for substitution as for specified product.

C. Will coordinate installation and make other changes that may be required for Work to be complete in all respects.

D. Waives claims for additional costs which may subsequently become apparent.

E. Will compensate City for additional redesign costs associated with substitution.

F. Will be responsible for Construction Schedule slippage due to substitution.

G. Will be responsible for Construction Schedule delay due to late ordering of available specified products caused by requests for substitution that are subsequently rejected by City.

H. Will compensate City for all costs; including extra costs of performing Work under Contract Documents, extra cost to other contractors, and any claims brought against City, caused by late requests for substitutions or late ordering of products.

City will review Contractor's RFS with reasonable promptness and notify Contractor in writing of decision to accept or reject requested substitution

Specified products, materials, or systems for Project may include engineering or on-file standards required by the regulatory agency. Contractor's substitution of products, materials or systems may require additional engineering, testing, reviews, approvals, assurances, or other information for compliance with regulatory agency requirements or both. Provide all agency approvals or other additional information required and pay additional costs for required City services made necessary by the substitution at no increase in Contract Sum or Contract Time, and as a part of substitution proposal

3.12 Hazardous Materials / Waste

Comply with Sections 5163 through 5167 of the *General Industry Safety Orders (California Code of Regulations, Title 8)* to protect the Site from being contaminated by the accidental release of any hazardous materials and/or waste.

If Contractor encounters subsurface contamination, the following provisions and precautionary measures shall be implemented during construction:

Contractor's personnel shall be alert for and immediately report to City any detectable chemical odors, unusual debris, or discolored soil, in accordance with California Public Contract Code Section 7104.

Should the discovery of contaminants cause delay to Contractor's operations, extension of Contract Time will be granted by City in accordance with Document 00700 (General Conditions). Contractor will not be entitled to damages or additional payment due to such delay.

If hazardous materials are encountered, they shall be handled in accordance with applicable local, state, and federal regulations which may include: (1) CCR Title 8, Division 4, Chapter 4, Section 5192 (Hazardous Waste Operations and Emergency Response); (2) CCR, Title 22, Division 4.5, Chapters 10 through 13 and 18 (Environmental Health Standards for Management of Hazardous Waste); and (3) CCR Title 23, Division 3, Chapter 15 (Discharges of Waste to Land).

Disposal requirements: Soils containing hazardous materials shall be disposed by Contractor at permitted treatment, recycling, or disposal facilities in accordance with CCR Title 23, Division 3, Chapter 15 (Discharges of Waste to Land). Determine to which permitted treatment, recycling, or disposal facilities the soil will be delivered.

Fees: Pay for any fees associated with the treatment, recycling, or disposal of these soils. Any additional soil sampling and chemical analyses required for acceptance of the soil at facilities other than those described above shall be the responsibility of Contractor.

Transport: Transport the soils to the selected facilities under approved manifests and submit copies of these manifests and the facility weight tickets to City.

Dewatering: Construct, operate and maintain as required to complete the Work all necessary cofferdams, channels, pipes, flumes, drains, sumps, well points and protective works; and furnish, install, operate and maintain all necessary pumping and other equipment for dewatering the areas of Work suspected of containing hazardous materials; and control all surface flow and groundwater as may be encountered while performing the Work. Remove all water that may accumulate in the excavation while the Work progresses so that all Work can be performed in dry conditions. All contaminated water shall be removed from the excavation before it is backfilled. The excavation shall be kept free from water until backfilling has progressed to a height above the water source. Storage tank: Provide a minimum 2,500-gallon double-walled water storage tank on Site for the duration of the Work. If more storage capacity is needed, provide additional storage tanks on Site.

Water sampling and chemical analysis: Water samples shall be collected from the holding tanks and submitted to a State-Certified chemical analysis laboratory. Chemical analyses required for the samples shall at a minimum include: TPHg following EPA Test Methods 5030/8015 (modified); benzene, toluene, ethylbenzene, and total xylenes (BTEX) following EPA Test Method 8020; and chlorinated solvents following EPA Test Method 8010. Perform additional chemical analyses that may be required for disposal or recycling of the water. Laboratory chemical analysis reports associated with the water samples shall be provided to City.

Removal of dewatering equipment: After having served their purpose, all protective works, including the temporary water storage tank(s) and dewatering pumps, shall be decontaminated and removed from the Site. Contractor is responsible for permanent disposal of all equipment that cannot be decontaminated or recycled in accordance with all applicable laws and regulations.

3.13 Inert Solids and Plant Materials Recycling

The Contractor shall have all asphalt concrete, Portland cement concrete, aggregate base material, inert solids and any plant material removed from the project site and deposited at a recognized acceptable recycling facility. Inert solids and plant materials shall <u>not</u> be disposed of at landfills.

It is the Contractor's responsibility to conform the above material to an acceptable size and composition in order to enable the acceptance of this material at a recognized inert solid or other acceptable recycling facility. All recycling facilities may be subject to the approval of the Engineer.

Recycling shall include the transportation and disposal of the material as specified in these specifications and as directed by the Engineer.

Documentation shall be submitted to the City Inspector for each load of inert solid and plant material removed from the project site on a daily basis. Failure to submit this documentation on a timely basis may delay progress payments. This documentation shall include the following:

A. Project title

B. Date and time

C. Truck number

D. Type of material

E. Weight of material

F. Name and address of recycling facility

G. Certification by recycling facility

Also contractor must report the total amount in tons of material disposed of at a landfill. Provide information the following information: Project name, date and time, truck number, type of material, weight of material, name of landfill facility and address.

Collection of Debris:
Debris from a project in Cupertino can be collected and disposed of in either a:

A. Los Altos Garbage Co. bin (call 725-4020 to order), OR

B. bin owned by the project's general contractor or demolition contractor, and hauled by a vehicle owned and registered to that contractor; (contractor should be prepared to prove ownership) OR

C. private truck with a bed, but no bin

The Los Altos Garbage Company is the only debris bin service provider franchised to do business in Cupertino. Bins from other leasing companies may not be used in Cupertino.

Recyclable Materials
Recyclable materials may be collected in private debris bins or containers leased from ANY company, as long as the materials are both:

A. separated by type of material into separate containers, AND

B. are not contaminated by garbage.

Separated recyclable materials are materials that are separated into individual containers, each containing just one type of recyclable material. Typical examples of recyclable materials include: metal, wood, concrete, steel-reinforced concrete, asphalt, tree trimmings, white goods, toilets, rocks and clean fill dirt. Separated recyclables must ultimately be recycled or otherwise reused, and not disposed of in a landfill.

Contractor should be prepared to provide the name and phone number of any recycling companies being used on the project. A list of some local recycling companies that can accept separated recyclable materials is available in the literature display rack in the downstairs Planning/Building Department lobby in City Hall.

3.14 Storm Water Pollution Control

In compliance with the State and Federal regulations regarding storm water management during construction, no waste materials or pollutants will be allowed to enter the storm drainage system. In addition to reducing downstream erosion and sedimentation, keeping pollutants and other debris out of storm drains reduces the direct discharge of materials and wastes to local creeks and San Francisco Bay.

The Contractor shall contain and remove any waste generated by the Contractor's construction operation using the appropriate Best Management Practices (BMPs) and shall properly dispose of the waste or pollutants off-site. If solid or liquid waste materials or pollutants originating from the Contractor's operation enter the storm drain system, the Contractor will be required to thoroughly clean up the affected catch basins, storm sewer and storm manholes to the satisfaction of the Engineer. If the Contractor fails to meet the requirements of this section, the City will issue a stop-work notice and take necessary action to require the Contractor to set up the preventive measures or clean up the storm drainage system as the case may be. All costs related to the stop-work action and corrective work shall be solely borne by the Contractor.

The following requirements shall be implemented to prevent the pollution of storm water runoff from construction projects.

General Requirements
Water pollution control work shall conform to the provisions in this Document, the National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction Activity No. CAS000002 (NPDES Construction General Permit) and these provisions. For additional information regarding the requirements of the NPDES Construction General Permit, refer to the State Water Resources Control Board web site at *http://www.swrcb.ca.gov/stormwtr/construction.html*.

The Contractor shall be responsible for the costs and liabilities imposed by law as a result of the Contractor's failure or negligence in complying with the provisions set forth in this section and in the technical specifications for this project. For the purposes of this section, costs and liabilities include, but are not limited to, fines, penalties and damages whether assessed against the City or the Contractor, including those levied under the Federal Clean Water Act and the State Porter Cologne Water Quality Act.

In addition to the remedies authorized by law, partial payments due the Contractor under the contract may be retained by the City until financial and legal disposition has been made of the costs and liabilities.

The retention of money due the Contractor shall be subject to the following:

A. The Engineer will give the Contractor thirty (30) days notice of the City's intention to retain funds from partial payments that may become due to the Contractor prior to acceptance of the contract. Retention of funds from payments made after acceptance of the contract may be made without prior notice to the Contractor.

B. No retention of additional amounts out of partial payments will be made if the amount to be retained does not exceed the amount being withheld from partial payments pursuant to Section 9-1.06, "Partial Payments," of the Standard Provisions.

C. If the City has retained funds and it is subsequently determined that the City is not subject to the costs and liabilities in connection with the matter for which the retention was made, the City shall be liable for interest on the amount retained at the legal rate of interest for the period of the retention.

Conformance with the provisions of this section and the technical specifications for this project shall not relieve the Contractor from the Contractor's responsibilities, as provided in Section 7, "Legal Relations and Responsibilities," of the Standard Specifications.

Storm Water Pollution Prevention Plan Preparation
The Contractor shall incorporate the following Best Management Practices (BMPs), as applicable, into the site-specific Storm Water Pollution Prevention Plan (SWPPP) required for this project.

The following requirements shall be met on all projects within the City of Cupertino.

Non Hazardous Material/Waste Management

A. CONTRACTOR shall propose designated areas of the project site, for approval by the CITY ENGINEER, suitable for material delivery, storage, and waste collection that, to the maximum extent practicable, are near construction entrances and away from catch basins, gutters, drainage courses, and creeks.

B. CONTRACTOR shall store granular material at least ten feet away from catch basin and curb returns.

C. CONTRACTOR shall not allow granular material to enter the storm drains or creeks.

D. When rain is forecast within 24 hours or during wet weather, the CITY ENGINEER may require the CONTRACTOR to cover granular material with a tarpaulin and to surround the material with sand bags.

E. CONTRACTOR shall use minimal amounts of water to control dust on a daily basis or as directed by the CITY ENGINEER.

F. At the end of each working day or as directed by the CITY ENGINEER, the CONTRACTOR shall clean and sweep roadways and on-site paved areas of all materials attributed to or involved in the work.

G. CONTRACTOR shall not use water to flush down streets in place of street sweeping.

H. CONTRACTOR shall recycle aggregate base material, asphalt concrete, and Portland cement concrete as described in Section C, Special Provisions, section ***Inert Solids Recycling,*** of these Specifications.

I. In addition, to the maximum extent practicable, the CONTRACTOR shall reuse or recycle any useful construction materials generated during the project.

J. At the end of each working day, the CONTRACTOR shall collect all scrap, debris, and waste material, and dispose of such materials properly.

K. CONTRACTOR shall inspect dumpsters for leaks and contact trash hauling contractors to replace or repair dumpsters that leak.

L. CONTRACTOR shall not discharge water on-site from cleaning dumpsters.

M. CONTRACTOR shall arrange for regular waste collection before dumpsters overflow.

Hazardous Material/Waste Management

A. The CONTRACTOR shall label and store all hazardous materials, such as pesticides, paints, thinners, solvents, and fuels; and all hazardous wastes, such as waste oil and antifreeze; in accordance with the City of Cupertino Hazardous Materials Storage Ordinance and all applicable State and Federal regulations.

B. CONTRACTOR shall store all hazardous materials and all hazardous wastes in accordance with secondary containment regulations, and it is recommended that these materials and wastes be covered, as needed, to avoid potential management of collected rain water as a hazardous waste.

C. CONTRACTOR shall keep an accurate, up-to-date inventory, including Materials Safety Data Sheets (MSDSs), of hazardous materials and hazardous wastes stored on-site, to assist emergency response personnel in the event of a hazardous materials incident.

D. When rain is forecast within 24 hours or during wet weather, the CITY ENGINEER may prevent the CONTRACTOR from applying chemicals in outside areas.

E. CONTRACTOR shall not over-apply pesticides or fertilizers and shall follow materials manufacturer's instructions regarding uses, protective equipment, ventilation, flammability, and mixing of chemicals. Over-application of a pesticide constitutes a "label violation" subject to an enforcement action by the Santa Clara County Agriculture Department.

F. The CONTRACTOR shall arrange for regular hazardous waste collection to comply with time limits on storage of hazardous wastes.

G. The CONTRACTOR shall dispose of hazardous waste only at authorized and permitted treatment, storage and disposal facilities, and use only licensed hazardous waste haulers to remove the waste off-site, unless quantities to be transported are below applicable threshold limits for transportation specified in Sate and Federal regulations.

H. If the CONTRACTOR'S business office is located in Santa Clara County then the CONTRACTOR may dispose of this waste through the Countywide Household Hazardous Waste Program. Information on this program may be requested by calling (408) 299-7300.

Spill Prevention and Control

A. The CONTRACTOR shall keep a stockpile of spill cleanup materials, such as rags or absorbents, readily accessible on-site.

B. The CONTRACTOR shall immediately contain and prevent leaks and spills from entering storm drains, and properly clean up and dispose of the waste and cleanup materials. If the waste is hazardous, the CONTRACTOR shall handle the waste as described in section above.

C. The CONTRACTOR shall not wash any spilled material into streets, gutters, storm drains, or creeks and shall not bury spilled hazardous materials.

D. The CONTRACTOR shall report any hazardous materials spill by calling 911.

Vehicle/Equipment Cleaning

A. The CONTRACTOR shall not perform vehicle or equipment cleaning on-site or in the street using soaps, solvents, degreasers, steam cleaning equipment, or equivalent methods.

B. The CONTRACTOR shall perform vehicle or equipment cleaning, with water only, in a designated, bermed area that will not allow rinse water to run off-site or into streets, gutters, storm drains, or creeks.

Vehicle/Equipment Maintenance and Fueling

A. CONTRACTOR shall perform maintenance and fueling of vehicles or equipment in a designated, bermed area or over a drip pan that will not allow run-on of storm water or runoff of spills.

B. CONTRACTOR shall use secondary containment, such as a drip pan, to catch leaks or spills any time that vehicle or equipment fluids are dispensed, changed, or poured.

C. CONTRACTOR shall keep a stockpile of spill cleanup materials, such as rags or absorbents, readily accessible on-site.

D. CONTRACTOR shall clean up leaks and spills of vehicle or equipment fluids immediately and dispose of the waste and cleanup materials as hazardous waste, as described above.

E. CONTRACTOR shall not wash any spilled material into streets, gutters, storm drains, or creeks and shall not bury spilled hazardous materials.

F. CONTRACTOR shall report any hazardous materials spill by calling 911.

G. CONTRACTOR shall inspect vehicles and equipment arriving on-site for leaking fluids and shall promptly repair leaking vehicles and equipment. Drip pans shall be used to catch leaks until repairs are made. Shut-off valves on equipment must be working properly.

H. CONTRACTOR shall comply with Federal, State and City requirements for aboveground storage tanks.

Contractor Training and Awareness

A. CONTRACTOR shall train all employees/subcontractors on the storm water pollution prevention requirements contained in these Specifications.

B. CONTRACTOR shall inform subcontractors of the storm water pollution prevention contract requirements and include appropriate subcontract provisions to ensure that these requirements are met.

C. CONTRACTOR shall post warning signs in areas treated with chemicals.

D. CONTRACTOR shall paint new catch basins, constructed as part of the project, with the “No Dumping” stencil available from Cupertino Public Works Department at City Hall (408) 777-3354.

Activity-Specific Requirements

The following requirements shall be met on all projects within the City of Cupertino that include the listed activities.

Dewatering Operations

A. CONTRACTOR shall route water through a control measure, such as a sediment trap, sediment basin, or Baker tank, to remove settleable solids prior to discharge to the storm drain system. Refer to ***California Storm Water Management Practice Handbook*** for these control measures.

B. Approval of the control measure shall be obtained in advance from the CITY ENGINEER.

C. Filtration of the water following the control measure may be required on a case-by-case basis.

D. If the CITY ENGINEER determines that the dewatering operation would not generate an appreciable amount of settleable solids, the control measure requirement in 1) above may be waived.

E. CONTRACTOR shall reuse water for other needs, such as dust control or irrigation, to the maximum extent practicable.

Paving Operations

A. When rain is forecast within 24 hours or during wet weather, the CITY ENGINEER may prevent the CONTRACTOR from paving.

B. The CITY ENGINEER may direct the CONTRACTOR to protect drainage courses by using control measures, such as earth dike, straw bale, and sand bag, to divert runoff or trap and filter sediment. Refer to ***California Storm Water Best Management Practice Handbook*** for these control measures.

C. The CONTRACTOR shall place drip pans or absorbent material under paving equipment when not in use.

D. The CONTRACTOR shall cover catch basins and manholes when paving or applying seal coat, tack coat, slurry seal, or fog seal.

E. If the paving operation includes an on-site mixing plant, the CONTRACTOR shall comply with Santa Clara County General Industrial Activities Storm Water Permit requirements.

F. The CONTRACTOR shall preheat, transfer or load hot bituminous material away from drainage systems or watercourses.

G. The CONTRACTOR shall not sweep or wash down excess sand (placed as part of a sand seal or to absorb excess oil) into streets, gutters, storm drains, or creeks. Instead, the CONTRACTOR shall either collect the sand and return it to the stockpile, or dispose of it in a trash container. The CONTRACTOR shall not use water to wash down fresh asphalt concrete pavement.

Saw Cutting

A. During saw cutting and grinding operations, use as little water as possible.

B. During saw cutting, the CONTRACTOR shall cover or barricade catch basins using control measures, such as filter fabric, straw bales, sand bags, and fine gravel dams, to keep slurry out of the storm drain system. When protecting a catch basin, the CONTRACTOR shall ensure that the entire opening is covered. Refer to ***California Storm Water Best Management Practice Handbook*** for these control measures.

C. The CONTRACTOR shall shovel, absorb or vacuum saw cut slurry and pick up the waste prior to moving to the next location or at the end of each working day, whichever is sooner.

D. If saw cut slurry enters catch basins, the CONTRACTOR shall remove the slurry from the storm drain system immediately.

Traffic Detector Loop Installation and Repair

A. Protect nearby storm drain inlets prior to cutting or flushing slot for traffic detector loops. Block or berm around nearby storm drain inlets using sand bags or an equivalent barrier or use absorbent materials such as pads, pillows and socks to contain slurry.

B. Clean up residues by sweeping up as much material as possible and dispose of material properly.

Concrete, Grout and Mortar Waste Management

A. The CONTRACTOR shall avoid mixing excess amounts of fresh concrete or cement mortar on-site.

B. The CONTRACTOR shall store concrete, grout and mortar away from drainage areas and ensure that these materials do not enter the storm drain system.

C. The CONTRACTOR shall not wash out concrete trucks or equipment into streets, gutters, storm drains, or creeks.

D. The CONTRACTOR shall perform washout of concrete trucks or equipment off-site or in a designated area on-site where the water will flow onto dirt or into a temporary pit in a dirt area. The CONTRACTOR shall let the water percolate into the soil and dispose of the hardened concrete in a

trash container. If a suitable dirt area is not available, the CONTRACTOR shall collect the wash water and remove it off-site.

E. The CONTRACTOR shall avoid creating runoff by draining water from washing of exposed aggregate concrete to a dirt area. If a suitable dirt area is not available, then the CONTRACTOR shall filter the wash water through straw bales or equivalent material before discharging to the storm drain.

F. The CONTRACTOR shall collect and return sweepings from exposed aggregate concrete to a stockpile or dispose of the waste in a trash container.

Painting

A. CONTRACTOR shall conduct cleaning of painting equipment and tools in a designated area that will not allow run-on of storm water or runoff of spills.

B. CONTRACTOR shall not allow wash water from cleaning of painting equipment and tools into streets, gutters, storm drains or creeks.

C. CONTRACTOR shall remove as much excess paint as possible from brushes, rollers and equipment before starting cleanup.

D. To the maximum extent practicable, the CONTRACTOR shall dispose of wash water from aqueous cleaning of equipment and tools to the sanitary sewer.

E. Otherwise, the CONTRACTOR shall direct wash water onto dirt area and spade in.

F. CONTRACTOR shall remove as much excess paint as possible from brushes, rollers and equipment before starting cleanup.

G. To the maximum extent practicable, the CONTRACTOR shall filter paint thinner and solvents for reuse.

H. CONTRACTOR shall dispose of waste thinner and solvent and sludge from cleaning of equipment and tools as hazardous waste, as described above.

I. CONTRACTOR shall store paint, solvents, chemicals, and waste materials in compliance with the City of Cupertino Hazardous Materials Storage Ordinance and all applicable State and Federal regulations. The CONTRACTOR shall store these materials in a designated area that will not allow run-on of storm water or runoff of spills.

J. CONTRACTOR shall dispose of excess thinners, solvents, oil and water-based paint as hazardous waste.

K. CONTRACTOR shall dispose of dry, empty paint cans/buckets, old brushes, rollers, rags, and drop cloths in the trash.

Earthwork

CONTRACTOR shall maximize the control of erosion and sediment by using the Best Management Practices for erosion and sedimentation in the *California Storm Water Best Management Practice Handbook - Construction Activity* or *ABAG Manual of Standards for Erosion and Sediment Control Measures.*

Thermoplastic

A. The CONTRACTOR shall transfer and load hot thermoplastic away from drainage systems or watercourses.

B. The CONTRACTOR shall sweep thermoplastic grindings into plastic bags. Yellow thermoplastic grindings may require special handling as they may contain paint.

Pesticide Usage and Pest Management

A. Follow all federal, state, and local policies (including the City's Integrated Pest Management Policy), law and regulations governing the use, storage, and disposal of pesticides and training of pest control advisors and applicators.

B. Consider employing integrated pest management methods, including:
   1. No controls;
   2. Physical and/ or mechanical methods;

3. Environmental controls (mulching, pest-resistant vegetation)
4. Biological controls (predators, parasites, etc.);
5. Less toxic controls (soaps and oils etc.) and;
6. Hot water.

C. Use the least toxic pesticides that will do the job, provided there is a choice. The agency will take into consideration the LD50, overall risk to the applicator, and impact to the environment.

D. Apply pesticides at the appropriate time to maximize their effectiveness and minimize the likelihood of discharging non-degraded pesticides in stormwater runoff. Avoid application of pesticides if rain is expected.

E. Mix and apply only as much material as is necessary for treatment. Calibrate application equipment prior to and during use to ensure desired application rate.

F. Do not mix or load pesticides in application equipment adjacent to a storm drain inlet culvert or watercourse.

G. Use of Clopyralid, Diazinon, Chlorpyrifos, Chloradane, DDT, Dieldrin or other organophosphates is prohibited.

Prior to application of any pesticides, Contractor must receive approval for application from the City's licensed pest control advisor, Diane Mahan (777-3343). Contractor must provide the pest control advisor with monthly summaries of pesticide use (City to provide forms for the summary).

SWPPP Implementation

The Contractor shall be responsible throughout the duration of the project for installing, constructing, inspecting and maintaining the BMPs included in the SWPPP or an erosion control plan and any amendments thereto and for removing and disposing of temporary control measures. Unless otherwise directed by the Engineer or specified in these special provisions, the Contractor's responsibility for SWPPP or the erosion control plan implementation shall continue throughout any temporary suspension of work ordered in conformance with the provisions in Section 7 of this Document.

Throughout the rainy season, the Contractor shall demonstrate the ability and preparedness to fully deploy soil stabilization and sediment control BMPs to protect soil-disturbed areas on the project site before the onset of rain. A quantity of soil stabilization and sediment control materials shall be maintained on site equal to 125 percent of that sufficient to protect unprotected, soil-disturbed areas on the project site. A current inventory of control measure materials and a plan to use them shall be included in the SWPPP or on the erosion control plan.

Throughout the rainy season, active soil-disturbed areas of the site shall be fully protected at the end of each day with soil stabilization and sediment control BMPs unless fair weather is predicted the next day. The Contractor shall monitor the weather forecast on a daily basis. The National Weather Service forecast shall be used. If precipitation is predicted prior to the end of the following workday, construction scheduling shall be modified, as required, and functioning BMPs shall be deployed prior to the onset of rain.

BMP Maintenance

To ensure proper implementation and function of BMPs, the Contractor shall regularly inspect and maintain the construction site for the BMPs included in the SWPPP or on an erosion control plan. The Contractor shall identify corrective actions and the time needed to address any deficient BMPs or reinitiate any BMPs that have been discontinued. The Contractor shall keep written records of all BMP inspections, maintenance activities and corrective actions.

The Contractor shall inspect the construction site as follows:

A. Prior to a forecast storm;

B. After any precipitation causes runoff;

C. At 24-hour intervals during extended rain events; and

D. Routinely, at a minimum of once every week

If the Contractor or the Engineer identifies a deficiency in the deployment or functioning of an identified BMP, the deficiency shall be corrected immediately. The deficiency may be corrected at a later date and time if

requested by the Contractor and approved by the Engineer in writing, but not later than the onset of the subsequent rain event. The correction of deficiencies shall be at no additional cost to the City.

SECTION 4. CONTROL OF WORK

4.1 Authority of City

City shall decide all questions which may arise as to the quality or acceptability of materials furnished and Work performed and rate of progress of the Work, all questions which may arise as to the interpretation of the Drawings and Specifications, and all questions as to the acceptable fulfillment of the Contract on the part of Contractor. City's decision shall be final. City shall have authority to enforce and make effective such decisions and orders which Contractor fails to carry out promptly.

4.2 Submittals

Submit, at Contractor's expense, in digital format, the following items ("Submittals") required by the Contract :

A. Schedule of Shop Drawing and Sample Submittals
B. Safety Plans
C. Progress Schedules
D. Product Data Shop Drawings
E. Samples
F. Coordination Drawings
G. Quality Assurance Control Data
H. Machine Inventory Sheets
I. Installation, Operation, and Maintenance Manuals
J. Computer Programs
K. Project Record Documents
L. Seismic Submittal Review Forms, where specified.

All submittals shall be digitally submitted unless prior exception is granted by the City.

Submit these Submittals to City for review and approval in accordance with accepted Schedule of Shop Drawings and Samples Submittals. If no such schedule is agreed upon, then all Shop Drawing, Samples, and product data Submittals shall be submitted within 21 Days after receipt of Notice of Award from City.

Transmit each item with a City approved Submittal transmittal form. Identify Project, Contractor, Subcontractor, major supplier, pertinent Drawing sheet and detail number, and Specification Section number as appropriate. Where manufacturer's standard drawings or data sheets are used, they shall be marked clearly to show those portions of the data that are applicable to this Project. Inapplicable portions shall be marked out. Submittals shall be submitted based on each Specification Section. Submittals containing information about more than one Specification Document will be returned for resubmittal. Submittals shall include all information requested by each Specification Section. (No partial Submittals.) Incomplete Submittals will be returned not reviewed by City.

The data shown on the Submittals shall be complete with respect to quantities, dimensions, specified performance and design criteria, materials and similar data to show City the materials and equipment Contractor proposes to provide and to enable City to review the information for the limited purposes specified in this Document. Submittals shall be identified clearly as to material, supplier, pertinent data such as catalog numbers and the use for which it is intended and otherwise as City may require to enable City to review the Submittal. The quantity of each Submittal to be submitted will be as required by individual Specification Documents or this Document.

At the time of each submission, give City specific notice of all variations, if any, that the submitted Submittal may have from the requirements of the Contract Documents, and the reasons therefore. This notice shall be in a a communication attached to the Submittal transmittal form. In addition, cause a specific notation to be made on each Submittal submitted to City, for review and approval of each such variation. If City accepts deviation, City will note its acceptance on the returned Submittal transmittal form and, if necessary, issue appropriate Contract Modification.

Submittal coordination and verification is responsibility of Contractor; this responsibility shall not be delegated in whole or in part to Subcontractors or suppliers. Before submitting each Submittal, review and coordinate each Submittal with other Submittals and with the requirements of the Work and the Contract Documents, and determine and verify:

A. All field measurements, quantities, dimensions, specified performance criteria, installation requirements, materials, catalog numbers and similar information with respect thereto;

B. All materials with respect to intended use, fabrication, shipping, handling, storage, assembly and installation pertaining to the performance of the Work; and

C. All information relative to Contractor's sole responsibilities and of means, methods, techniques, sequences and procedures of construction and safety precautions and programs incident thereto.

Contractor's submission to City of a Submittal shall constitute Contractor's representation that it has satisfied its obligations under the Contract Documents, and as set forth immediately above in this paragraph, with respect to Contractor's review and approval of that Submittal.

Designation of work "by others," if shown in Submittals, shall mean that work will be responsibility of Contractor rather than Subcontractor or supplier who has prepared Submittals.

After review by City of each of Contractor's Submittals, the City will be returned to Contractor with actions defined as follows:

A. NO EXCEPTIONS TAKEN - Accepted subject to its compatibility with future Submittals and additional partial Submittals for portions of the Work not covered in this Submittal. Does not constitute approval or deletion of specified or required items not shown on the Submittal.

B. MAKE CORRECTIONS NOTED (NO RESUBMISSIONS REQUIRED) - Same as item 1 above, except that minor corrections as noted shall be made by Contractor.

C. REVISE AS NOTED AND RESUBMIT - Rejected because of major inconsistencies or errors that shall be resolved or corrected by Contractor prior to subsequent review by City.

D. REJECTED - RESUBMIT - Submitted material does not conform to Drawings and/or Specifications in major respect, i.e.: wrong size, model, capacity, or material.

Make a complete and acceptable Submittal at least by second submission. City reserves the right to deduct monies from payments due Contractor to cover additional costs of review beyond the second submission. Illegible Submittals will be rejected and returned to Contractor for resubmission. Contractor shall be in breach of the Contract if Contractor's first resubmittal, following a Submittal which City determines falls within categories C or D above, does not fall within categories A or B above.

Favorable review will not constitute acceptance by City of any responsibility for the accuracy, coordination and completeness of the Submittals. Accuracy, coordination, and completeness of Submittals shall be sole responsibility of Contractor, including responsibility to back-check comments, corrections, and modifications from City's review before fabrication. Contractor, Subcontractors, or suppliers may prepare Submittals, but Contractor shall ascertain that Submittals meet requirements of Contract Documents, while conforming to structural space and access conditions at point of installation. City's review will be only to assess if the items covered by the Submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as indicated by the Contract Documents. Favorable review of Submittal, method of work, or information regarding materials and equipment Contractor proposes to furnish shall not relieve Contractor of responsibility for errors therein and shall not be regarded as assumption of risks or liability by City, or any officer or employee thereof, and Contractor shall have no claim under Contract Documents on account of failure or partial failure or inefficiency or insufficiency of any plan or method of work or material and equipment so accepted. Favorable review shall be considered to mean merely that City has no objection to Contractor using, upon Contractor's own full responsibility, plan or method of work proposed, or furnishing materials and equipment proposed.

City's review will not extend the means, methods, techniques, sequences or procedures of construction or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.

Submit complete initial Submittal for those items where required by individual Specification Sections. Complete Submittal shall contain sufficient data to demonstrate that items comply with Specifications, shall meet minimum requirements for submissions cited in Specification Sections, shall include motor data and seismic anchorage certifications, where required, and shall include necessary revisions required for equipment other than first named. If Contractor submits incomplete initial Submittal when complete Submittal is required, Submittal may be returned to Contractor without review.

Copy, conform, and distribute reviewed Submittals in sufficient numbers for Contractor's files, Subcontractors, and vendors.

After City's review of Submittal, revise as noted and resubmit as required. Identify changes made since previous Submittal.

Begin no fabrication or work that requires Submittals until return of Submittals not requiring resubmittal. Do not extrapolate from Submittals covering similar work.

Normally, Submittals will be processed and returned to Contractor within 21 Days of receipt. Submittals received after 12:00 pm will be considered as received on the following Day. For Fridays, the following day will be considered to be Monday.

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

All Submittals shall be number-identified by Contractor, prior to submission to City, in accordance with the following:

A. Sequentially number each Submittal (i.e., "1", "2", "3", etc.) as the basis for number identification of Submittals.

B. Affix the Submittal number under which each Submittal is made on every copy of each Shop Drawing, product data, sample, certification, etc.

C. Number Installation, Operation, and Maintenance Manuals with original root number of the approved Submittal for the item.

D. If the Submittal is a resubmittal (including without limitation after an initial Submittal is rejected, returned without review or marked 'Revise as Noted and Resubmit'), add the suffix designation "A" (i.e., a resubmittal of Submittal 1 would be numbered 1A). Subsequent re-submittals would be identified by the Submittal number and sequential letters (i.e., "B", "C", "D", etc.).

E. All Submittals shall include all information requested by each Specification Section. No partial Submittals will be accepted unless previously authorized by City. In the event a partial Submittal is authorized, each subsequent different Submittal (as opposed to resubmittal) is given a new number.

F. Deliver Submittals to City at least 30 Days before dates reviewed Submittals will be needed.

G. Initial Submittal of Installation, Operation, and Maintenance Manuals shall be **45** Days after the date Submittals that pertain to the applicable portion of the Installation, Operation, and Maintenance Manual is satisfactorily reviewed.

The following table lists the number of initial Submittals required from Contractor for each type of submission, to whom Contractor shall distribute the information, and City's distribution of reviewed submissions. If Contractor needs more copies of reviewed Submittals returned to it, then either submit additional copies or make copies from the returned transparency Submittal. Submittals requiring resubmission will require the same quantity and distribution as an initial Submittal.

SUBMITTAL	Contractor Initial Submittal	City Submittal Return
	# of Copies/ Prints/ Samples	# of Copies/ Prints/ Samples
Shop Drawings	6	1
Product Data	6	1
Samples	4	1
Materials Safety Data Sheets	3	1
Installation, Operation, and Maintenance Manuals	4	1
Other Documents	6	1

Submittal transmittal form, in duplicate, shall contain the following:

A. Date, revision date, and Submittal log number.
B. Project name and City's Project number.
C. Contractor's name, address, and job number.
D. Specification Section number clearly identified.
E. The quantity of Shop Drawings, Product Data, or Samples submitted.
F. Notification of deviations from Contract Documents.
G. Materials Safety Data Sheet (MSDS) for each item complying with OSHA's Hazard Communication Standard 29 CFR 1910.1200.
H. Other pertinent data.

Submittal shall contain the following:

A. Date and revision dates.
B. Revisions, if any, identified.
C. Project Name and Project number.
D. The names of:
E. Contractor, Subcontractor, Supplier, Manufacturer, and separate detailer, when pertinent.
F. Identification of product material by location within the Project.
G. Relation to adjacent structure or materials.
H. Field dimensions, clearly identified as such.
I. Specification Section number and applicable detail reference number on the Drawings.
J. Applicable reference standards.
K. A blank space, on each Drawing or data sheet, 5" x 4" for the City's stamp.
L. Identification of deviations from Contract Documents.
M. Contractor's stamp, initialed or signed, with language certifying the review of Submittals, verification of field measurements, construction criteria and technical standards in compliance with Contract Documents.

Resubmission requirements:

A. Revise initial Shop Drawings as required and resubmit as specified for initial Submittals.
B. Indicate on Shop Drawings any changes that have been made other than those requested by City.
C. Submit new Product Data and Samples as required for initial Submittals.
D. Revise initial Installation, Operation, and Maintenance Manual(s) as required and resubmit as specified for initial Submittals.

Number of resubmissions:

One (1) reexamination of Contractor's Submittals that have been returned for correction or replacement will be included in City's budget. Any additional reexamination of Contractor's Submittals will be considered additional scope services to be paid by Contractor through City. Contractor shall pay City (or City may deduct from any progress or final payment), for engineering personnel, on an hourly basis at 2.5 times direct payroll expenses, and for consultant personnel time at 1.25 times the amount billed City.

Schedule of Shop Drawing and Sample Submittals

A. Submit preliminary Schedule of Shop Drawing and Sample Submittals as required by Document 00700 (General Conditions). Submit two copies of final and accepted Schedule of Shop Drawings and Sample Submittals as required in this Document.

A. Schedule of Shop Drawing and Sample Submittals will be used by City to schedule its activities relating to review of Submittals. Schedule of Submittals shall indicate a spreading out of Submittals and early Submittals of long-lead-time items and of items that require extensive review.

B. Schedule of Shop Drawing and Sample Submittals will be reviewed by City and shall be revised and resubmitted until accepted by City.

D. Unless otherwise specified, make Submittals in groups containing all associated items to assure that information is available for checking each item when it is received. Identify on the Submittal which Submittals should be reviewed together.

Safety Program

Submit three (3) copies of Safety Program specific to these Contract Documents to City within 15 days after the Notice to Proceed is issued**.**

Progress Schedule

A. Submit three (3) print copies of schedule at each of the following times:
   1. Initial Progress Schedule at the Preconstruction Conference.
   2. Original Schedule within 20 Days of the Notice to Proceed date.
   3. Adjustments to the Schedule as required.
   4. Schedule updates monthly, seven (7) Days prior to monthly progress meeting.

B. Submit four (4) copies of the reports listed in this document with:
   1. Initial Schedule
   2. Original Schedule
   3. Each monthly Schedule update

C. Progress Schedules and Reports shall be submitted on a CD Ram, using software described in this Document, in addition to hard copies specified in this paragraph. Electronic files shall be complete copies, including all programs and electronic coding

Product Data

Within ten (10) Days after Start Date of the Contract Time, submit two (2) copies of complete list of major products proposed for use, with name of manufacturer, telephone number, trade name, and model number of each product. Tabulate product data by Specification Section.
For products specified only by reference standards, give manufacturer, trade name, model or catalog designation, and reference standards.

Product or Catalog Data:

A. Manufacturer's standard drawings shall be modified to delete non-applicable data or include applicable data.

B. Manufacturer's catalog sheets, brochures, diagrams, schedules, charts, illustrations and other standard descriptive data:
   1. Mark each copy to identify pertinent materials, products, or models.
   2. Show dimensions and clearances required, performance characteristics and capacities, wiring diagrams and controls.
   3. Include applicable MSDS.

Supplemental Data:

1. Submit number of copies that Contractor requires, plus two (2) copies that will be retained by City.
2. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturer's standard data to provide information unique to Project.

D. Provide copies for Project Record Documents described in this Document.

Shop Drawings

A. Minimum Sheet Size: 8½ inches by 11 inches. All others: Multiples of 8½ inches by 11 inches, 34 inches by 44 inches maximum.

B. Original sheet or reproducible transparency will be marked with City's review comments and returned to Contractor.

C. Mark each copy to identify applicable products, models, options, and other data; supplement manufacturers' standard data to provide information unique to Work.

D. Include manufacturers' installation instructions when required by Specification Section.

E. If Contractor submits Shop Drawings for items that Shop Drawings are not specified, City will not be obliged to review them.

E. Contractor is responsible for procuring copies of Shop Drawings for its own use as it may require for the progress of the Work.

F. Shop Drawings shall be drawn to scale and completely dimensioned, giving plan view together with such sectional views as are necessary to clearly show construction detail and methods.

H. After Shop Drawings are approved contractor shall provide an electronic copy of them to the City when requested.

Samples

A. Submit full range of manufacturers' standard colors, textures, and patterns for City's selection.

B. Submit samples to illustrate functional and aesthetic characteristics of product, with integral parts and attachment devices. Coordinate Submittal of different categories for interfacing work.

C. Include identification on each sample, giving full information.

D. Sizes: Unless otherwise specified, provide the following:

1. Paint Chips: Manufacturers' standard
2. Flat or Sheet Products: Minimum 6 inches square, maximum 12 inches square
3. Linear Products: Minimum 6 inches, maximum 12 inches long
4. Bulk Products: Minimum 1 pint, maximum 1 gallon

E. Full size samples may be used in Work upon approval by City.

F. Field Samples and Mock-ups (if applicable):

1. Erect field samples and mock-ups at Site in accordance with requirements of Specification Sections. If testing is conducted, record and certify results and full Contract compliance.
2. Modify or make additional field samples and mock-ups as required to provide appearance and finishes approved by City.
3. Approved field samples and mock-ups may be used in Work upon approval by City.
4. Construct or prepare as many additional Samples as may be required, as directed by the City, until desired textures, finishes, and/or colors are obtained.
5. Accepted Samples and mock-up shall serve as the standard of quality for the various units of work.

G. No review of a Sample shall be taken in itself to change or modify the requirements in the Contract Documents.

H. Finishes, materials, and workmanship in the completed Work shall match accepted Samples

Quality Assurance Control Submittals

A. Test Reports:

Submit three (3) copies; One copy will be marked with City's review comments and returned to Contractor.

Indicate that material or product conforms to or exceeds specified requirements.

Reports may be from recent or previous tests on material or product, but shall be acceptable to City.

Comply with requirements of each individual Specification Section.

B Certificates:

Submit five (5) copies; One copy will be marked with City's review comments and returned to Contractor.

Indicate that material or product conforms to or exceeds specified requirements.

Submit supporting reference data, affidavits, and certifications as appropriate.

Certificates may be recent or from previous test results on material or product, but shall be acceptable to City.

C. Manufacturers' Instructions:

Submit three (3) copies; One copy will be marked with City's review comments and returned to Contractor.

Include manufacturers' printed instructions for delivery, storage, assembly, installation, startup, adjusting, and finishing.

Identify conflicts between manufacturers' instructions and Contract Documents.

D. Material Safety Data Sheets:

In addition to Material Safety Data Sheets (MSDS) otherwise required by the Contract Documents, submit five (5) copies for any paints, solvents, thinners, varnish, lacquer, glues and adhesives, mastics, or other materials needed for the Project as required by the individual Specification Sections or as otherwise specified in the Contract Documents.

MSDS required for a Submittal shall be submitted with product data in order for the Submittal to be reviewed.

E. Installation, Operations and Maintenance Manuals

Sheet Size: 8½ x 11 inch

Drawing Size: Reduce drawings or diagrams to an 8½ x 11 inch or 11 x 17 inch size. However, where reduction is not practical to ensure readability, fold larger drawings separately and place in vinyl envelopes bound into the binder. Identify vinyl envelopes with drawing numbers.

Binding: Bind in stiff, metal-hinged, three-ring binder(s) with standard three-hole punching.
Multiple Items: Multiple items may be combined into one (1) binder; tab each section with plastic-coated dividers.

Page Protectors: Provide plastic sheet lifters prior to first page and following last page.

Binder title: Include the following title on front and spine of binder:

PROJECT TITLE
INSTALLATION, OPERATION, AND MAINTENANCE MANUAL, 200_

Contents:

1. Introductory Information:

   a. Title page providing the same information as paragraph 0 above
   b. Contractor's name, address, and telephone number
   c. Table of Contents

2. Include, at a minimum, the following detailed information for each item as applicable and as required by individual Specification Sections:

   a. Equipment function, normal operating characteristics, limiting operations.
   b. Assembly, disassembly, installation, alignment, adjustment, and checking instructions.
   c. Operating instructions for startup, routine and normal operation, regulation and control, shutdown, and emergency conditions.
   d. Lubrication and maintenance instructions including specific type and amount of lubricant and recommended lubrication interval.
   e. Guide to "troubleshooting."
   f. Parts list and predicted life of parts subject to wear.
   g. Outline, cross-section, and assembly drawings; engineering data; and electrical diagrams, including elementary diagrams, labeled wiring diagrams, connection diagrams, word description of wiring diagrams and interconnection diagrams.
   h. Test data and performance curves.
   i. A list of recommended spare parts with a price list and a list of spare parts provided under this Contract.
   j. Copies of parts lists or other documents packed with equipment when delivered.
   k. Instrumentation or tag numbers relating the equipment back to the Contract Documents.
   l. Index

3. Final Submittal: Upon favorable review of Installation, Operation, and Maintenance Manual(s) by City, deliver nine (9) additional hard copies and one (1) electronic media format copy of the final approved Installation, Operation, and Maintenance Manual(s). Electronic media format copy shall include all tables, charts, drawings, codes and all other matters reflected in hard copies. The City utilizes various media for records-keeping and facilitating maintenance functions.

4. Electronic Media Format: Compatible with City's current software. All files shall be delivered on a unique CD-ROM.

5. Draft Submittal: The Draft Submittal of Installation, Operation and Maintenance Manuals shall be submitted to City prior to equipment startup.

F. Project Record Documents

Submit one copy of each of the Project Record Documents listed in these Documents.

G. Delay of Submittals

Delay of Submittals by Contractor is considered avoidable delay. Liquidated damages incurred because of late Submittals will be assessed to Contractor.

H. Optional Review Meeting

At the Contractor's request, in order to facilitate the timeliness of the review process, the City may schedule a meeting to review the materials submitted. If this option is exercised, the following requirements apply:

Request a meeting date with the City at least ten (10) Business Days in advance.

Provide the complete package of Submittal information at least five (5) Business Days in advance of the meeting.

The meeting shall take place at City's office. City will provide the authorized staff to review and respond on the Submittal information during the meeting.

Make available for this meeting the job superintendent and/or foreman, Contractor's safety officer, and someone knowledgeable of all the items submitted and authorized to make substitutions or changes.

4.3 Conformity with Contract Documents and Allowable Deviations

Work and materials shall conform to the lines, grades, typical cross sections, dimensions and materials requirements, including tolerances, shown on the plans or indicated in the specifications. Although measurements, sampling, and testing may be considered evidence as to conformity, City shall be the sole judge as to whether the work or materials deviate from the plans and specifications, and City's decision as to any allowable deviations therefrom shall be final.

4.4 Order of Work

When required by the Contract Documents, Contractor shall follow the sequence of operations as set forth therein. Full compensation for conforming to those requirements will be considered as included in the prices paid for the various contract items of work and no additional compensation will be allowed therefore.

4.5 Drawings and Data to be Furnished by City

City may issue supplemental Drawings for the construction work under the Contract. These Drawings will show additional details as required for construction purposes. Installation instructions for City-furnished materials will be furnished if required.

4.6 Superintendence

Contractor shall designate, in writing before starting Work, an authorized representative who shall have complete authority to represent and act for Contractor. Said authorized representative of Contractor shall normally be present at the Site of the Work at all times while Work is actually in progress on the Contract. During any period when Work is suspended, arrangements acceptable to City shall be made for any emergency work which may be required.

Whenever Contractor or an authorized representative is not present on any part of the Work where it may be desired to give direction, orders will be given by City, which shall be received and obeyed by the superintendent who may have charge of the particular work in reference to which the orders are given. Any order given by City, not otherwise required by the Specifications to be in writing, will, on request of Contractor, be given or confirmed by City in writing.

Contractor shall designate, in writing, the names and telephone numbers of at least three representatives who could be contacted at any time in the event that an emergency occurs.

See Document 00520 Liquidated Damages due to change in Key Personnel on the project.

4.7 Character of Workers

Any subcontractor, or person employed by Contractor or subcontractor, who fails or refuses to carry out the directions of City, or appears to City to be incompetent or to act in a disorderly or improper manner, shall be removed from the Work immediately on the written request of City, and such person shall not again be employed on the Work.

4.8 Layout of Work and Surveys

All Work shall be done to the lines, grades, and elevations indicated on the Drawings.

City shall provide basic horizontal and vertical control points to be used as datums for the Work. All additional survey, layout, and measurement work shall be performed by Contractor as a part of the Work.

Contractor shall provide at its cost an experienced instrument person, competent assistants, and such instruments, tools, stakes and other materials required to complete the survey, layout, and measurement work. In addition, Contractor shall furnish at its cost competent persons and such tools, stakes, and other materials as City (and/or any Engineer) may require in establishing or designating control points, or in checking survey, layout, and measurement work performed by Contractor.

Contractor shall keep City informed, a reasonable time in advance, of the times and places at which it wishes to do Work, so that any checking deemed necessary by City may be done with minimum inconvenience to City and minimum delay to Contractor.

Contractor shall remove and reconstruct Work which is improperly located.

4.9 Warranty and Inspection

General Representations and Warranties: Contractor represents and warrants that it is and will be at all times fully qualified and capable of performing every Phase of the Work and to complete Work in accordance with the terms of Contract Documents. Contractor warrants that all construction services shall be performed in accordance with generally accepted professional standards of good and sound construction practices and all requirements of Contract Documents. Contractor warrants that Work, including but not limited to each item of materials and equipment incorporated therein, shall be new, of suitable grade of its respective kind for its intended use, and free from defects in design, engineering, materials, construction and workmanship. Contractor warrants that Work shall conform in all respects with all applicable requirements of federal, state and local laws, applicable construction codes and standards, licenses, and permits, Drawings and Specifications and all descriptions set forth therein, and all other requirements of Contract Documents. Contractor shall not be responsible, however, for the negligence of others in the specification of specific equipment, materials, design parameters and means or methods of construction where that is specifically shown and expressly required by Contract Documents.

Extended Guarantees: Any guarantee exceeding one year provided by the supplier or manufacturer of any equipment or materials used in the Project shall be extended for such term. Contractor expressly agrees to act as co-guarantor of such equipment and materials and shall supply City with all warranty and guarantee documents relative to equipment and materials incorporated in the Project and guaranteed by their suppliers or manufacturers.

Inspection. City shall at all times have access to the Work during its construction, and shall be furnished with every reasonable facility for ascertaining that the materials and the quality of performance are in accordance with the requirements and intentions of the Drawings and Specifications. All Work done and all materials furnished shall be subject to City's inspection and approval.

The day-to-day inspection performed by the various inspectors employed by City shall not constitute approval or ratification of Work improperly done by Contractor. City is the only person authorized to recommend acceptance or rejection of Work and materials.

The presence or absence of an inspector during performance of the Work shall not relieve Contractor of any obligation to fulfill the Contract. It shall be the duty of Contractor to see that all provisions are complied with in detail, irrespective of the inspection given the Work during its progress by City or representatives of City. Any plan or method suggested to Contractor by City or an inspector, but not specified or required, if adopted or followed in whole or in part, shall be used at the risk and responsibility of Contractor; and City and City will assume no responsibility therefore.

Should it be considered necessary or advisable by City at any time before Acceptance of the entire Work to make an examination of Work already completed by removing or tearing out same, Contractor shall, on request, promptly furnish all necessary facilities, labor, and material. If such Work is found to be defective or nonconforming in any material respect, due to the fault of Contractor or subcontractors, Contractor shall pay all the expenses of such examination and of satisfactory reconstruction. If, however, such Work is found to meet the requirements of the Contract, an equitable adjustment shall be made in the Contract Price to compensate Contractor for the additional services involved in such examination and reconstruction and, if completion of the Work has been delayed thereby, Contractor shall, in addition, be granted an appropriate extension of time.

Projects financed in whole or part with federal or state funds shall be subject to inspection at all times by the federal or state agency involved.

Any inspection, evaluation, or test performed by or on behalf of City relating to the Work is solely for the benefit of City, and shall not be relied upon by Contractor. Contractor shall not be relieved of its absolute obligation to perform Work in accordance with the Contract Documents, nor relieved of any guaranty, warranty, or other obligation, as a result of any inspections, evaluations, or tests performed by City, whether or not such inspections, evaluations, or tests are permitted or required under the Contract Documents. Contractor shall be solely responsible for testing and inspecting Work already performed to determine whether such Work is in proper condition to receive later Work.

A. Execute Contractor's submittals and assemble warranty documents, and installation, operations and maintenance manuals, executed or supplied by Subcontractors, suppliers, and manufacturers.

- Provide table of contents and assemble in 8½ inches by 11 inches three-ring binder with durable plastic cover, appropriately separated and organized.
- Include contact names and phone numbers for City personnel to call during warranty period.
- Assemble in Specification Section order.

B. Submit material prior to final application for payment.

- For equipment put into use with City's permission during construction, submit within 14 Days after first operation.
- For items of Work delayed materially beyond Date of Substantial Completion, provide updated submittal within 14 Days after acceptance, listing date of acceptance as start of warranty period.
- Warranties are intended to protect City against failure of Work and against deficient, defective and faulty materials and workmanship, regardless of sources.

C. Limitations: Warranties are not intended to cover failures that result from the following:

- Unusual or abnormal phenomena of the elements
- Vandalism after Substantial Completion
- Insurrection or acts of aggression including war

D. Related Damages and Losses: Remove and replace Work which is damaged as result of defective Work, or which must be removed and replaced to provide access for correction of warranted Work.

E. Warranty Reinstatement: After correction of warranted Work, reinstate warranty for corrected Work to date of original warranty expiration or to a date not less than one year after corrected Work was done, whichever is later.

F. Replacement Cost: Replace or restore failing warranted items without regard to anticipated useful service lives.

G. Warranty Forms: Submit drafts to City for approval prior to execution. Forms shall not detract from or confuse requirements or interpretations of Contract Documents.

- Warranty shall be countersigned by manufacturers.
- Where specified, warranty shall be countersigned by Subcontractors and installers.
- Rejection of Warranties: City reserves right to reject unsolicited and coincidental product warranties that detract from or confuse requirements or interpretations of Contract Documents.

H. Term of Warranties: For materials, equipment, systems, and workmanship, warranty period shall be one year minimum from date of Final Completion of entire Work except where:

- Detailed specifications for certain materials, equipment or systems require longer warranty periods.
- Materials, equipment or systems are put into beneficial use of City prior to Final Completion as agreed to in writing by City.

I. Warranty of Title: No material, supplies, or equipment for Work under Contract shall be purchased subject to any chattel mortgage, security agreement, or under a conditional sale or other agreement by which an interest therein or any part thereof is retained by seller or supplier. Contractor warrants good title to all material, supplies, and equipment installed or incorporated in Work and agrees upon completion of all Work to deliver premises, together with improvements and appurtenances constructed or placed thereon by Contractor, to City free from any claim, liens, security interest, or charges, and further agrees that neither Contractor nor any person, firm, or corporation furnishing any materials or labor for any Work covered by Contract shall have right to lien upon premises or improvement or appurtenances thereon. Nothing contained in this paragraph, however, shall defeat or

impair right of persons furnishing materials or labor under bond given by Contractor for their protection or any rights under law permitting persons to look to funds due Contractor in hands of City.

4.10 Defective and Unauthorized Work

All Work which has been rejected shall be remedied promptly (no later than five days) or removed and replaced by Contractor in an acceptable manner at no additional cost to City.

Payment will not be made for any Work done beyond the lines and grades shown on the Drawings or established by City, or any extra Work done without written authority, and such Work will be -considered as unauthorized. Work so done may be ordered remedied, removed, or replaced.

If Contractor should fail to comply promptly with any order of City made under the provisions of this, City may cause rejected or unauthorized Work to be remedied, removed, or replaced, and the costs thereof to be deducted from any moneys due or to become due Contractor.

4.11 Construction Equipment and Plant

Contractor shall provide and use construction equipment and plant capable of producing the quality and quantity of Work required. Construction equipment shall be identified by readily visible numbers. If ordered, Contractor shall remove unsatisfactory construction equipment and discontinue the operation of unsatisfactory plants.

4.12 Substantial Completion, Final Completion and Final Acceptance

A. Substantial Completion

The Work (or a specified part thereof) has progressed to the point where, in the opinion of City as evidenced by a Certificate of Substantial Completion, the Work is sufficiently complete, in accordance with Contract Documents, so that the Work (or specified part) can be utilized for the purposes for which it is intended; or if no such certificate is issued, when the Work (or specified part) is complete and ready for final acceptance as evidenced by written recommendation of City for final acceptance. The terms “Substantially Complete” and “Substantially Completed” as applied to all or part of the Work refer to Substantial Completion thereof.

1. When Contractor considers Work or designated portion of the Work as Substantially Complete, submit written notice to City, with list of items remaining to be completed or corrected.
2. Within reasonable time, City will inspect to determine status of completion.
3. Should City determine that Work is not Substantially Complete, City will promptly notify Contractor in writing, listing all defects and omissions.
4. Remedy deficiencies and send a second written notice of Substantial Completion. City will reinspect the Work. If deficiencies previously noted are not corrected on reinspection, then Contractor shall pay City’s cost of the reinspection.
5. When City concurs that Work is Substantially Complete, City will issue a Certificate of Substantial Completion, accompanied by Contractor’s list of items to be completed or corrected as verified by City.
6. A punch list examination will be performed upon Substantial Completion. One follow-up review of punch list items for each discipline will be provided.

B. **Final Completion**

When the Work authorized by the Contract has been completed, City will make the final inspection. If City determines that the Work has been completed, in accordance with the Contract, City will recommend that the Work be accepted. Contractor will be relieved of the responsibility imposed by Section 6.15, Contractor’s Responsibility for Work, on the date of Acceptance.

Final Completion occurs when Work meets requirements for City’s Final Completion. When Contractor considers Work is Finally Complete, submit written certification that:

1. Contractor has inspected Work for compliance with Contract Documents, and all requirements for Final Acceptance have been met.

2. Except for Contractor maintenance after Final Acceptance, Work has been completed in accordance with Contract Documents and deficiencies listed with Certificate of Substantial Completion have been corrected. Equipment and systems have been tested in the presence of City, and are operative.
3. Work is complete and ready for final inspection.
4. All systems having been tested and accepted as having met requirements of Contract Documents.
5. All required instructions and training sessions having been given by Contractor.
6. All closeout documents having been submitted by Contractor, reviewed by City and accepted by City.
7. All punch list work, as directed by City, having been completed by Contractor.
8. All final cleanup and completion activities having been completed by Contractor.

In addition to submittals required by Contract Documents, provide submittals required by governing authorities and submit final statement of accounting giving total adjusted Contract Sum, previous payments, and sum remaining due.

When City finds Work is acceptable and final closeout submittals are complete, City will issue final Change Order reflecting approved adjustments to Contract Sum not previously made by Change Order. Should City determine that Work is incomplete or defective:

1. City promptly will so notify Contractor, in writing, listing the incomplete or defective items.
2. Promptly remedy the deficiencies and notify the City when it is ready for reinspection.
3. When City determines that the Work is acceptable under the Contract Documents, City will request Contractor to make closeout submittals.

Final adjustments of accounts:

1. Submit a final statement of accounting to City, showing all adjustments to the Contract Sum and complete and execute Document 00650 (Contract and Release of Any and All Claims).
2. If so required, City shall prepare a final Change Order for submittal to Contractor, showing adjustments to the Contract Sum that were not previously made into a Contract Modification.

C. **Final Acceptance**

The City will record a “Notice of Completion” after the City accepts the project as complete. The final payment including without limitation on retentions will be made 35 days after the Notice of Completion has been recorded by the County, provide there are no outstanding punchlist items or deficiencies in the project. The final payment will be fewer sums as may be lawfully retained under any provisions of the contract documents or by law.

D. **Project Guarantee**

Requirements for Contractor’s guarantee of completed Work are included in this Document. Guarantee Work done under Contract against failures, leaks, or breaks or other unsatisfactory conditions due to defective equipment, materials, or workmanship, and perform repair work or replacement required, at Contractor’s sole expense, for period of one year from date of Final Acceptance.

Neither recordation of Final Acceptance nor final certificate for payment nor provision of the Contract nor partial or entire use or occupancy of premises by City shall constitute acceptance of Work not done in accordance with Contract Documents nor relieve Contractor of liability in respect to express warranties or responsibility for faulty materials or workmanship.

City may make repairs to defective Work as set forth in this Document.

If, after installation, operation, or use of materials or equipment to be provided under Contract proves to be unsatisfactory to City, City shall have right to operate and use materials or equipment until said materials and equipment can, without damage to City, be taken out of service for correction or replacement. Period of use of defective materials or equipment pending correction or replacement shall in no way decrease guarantee period required for acceptable corrected or replaced items of materials or equipment.

Nothing in this Document shall be construed to limit, relieve, or release Contractor's, Subcontractors', and equipment suppliers' liability to City for damages sustained as result of latent defects in equipment caused by negligence of suppliers' agents, employees, or Subcontractors. Stated in another manner, warranty contained in the Contract Documents shall not amount to, nor shall it be deemed to be, waiver by City of any rights or remedies (or time limits in which to enforce such rights or remedies) it may have for defective workmanship or defective materials under laws of this State pertaining to acts of negligence.

4.13 Use Prior to Final Acceptance

City may take possession of, and use, all or part of the Project prior to Final Acceptance.

SECTION 5. CONTROL OF MATERIALS

5.1 Source of Supply and Quality of Materials.

Contractor shall furnish all materials required to complete the work, except materials that are designated in the specifications to be furnished by City.

Only materials conforming to the requirements of the specifications shall be incorporated in the work.

The materials furnished and used shall be new, except as may be provided elsewhere in these specifications, on the plans or in the Special Provisions. The materials shall be manufactured, handled, and use in a workmanlike manner to ensure completed work in accordance with the plans and specifications. Materials to be used in the work will be subject to inspection and tests by City or City's designated representative. Contractor shall furnish without charge such samples as may be required.

Contractor shall furnish City a list of Contractor's sources of materials and the locations at which those materials will be available for inspection. The list shall be submitted on a City approved form and shall be furnished to City in sufficient time to permit inspection and testing of materials to be furnished from the listed sources in advance of their use. City may inspect, sample or test materials at the source of supply or other locations, but the inspection, sampling or testing will not be undertaken until City is assured by Contractor of the cooperation and assistance of both Contractor and the supplier of the material. Contractor shall assure that City or City's authorized representative has free access at all times to the material to be inspected, sampled or tested. It is understood that the inspections and tests if made at any point other than the point of incorporation in the work in no way shall be considered a s guaranty of acceptance of the material nor of continued acceptance of material presumed to be similar to that upon which inspections and tests have been made, and that inspection and testing performed by the State shall not relieve Contractor or Contractor's suppliers of responsibility for quality control.

Manufacturers' warranties, guaranties, instruction sheets and parts lists, which are furnished with certain Sections or materials incorporated in the work, shall be delivered to City before acceptance of the contract.

Reports and records of inspections made and tests performed, when available at the site of the work, may be examined by Contractor.

5.2 City-Furnished Materials.

Materials which are listed as City-furnished materials in the Special Provisions will be available to Contractor free of charge.

Contractor shall submit a written request to City for the delivery of City-furnished materials at least 15 days in advance of the date of its intended use, except that the written request for the delivery of City-furnished sign

panels for roadside signs and overhead sign structures shall be submitted at least 30 days in advance of their intended installation. The request shall state the quantity and the type of each material.

The locations at which City-furnished materials will be available to Contractor free of charge will be designated in the Special Provisions. In those cases said materials shall be hauled to the site of the work by Contractor at Contractor's expense, including any necessary loading and unloading that may be involved. If the locations are not designated in the Special Provisions, City-furnished materials will be furnished to Contractor free of charge at the site of the project. In either case, all costs of handling and placing City-furnished material shall be considered as included in the price paid for the contract item involving the State-furnished material.

Contractor shall be responsible for all City-furnished materials furnished to Contractor, and shall pay all demurrage and storage charges. City-furnished materials lost or damaged from any cause whatsoever shall be replaced by Contractor at Contractor's expense. Contractor shall be liable to City for the cost of replacing City-furnished material and those costs may be deducted from any moneys due or to become due Contractor. All City-furnished material that is not used on the work shall remain the property of the State and shall be delivered to City.

City reserves right to furnish materials as it deems advisable, and Contractor shall have no claims for costs and overhead and profit on such materials.

5.3 Storage of Materials

Sections or materials to be incorporated in the work shall be stored in such a manner as to ensure the preservation of their quality and fitness for the work, and to facilitate inspection.

5.4 Defective Materials

All materials which City has determined to not conform to the requirements of the plans and specifications will be rejected whether in place or not. They shall be removed immediately from the site of the work, unless otherwise permitted by City. No rejected material, the defects of which have been subsequently corrected, shall be used in the work unless approval in writing has been given by City. Upon failure of Contractor to comply promptly with any order of City made under the provisions in this Section 5, City shall have authority to cause the removal and replacement of rejected material and to deduct the cost thereof from any moneys due or to become due Contractor.

5.5 Plant Inspection

City may inspect the production of material, or the manufacture of products at the source of supply.

Plant inspection, however, will not be undertaken until City is assured of the cooperation and assistance of both Contractor and the material producer. City or City's authorized representative shall have free entry at all times to those parts of the plant as concerns the manufacture or production of the materials. Adequate facilities shall be furnished free of charge to make the necessary inspection. City assumes no obligation to inspect materials at the source of supply.

5.6 Certificates of Compliance

A Certificate of Compliance shall be furnished prior to the use of any materials for which these specifications or the Special Provisions require that a certificate be furnished. In addition, when so authorized in these specifications or in the Special Provisions, City may permit the use of certain materials or assemblies prior to sampling and testing if accompanied by a Certificate of Compliance. The certificate shall be signed by the manufacturer of the material or the manufacturer of assembled materials and shall state that the materials involved comply in all respects with the requirements of the specifications. A Certificate of Compliance shall be furnished with each lot of material delivered to the work and the lot so certified shall be clearly identified in the certificate.

All materials used on the basis of a Certificate of Compliance may be sampled and tested at any time. The fact that material is used on the basis of a Certificate of Compliance shall not relieve Contractor of the requirements of the plans and specifications and any material not conforming to the requirements will be subject to rejection whether in place or not.

City reserves the right to refuse to permit the use of material on the basis of a Certificate of Compliance.

The form of the Certificate of Compliance and its disposition shall be as directed by City.

5.7 State Specification Numbers

The State Specification number of material furnished on the contract shall conform to the number specified in these specifications or the Special Provisions for the material involve, except that material conforming to a later specification issue will be acceptable.

5.8 Testing

Unless otherwise specified, all tests shall be performed in accordance with the methods used by the Department of Transportation and shall be made by the Engineer or the Engineer's designated representative.

The Department has developed methods for testing the quality of materials and work. These methods are identified by number and are referred to in the specifications as California Test. Copies of individual California Tests are available at the Transportation Laboratory, Sacramento, California, and will be furnished to interested persons upon request.

Whenever the specifications require compliance with specified values for the following properties, tests will be made by the California Test indicated unless otherwise specified:

Properties	California Test
Relative Compaction	216 or 231
Sand Equivalent	217
Resistance (R-value)	301
Grading (Sieve Analysis)	202
Durability Index	229

Whenever a reference is made in the specifications to a California Test by number, it shall mean the California Test in effect on the day the Notice to Contractors for the work is dated.

Whenever the specifications provide an option between 2 or more tests, the Engineer will determine the test to be used.

Whenever a reference is made in the specifications to a specification, manual or test designation either of the American Society for Testing and Materials, the American Association of State Highway and Transportation Officials, Federal Specifications or any other recognized national organization, and the number or other identification representing the year of adoption or latest revision is omitted, it shall mean the specification, manual or test designation in effect on the day the Notice to Contractors for the work is dated. Whenever the specification, manual or test designation provides for test reports (such as certified mill test reports) from the manufacturer, copies of those reports, identified as to the lot of material, shall be furnished to the Engineer. The manufacturer's test reports shall supplement the inspection, sampling and testing provisions in Section 5, "Control of Materials," and shall not constitute a waiver of the City's right to inspect. When material which cannot be identified with specific test reports is proposed for use, the Engineer may, at the Engineer's discretion, select random samples from the lot for testing. Test specimens from the random samples, including those required for retest, shall be prepared in accordance with the referenced specification and furnished by the Contractor at the Contractor's expense. The number of the samples and test specimens shall be entirely at the discretion of the Engineer. Unidentified metal products, such as sheet, plate and hardware shall be subject to the requirements of Section 55-2.07, "Unidentified Stock Material."

When requested by the Engineer, the Contractor shall furnish, without charge, samples of all materials entering into the work, and no material shall be used prior to approval by the Engineer, except as provided in Section 5.6, "Certificates of Compliance." Samples of material from local sources shall be taken by or in the presence of the Engineer; otherwise, the samples will not be considered for testing.

Whenever the provisions of this Section refer to tests or testing, it shall mean tests to assure the quality and to determine the acceptability of the materials and work.

A. City will select an independent testing and inspection agency or agencies to conduct tests and inspections as indicated on Drawings, in Specifications and as required by governing authorities having jurisdiction.
   1. Responsibility for time and costs shall be as indicated in schedule below. All time and costs for Contractor's service related to such tests and inspections shall be included in Contract Time and Contract Sum.
   2. Notify City in writing (and, if provided, on inspection request form provided by City) and, if directed by City, testing and inspection agency, when Work is ready for specified tests and inspections. Deliver this written notification at least two (2) working days before the requested inspection date.

B. Contractor pays for all additional charges by testing and inspection agencies and governing authorities having jurisdiction due to the following: The amount deducted will be determined by City and deducted from moneys due or to become due to Contractor.
   1. Contractor's failure to properly schedule or notify testing and inspection agency or authorities having jurisdiction.
   2. Costs for testing of materials and work found to be unacceptable, as determined by the test performed by City.
   3. Changes in sources, lots, or suppliers of products after original tests or inspections.
   4. Changes in means, methods, techniques, sequences, and procedures of construction that necessitate additional testing, inspection, and related services.
   5. Changes in mix designs for concrete and mortar after review and acceptance of submitted mix design.
   6. Contractor submitted requests to change materials or products, which are accepted, but require testing and/or reinspection beyond original design.

C. If initial tests or inspections made by the testing and inspection agency reveal that materials do not comply with Contract Documents, or if City has reasonable doubt that materials do not comply with Contract Documents, additional tests and inspections shall be made as directed.
   1. If additional tests and inspections establish that materials comply with Contract Documents, City shall pay all costs for such tests and inspections.
   2. If additional tests and inspections establish that materials do not comply with Contract Documents, all costs of such tests and inspections shall be deducted from Contract Sum.

If Work requiring inspection is covered by follow-on or follow-up Work before it is inspected, uncover Work so proper inspections can be performed. All costs of such tests and inspections shall be deducted from Contract Sum.

The Contractor shall be responsible for controlling the quality of the material entering the work and of the work performed, and shall perform testing as necessary to ensure control. The test methods used for quality control testing shall be as determined by the Contractor. The results of the testing shall be made available to the Engineer upon request. These tests are for the Contractor's use in controlling the work and will not be accepted for use as acceptance tests.

Full compensation for performing quality control tests and making the results available to the Engineer shall be considered as included in the contract prices paid for the various items of work involved and no additional compensation will be allowed therefor.

SECTION 6. LEGAL RELATIONS AND RESPONSIBILITY

6.1 Laws to be Observed

Contractor shall remain informed of and in compliance with all applicable existing and future federal, state, county, and municipal laws, codes, ordinances, rules and regulations, including but not limited to, those cited herein.

6.2 Labor Discrimination

In the performance of the Contract, Contractor shall not discriminate against an employee or applicant for employment because of race, color, religious creed, ancestry, sex, age, national origin, physical handicap, medical condition, or marital status. Section 1735 of the Labor Code and Sections 12990 et seq. of the Government Code are incorporated herein in full by this reference.

Contractor and each subcontractor shall submit monthly an employee utilization report, substantially conforming to U.S. Department of Labor Form CC-257 (Rev. 9/78 or successor).

6.3 Employment of Labor

In the employment of labor in the performance of the Contract, City desires that Contractor and all subcontractors shall, wherever possible, give first consideration to residents of the County.

6.4 Prevailing Wages

In accordance with provisions of Section 1773 of the Labor Code, the Director of the Department of Industrial Relations has ascertained the general prevailing rate of wages and employer payments for health and welfare, pension, vacation, and similar purposes available to the particular craft, classification, or type of workers employed on the work. These rates are set forth in the latest determination obtained from the Director, which is on file in the office of the Director of Public Works and incorporated herein by reference the same as though set out in full. Post copy of general prevailing rates at site.

Contractor shall forfeit as a penalty to City, $50 for each day, or portion thereof, for each worker paid less than the stipulated prevailing rates for any public work done under the Contract by Contractor or by any subcontractor in violation of the provisions of the Labor Code, particularly Sections 1770 through 1780, inclusive.

Each contractor and subcontractor shall keep an accurate payroll record showing the name, address, Social Security number, work classification, straight time and overtime hours worked each day and week, and the actual per diem wages paid to each journeyman, apprentice, worker, or other employee by him or her in connection with the public work. The payroll records shall be certified and shall be available for inspection at all reasonable hours at the principal office of Contractor in accordance with the provisions of Section 1776 of the Labor Code.

Contractor shall inform City of the location of the payroll records, including the street address, city, and county, and shall, within 5 working days, provide a notice of a change in location and address. The responsibility for compliance with payroll record requirements imposed by said Section 1776 of the Labor Code is on the prime Contractor.

A copy of all payrolls shall be submitted weekly to City. Payrolls shall contain the full name, address, and Social Security number of each employee, his or her correct classification, rate of pay, daily and weekly number of hours worked, itemized deductions made, and actual wages paid. They shall also indicate apprentices and ratio of apprentices to journeymen. The employee's address and Social Security number need only appear on the first payroll on which his or her name appears. The payroll shall be accompanied by a "Statement of Compliance" signed by the employer or agent indicating that the payrolls are correct and complete and that the wage rates contained therein are not less than those required by the Contract. The "Statement of Compliance" shall be on forms furnished by City or on any form with identical wording. Contractor shall be responsible for the submission of copies of payrolls of all subcontractors.

If, by the 15th of the month, Contractor has not submitted satisfactory payrolls for all work performed during the monthly period ending on or before the first of that month, City will retain an amount equal to 10 percent of the estimated value of the work performed (exclusive of mobilization) during the month from the next monthly estimate, except that such retention shall not exceed $10,000 nor be less than $1,000. Retentions for failure to submit satisfactory payrolls shall be additional to all other retentions provided for in the Contract. The retention for failure to submit satisfactory payrolls for any monthly period will be released for payment when the monthly estimate for partial payments next following the date that all such payrolls for which the retention was made are submitted.

Contractor and each subcontractor shall preserve their respective payroll records for a period of 4 years from the date of fling a Notice of Completion and Acceptance under the Contract.

The work of installing, assembling, repairing or reconditioning, or other work of any nature on machinery, equipment, or tools used in or upon the work, shall be considered a part of the work to be performed under the Contract and any laborers. workers, or mechanics working on such machinery, equipment, or tools, shall be subject to all of the requirements relating to labor set forth in the Contract.

The construction, erection, and operation of material production, proportioning, or mixing plants from which material is used wholly on the Contract or on contracts under the supervision of City, shall be considered a part of the work to be performed under the Contract and any laborers, workers, or mechanics working on such plants shall be subject to all of the requirements relating to labor set forth in the Contract.

6.5 Hours of Labor and Work

Eight hours' labor constitutes a legal day's work. Contractor shall forfeit as a penalty to City, $25 for each worker employed in the execution of the Contract by Contractor or by any subcontractor for each day during which such worker is required or permitted to labor more than 8 hours in violation of Labor Code Sections 1810 to 1815, inclusive, except as provided for under Labor Code Section 1815.

Work hours are **7:00 A.M**. to **8:00 P.M**., Monday through Friday. No weekend, holiday or night work will be allowed without written approval from the City.

6.6 Apprentices

Contractor's attention is directed to the provisions in Sections 1777.5, 1777.6 and 1777.7 of the Labor Code concerning the employment of apprentices by Contractor or any subcontractor.

Section 1777.5 requires Contractor or subcontractor employing persons, as defined, in any apprenticeable occupation to apply to the joint apprenticeship committee which is nearest the Site of the public works project and which administers the apprenticeship program in that trade for a certificate of approval. The certificate will also fix the ratio of apprentices to journeymen that will be used in the performance of the Contract. The ratio of work performed by apprentices to journeymen in such cases shall not be less than 1 hour to 5 hours, except when the committee finds that any one of the following conditions is met:

A. In the event unemployment for the previous 3-month period in the project Site area exceeds an average of 15 percent, or

B. In the event the number of apprentices in training in such area exceeds a ratio of 1 to 5, or

C. If there is a showing that the apprenticeable craft or trade is replacing at least one-thirtieth of its journeymen annually through apprenticeship training, either (1) on a statewide basis, or (2) on a local basis, or

D. If assignment of an apprentice to any work performed under a public works contract would create a condition which would jeopardize his/her life or the life, safety, or property of fellow employees or the public at large, or if the specific task to which the apprentice is to be assigned is of such a nature that training cannot be provided by a journeyman.

Contractor is required to make contributions to funds established for the administration of apprenticeship programs if Contractor employs registered apprentices or journeymen in any apprenticeable trade on such contracts and if other contractors on the public works Site are making such contributions.

Contractor and any subcontractor shall comply with the requirements of Section 1777.5 and 1777.6 in the employment of apprentices.

Information relative to apprenticeship standards, wage schedules, and other requirements may be obtained from the Director of Industrial Relations, ex officio the Administrator of Apprenticeship, San Francisco, California, or from the Division of Apprenticeship Standards and its branch offices.

6.7 Permits and Licenses

Contractor shall procure all permits and licenses, pay all charges and fees, and give all notices necessary and incident to the prosecution of the work, except as provided in the Special Provisions.

6.8 Patents and Copyrights

Contractor shall assume all costs including any costs of defense arising from the use of any copyrighted composition, secret process, patented or unpatented invention, Section, equipment, device, or appliance manufactured, furnished, or used in the performance of the Contract, including their use by City, unless otherwise specifically stipulated in the Specifications.

6.9 Public Safety and Traffic Control

Contractor shall furnish, erect, and maintain such fences, barriers, lights, and signs and provide such flagging and guards as are necessary in the opinion of City or public agency having jurisdiction, to give adequate warning to the public of the construction and of any dangerous condition to be encountered as a result thereof.

Without limiting the foregoing, signs, lights, flags, and other warning and safety devices and their use shall conform to the requirements set forth in Part 6 of the MUTCD and of the MUTCD California Supplement. Signs or other protective devices furnished and erected by Contractor, at Contractor's expense, as above provided, shall not obscure the visibility of, nor conflict in intent, meaning and function of either existing signs, lights and traffic control devices or any construction area signs and traffic control devices for which furnishing of, or payment for, is provided elsewhere in the specifications. Signs furnished and erected by Contractor, at Contractor's expense, shall be approved by City as to size, wording and location.

The Contractor shall so conduct operations as to offer the least possible obstruction and inconvenience to the public and shall have under construction no greater length or amount of work than can be prosecuted properly with due regard to the rights of the public.

Unless otherwise provided in the special provisions, all public traffic shall be permitted to pass through the work with as little inconvenience and delay as possible. Where possible, public traffic shall be routed on new or existing paved surfaces.

Spillage resulting from hauling operations along or across any public traveled way shall be removed immediately by the Contractor at the Contractor's expense.

Existing traffic signals and highway lighting shall be kept in operation for the benefit of the traveling public during progress of the work, and other forces will continue routine maintenance of existing systems. Construction operations shall be conducted in such a manner as to cause as little inconvenience as possible to abutting property owners.

Convenient access to driveways, houses, and buildings along the line of the work shall be maintained and temporary approaches to crossings or intersecting highways shall be provided and kept in good condition. When the abutting property owner's access across the right of way line is to be eliminated, or to be replaced under the contract by other access facilities, the existing access shall not be closed until the replacement access facilities are usable.

The Contractor may be required to cover certain signs which regulate or direct public traffic to roadways that are not open to traffic. The Engineer will determine which signs shall be covered. Except as otherwise provided for construction area signs in Section 12, "Construction Area Traffic Control Devices," furnishing, installing and removing covers will be paid for as extra work as provided in Section 3.3.

No lane closure shall be permitted before 7:00 A.M. or after 5:00 P.M. Mondays through Fridays. Only under special conditions shall the City have the right to permit lane closure before 7:00 A.M. and after 5:00 P.M.

All costs of the above shall be included in the price bid for the various bid items and no special compensation will be allowed.

The Contractor shall maintain a minimum of two (2) travel lanes for traffic use, one in each direction at all times.

6.10 Accident Prevention

Contractor shall comply with the California Occupational Safety and Health Act (Labor Code Section 6300 et seq.) and Title 8 of the Code of Regulations, and will also take, or cause to be taken, such additional measures as may be necessary for the prevention of accidents.

Designate one of Contractor's staff as "Site Safety Officer" whose duties shall include the responsibility for enforcing the environmental protection provisions of the Contract Documents including safety and health, the requirements of the Occupational Safety and Health Act, and other applicable federal, state and local standards. Submit for review by City Contractor's intended traffic flow plan, security plan, program for temporary structures, housecleaning plan, demolition program, and environmental safety and health plan. After review by City, the implementation and enforcement of these plans shall become the responsibility of the Site Safety Officer. Any changes in the plans shall be requested by Contractor through the Site Safety Officer for written concurrence by City.

Prior to commencement of Work Contractor shall (1) submit proposals in writing for effectuating provisions for accident prevention, and (2) meet in conference with City to discuss and develop mutual understandings relative to administration of an overall safety program.

During the performance of Work under the Contract, Contractor shall institute controls and procedures for the control and safety of persons visiting the job-Site.

Contractor shall maintain an accurate record of, and shall report to City in writing, exposure data and all accidents resulting in death, traumatic injury, occupational disease, or damage to property, materials, supplies, or equipment incident to Work performed under the Contract.

City will notify Contractor of any noncompliance with the foregoing provisions. Contractor shall, after receipt of such notice, immediately take corrective action. If Contractor fails or refuses to comply immediately, the matter will be referred to the proper authority. No part of the time lost due to any stop order issued by proper authority shall be made the subject or claim for extension of time or for extra costs or damages by Contractor.

Compliance with the provisions of this Section by Subcontractors will be the responsibility of Contractor.

6.11 Explosives and Stream Pollution

This section not applicable to City projects.

6.12 Fire Protection Plan

Within 15 days after Notice of Proceed submit one copy of a fire protection plan that has been reviewed and approved by the Santa Clara County Fire Department. It is recommended that the plan include, but not be limited to, a discussion of the following items:

A Equipment spark arresters

B Fire-extinguishing equipment on hand

C Method of operation in case of fire

D Notification to authorities of any fire

E Access available during performance of Work

F Educating workers of fire protection plan

G Storage protection for flammable materials

H Ventilation and illumination equipment

6.13 Interference with Fire Hydrants, Highways, and Fences

Contractor shall conduct operations as not too close or obstruct any portion of any highway, road, or street, or prevent in any way free access to fire hydrants until permits have been obtained therefor from the proper authorities. If any highway required to be kept open shall be rendered unsafe by Contractor's operations, Contractor shall make such repairs or provide such temporary guards as shall be acceptable to the authorities having jurisdiction and to City. Any highway or street maintenance or repair work required by local authorities in connection with necessary operations under the Contract shall be performed by Contractor at Contractor's own cost and expense. Fences subject to interference shall be maintained as effective barriers consistent with the original intent but, upon approval of City, they may be moved or rearranged to facilitate prosecution of the Work until the Work is finished, after which they shall be restored to their original location in an equal or better condition that existed prior to rearrangement.

6.14 Preservation of Property

Contractor shall not damage existing improvements, utility facilities, and adjacent property, real and personal. The fact that any existing underground improvement or facility is not shown on the Drawings shall not relieve Contractor of responsibility to ascertain the existence of any underground improvement or facility which may be subject to damage by reason of Contractor's operations.

Any damage to improvements or property, whether above or below the ground, private or public, within or adjacent to the project limits, arising from, or in consequence of, the performance of the Contract shall be repaired at once by Contractor. If City requires such repair to be made prior to the execution or continued performance of any part of the Work included in this Contract, City will so notify Contractor who shall delay or discontinue the performance of that part of the Work until the necessary repair has been made. Such delay shall not be considered unavoidable, and no extension of time for completion of the Contract will be allowed therefor.

When ordered by City to make any such repair, Contractor shall start work thereon within four (4) hours and shall prosecute the same with diligence to completion. Upon failure of Contractor to so comply with such order, or upon Contractor's failure to make immediate emergency repairs reasonably determined by City to be necessary in the best interests of the public, City shall have authority to cause such repair to be made and to deduct the costs thereof from any money due, or which may become due, Contractor.

In an emergency affecting the safety of life or property including adjoining property, Contractor shall act to prevent, to the extent possible, such threatened loss or injury, whether or not instructed to do so by City.

6.15 Contractor's Responsibility for Work

Until Final Acceptance of the Work, Contractor shall have the charge and care of the work and of the materials to be used therein, and shall bear the risk of injury, loss, or damage to any part thereof by the action of the elements or from any other cause, whether arising from the execution or from the non-execution of the Work. The materials to be used in the Work include both those furnished by City and those furnished by Contractor, including materials for which Contractor has received partial payment as provided in Section 8.3, Progress Payment.

6.16 Indemnification and Hold Harmless

Contractor shall, to the fullest extent allowed by law, indemnify, and when the City requests with respect to a claim provide a deposit for the defense of, defend, and hold harmless the City and its officers, officials, agents, employees and volunteers against any and all liability, claims, stop notices, actions, causes of action or demands whatsoever from and against any of them, including any injury to or death of any person or damage to property or other liability of any nature, arising out of, pertaining to, or related to the performance of this Agreement by Contractor or Contractor's employees, officers, officials, agents or independent contractors. Contractor shall not be obligated under this Agreement to indemnify City to the extent that the damage is caused by the sole or active negligence or willful misconduct of City, its agents or employees. Such costs and expenses shall include reasonable attorneys' fees of counsel of City's choice, expert fees and all other costs and fees of litigation.

Contractor agrees to obtain executed indemnity agreements with provisions identical to those set forth here in these sections from each and every subcontractor or any other person or entity involved by, for, with, or on behalf of Contractor in the performance of this agreement. If Contractor fails to obtain such indemnity

obligations from others as required here, Contractor agrees to be fully responsible according to the terms of this section.

With respect to third party claims against Contractor, Contractor waives any and all rights to any type of express or implied indemnity against City, and each of their officers, employees, consultants and agents, including, but not limited to, the Council, City representative.

Approval or purchase of any insurance contracts or policies shall in no way relieve from liability nor limit the liability of Contractor, its Subcontractors of any tier, or the officers or agents of any of them.

To the furthest extent permitted by law (including, without limitation, Civil Code Section 2782), the indemnities, releases of liability and limitations of liability, and limitations of remedy expressed throughout the Contract Documents shall apply even in the event of breach of contract, negligence (active or passive), fault or strict liability of the party[s] indemnified, released, or limited in liability, and shall survive the termination, rescission, breach, or completion of the Contract Documents. If Contractor fails to perform any of these defense or indemnity obligations, City may in its discretion back charge Contractor for its costs and damages resulting there from and withhold such sums from progress payments or other contract monies which may become due.

6.17 Payment of Taxes

Except as otherwise specifically provided in the Special Provisions, the Contract Prices shall include full compensation for all current and future taxes of any type which Contractor is required to pay, whether imposed by federal, state, or local government, and no tax exemption certificate or any other document designed to exempt Contractor from payment of tax will be furnished to Contractor by City.

6.18 Cooperation with Others

City reserves the right to do other work on or near the Project. Contractor shall cooperate with others and conduct Work so as to facilitate work by City or others and prevent delay, additional expense, or hindrance thereto. Contractor shall request from, and exchange with others, Drawings, data, and information as necessary to insure proper completion of the project and work of others. Contractor shall furnish copies of correspondence and Drawings exchanged with other contractors to City.

Contractor shall conduct, adjust, correct, and coordinate Work with work of others so that the Project shall be free of defects.

6.19 Property Rights in Materials

Nothing in the Contract shall be construed as vesting in Contractor any right of property in the materials used after they have been attached or affixed to the Work or the soil, or after payment has been made for 90 percent of the value of materials delivered to the Site of the work, whether or not they have been so attached or affixed. All such materials shall become the property of City upon being so attached or affixed or upon payment of such 90 percent of the value of materials delivered by Contractor on the ground and not used.

6.20 Rights in Land and Improvements

Nothing in these Specifications shall be construed as allowing Contractor to make any arrangements with any person to permit occupancy or use of any land, structure, or building within the limits of the Contract for any purpose whatsoever, either with or without compensation, in conflict with any agreement between City and any owner, former owner, or tenant of such land, structure, or building.

6.21 Title to Materials Found on the Work

The title to all water and to the right to the use of all water, to all soil, stone, gravel, sand, minerals, and all other materials developed or obtained in the excavation or other operations by Contractor or any subcontractor, or any of their employees, and the right to use or dispose of the same, are hereby expressly reserved by City, and neither Contractor, nor any subcontractor, nor any of their employees shall have any right, title, or interest in or to any part thereof; neither shall they, nor any of them, assert or make any claim thereto. Contractor may be permitted to use in the Work, without charge, any such materials which meet the requirements of these Specifications.

6.22 Trespass

Contractor shall be responsible for all damage or injury which may be caused on any property by trespass by Contractor, any subcontractor, or their employees in the course of their employment, whether the said trespass was committed with or without the consent or knowledge of Contractor.

6.23 Subcontracting

The Contractor shall give personal attention to the fulfillment of the contract and shall keep the work under the Contractor's control.

No subcontractor will be recognized as such, and all persons engaged in the work of construction will be considered as employees of the Contractor and the Contractor will be held responsible for their work, which shall be subject to the provisions of the contract and specifications.

The Contractor shall perform, with the Contractor's own organization, contract work amounting to not less than the percentage listed in Document 00100 Advertisement for Bid, of the original total contract price, except that any designated "Specialty Items" may be performed by subcontract and the amount of any designated "Specialty Items" performed by subcontract may be deducted from the original total contract price before computing the amount of work required to be performed by the Contractor with the Contractor's own organization. When items of work in the Bid Form, (Document 00400) are preceded by the letters (S), those items are designated as "Specialty Items." Where an entire item is subcontracted, the value of work subcontracted will be based on the contract item bid price. When a portion of an item is subcontracted, the value of work subcontracted will be based on the estimated percentage of the contract item bid price, determined from information submitted by the Contractor, subject to approval by the Engineer.

Subcontracts shall include provisions that the contract between the City and the Contractor is part of the subcontract, and that all terms and provisions of the contract are incorporated in the subcontract. Subcontracts shall also contain certification by the subcontractor that the subcontractor is experienced in and qualified to do, and knowledgeable about, the subcontracted work. Copies of subcontracts shall be available to the Engineer upon written request, and shall be provided to the Engineer at the time any litigation against the City concerning the project is filed.

Before work is started on a subcontract, the Contractor shall file with the Engineer a written statement showing the work to be subcontracted, the names of the subcontractors and the description of each portion of the work to be subcontracted.

Pursuant to the provisions of Section 6109 of the Public Contract Code, the Contractor shall not perform work on a public works project with a subcontractor who is ineligible to perform work on the public works project pursuant to Section 1777.1 or 1777.7 of the Labor Code.

When a portion of the work which has been subcontracted by the Contractor is not being prosecuted in a manner satisfactory to the City, the subcontractor shall be removed immediately on the requisition of the Engineer and shall not again be employed on the work.

Contractor shall comply with Subletting and Subcontracting Fair Practices Act commencing with Section 4100 of the Public Contract Code Violations shall subject Contractor to penalties described in the Act.

In accordance with Section 4107 of the Public Contract Code, City Council or its designated authorized officer is the awarding authority for the purpose of consenting to a substitute subcontractor.

6.24 Tunnel Construction Safety

Attention is directed to Labor Code Sections 7950 and following, concerning tunnel safety. Contractor shall notify the Division of Occupational Safety and Health and City before any initial construction may be started at any tunnels. A pre-job safety conference, to be arranged for by Contractor, shall be held for all underground operations. City shall be notified of the time and place of such conference. The tunnel classification prepared by the Division of Occupational Safety and Health shall be prominently posted at the Site by Contractor. City will obtain this classification prior to the request for bids, whenever possible, and make it available to Contractor.

6.25 Cultural Resources

If cultural resources are encountered during construction of the Project, Contractor shall avoid any further disturbance of the materials and immediately discontinue earthwork within 100 feet of the find. Contractor shall notify City immediately upon encountering cultural resources. Contractor shall be prepared to move on to another location or phase of work, allowing sufficient time for City to evaluate the nature and significance of the find, and implement appropriate management procedures.

In the event that prehistoric human remains are encountered, ground-disturbing activities at that location shall cease immediately. Contractor shall notify City immediately upon encountering human remains. Contractor shall be prepared to move on to another location or phase of Work to allow the City to notify the proper authorities and assess management of the situation.

Contractor is advised that if burials or archaeological artifacts are encountered, it may be necessary to suspend Work on the project in order to comply with the above requirements. Payment for a delay of more than 1 working day for each occurrence will be made in accordance with Section 3.

6.26 Sound Control

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

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

Grading, construction and demolition activities shall be allowed to exceed the noise limits of Section 10.48.040 of the Cupertino Municipal Code during the daytime hours; provided that the equipment utilized has high quality noise muffler and abatement devices installed and in good condition and the activity meets one of the following criteria:

A No individual device produces a noise level more than 87 dBA at a distance of twenty-five feet (25') (7.5 meters).

B A noise level on any nearby property does not exceed 80 dBA. It is a violation of the Cupertino Municipal Code to engage in any grading, street construction or underground utility work within seven hundred fifty feet (750') of a residential area on Saturdays, Sundays, holidays, and during the nighttime period except as provided in Section 10.48.030 of the Cupertino Municipal Code.

C Grading, construction, or demolition occurring during nighttime period shall not be allowed unless they meet the nighttime standards of Section 10.48.040 of the Cupertino Municipal Code.

6.27 Site Security

Contractor shall take and be fully responsible for all reasonably required measures to protect and maintain the security of persons, existing facilities and property at the Site, including without limitation preventing theft, loss, vandalism and improper concealment of personal property of the City and all persons lawfully present on the Site, and including times where workers are not present on the Site. Contractor's measures shall include, at a minimum, maintaining a log of all persons entering and leaving the Site and who they represent, what they are delivering and to whom.

Contractor shall repair all damage to City's property resulting from Contractor's failure to provide adequate security measures at no cost to City.

Contractor shall maintain a lock on the Construction access gate at all times.

Contractor shall supply additional security fencing, barricades, lighting, and other security measures as required to protect and control the Site.

Contractor shall provide a Safety Program in accordance with all applicable federal, state, and local regulation codes, rules, laws and ordinances.

6.28 Public Facilities

Where overhead service to a structure, known to receive service, does not exist, then underground service shall be assumed to exist.

Contractor's attention is directed to the existence of underground sewer, water, gas, power, telephone and cable and other utilities within the areas in which Work is to be performed. Contractor shall, at least 2 Business Days, or as otherwise noted, prior to commencement of excavation, notify the following owners of these Underground

Facilities:

A. Storm drainage lines:
City of Cupertino

B. Water:
San Jose Water Co., 374 West Santa Clara, San Jose, CA 95113-9971, Phone: 408-279-7900

C. Cable:
Comcast, 1900 S. Tenth St., San Jose, CA 95112, Phone: 408-918-3230

D. Electrical/Gas:
Pacific Gas & Electric, 10900 N. Blaney Ave., Cupertino, CA 95014, Phone: 408-725-2098

E. Phone:
Pacific Bell/AT&T, 3475 B N. First Street, San Jose, CA 95134, Phone: 408-493-7236

F. Sanitary:
Cupertino Sanitary, 20833 Stevens Creek Blvd., Suite 104, Cupertino, CA 95014, Phone: 408-259-7071

The Contractor shall have all of the utilities, underground mains, and services that may conflict with the project, located in the field. The Contractor shall contact Underground Service Alert (USA) two (2) working days in advance of any work, for location of the underground facilities, at 800-642-2444.

Underground vaults and lines are shown on the Drawings. Contractor shall exhibit extreme care when conducting this work and may be required to hand dig in these locations. The vaults and lines shall be protected throughout the construction period.

Attention is directed to the presence of overhead telephone, cable and power lines and a power pole in the area. The existing power pole shall be protected throughout the construction period. Protection of these power poles may require assistance from PG&E, AT&T and Comcast. Cost for assistance by PG&E, AT&T and Comcast shall be borne by Contractor.

Attention is directed to the existing utilities in the area. Contractor shall notify utility companies prior to digging in this area and shall abide by any provisions instructed by the utility company for protection of their facility including hand digging in this area. Costs for compliance with all mitigation measures shall be borne by Contractor.

6.29 Legal Actions Against the City

No representative, officer, or employee of City, no member of the governing body of the locality in which the Project is situated, no member of the locality in which City was activated, and no other public official of such locality or localities who exercises any functions or responsibilities with respect to the Project, during the tenure of the official or for one year thereafter, shall, as principal, agent, attorney or otherwise, be directly or indirectly interested, in the Contract Documents or the proceeds thereof.

6.30 Limit of Liabiltiy

CITY, AND EACH OF ITS OFFICERS, THE CITY COUNCIL, EMPLOYEES, CONSULTANTS (INCLUDING WITHOUT LIMITATION CONSULTING ENGINEER) AND AGENTS INCLUDING, BUT NOT LIMITED TO, ENGINEER EACH OTHER CITY REPRESENTATIVE SHALL HAVE NO LIABILITY

TO CONTRACTOR FOR SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES, EXCEPT TO THE LIMITED EXTENT THAT THESE CONTRACT DOCUMENTS OR APPLICABLE PUBLIC CONTRACTING STATUTES MAY SPECIFY THEIR RECOVERY.

SECTION 7. PROSECUTION AND PROGRESS OF WORK

7.1 Assignment

The performance of the Contract may not be assigned except upon the written consent of the Council. Consent will not be given to any proposed assignment which would relieve the original Contractor or surety of their responsibilities under the Contract.

Contractor may assign moneys due, or to become due under the Contract, and such assignment will be recognized by City, if given proper notice thereof, to the extent permitted by law, but any assignment of moneys shall be subject to all proper setoffs in favor of City and to all deductions provided for in the Contract and particularly all money withheld, whether assigned or not, shall be subject to being used by City for the completion of the Work in the event that Contractor should be in default therein.

7.2 Notice to Proceed

The Contract Time will commence to run on the date indicated on the Notice to Proceed. Contractor shall not do any work at the site prior to the date on which the Contract Time commences to run.

7.3 Commencement of Work

Contractor shall not begin Work until receipt from City of the Notice to Proceed, and shall, upon receiving notice, begin Work within the time specified in the notice. The time specified in said notice will allow a period of at least 10 days after the date of said notice for commencement of Work. After receipt of said notice, Contractor shall diligently prosecute the Work to completion. Contractor shall provide, at least 24 hours in advance, written notice to City of Contractor's intention to start Work and specify the date on which Contractor intends to start.

No Work shall begin until the Contract, bonds and certificates of insurance required by Section 2 have been received and approved.

7.4 Work Progress Schedule

A. General

Progress Schedule shall be based on and incorporate milestone and completion dates specified in Contract Documents. Overall time of completion and time of completion for each milestone shown on Progress Schedule shall adhere to times in Document 00520 (Contract), unless an earlier (advanced) time of completion is requested by Contractor and agreed to by City. A Change Order shall formalize any such agreement.

1. City is not required to accept an earlier (advanced) schedule, i.e., one that shows early completion date(s) for the Contract Time.
2. Contractor is not entitled to extra compensation in event agreement is reached on an earlier (advanced) schedule and Contractor completes its Work, for whatever reason, beyond completion date shown in earlier (advanced) schedule but within the Contract Time.
3. A schedule showing the Work completed in less than the Contract Time, which has been accepted by City, shall be considered to have Project Float. The Project Float is the time between the scheduled completion of the Work and Contract Substantial Completion. Project Float is a resource available to both City and Contractor.
4. Float Ownership: Neither City nor Contractor owns float. The Project owns the float. As such, liability for delay of any Substantial Completion or Final Completion date rests with the party whose actions, last in time, actually cause delay to a Substantial Completion or Final Completion date.

    a. For example, in the event of unexcused delay by Party A and Party B, and if Party A uses some, but not all of the float and Party B later uses remainder of the float as well as additional time beyond the float, Party B shall be liable for the time that represents a delay to the Substantial Completion date.

b. Under this scenario, Party A would not be responsible for the time since it did not consume all of the float and additional float remained; therefore, the Substantial Completion Date was unaffected.

c Progress Schedule shall be the basis for evaluating job progress, payment requests, and time extension requests. Responsibility for developing Contract schedule and monitoring actual progress as compared to Progress Schedule rests with Contractor.

d Failure of Progress Schedule to include any element of the Work or any inaccuracy in Progress Schedule will not relieve Contractor from responsibility for accomplishing the Work in accordance with the Contract. City's acceptance of Schedule shall be for its use in monitoring and evaluating job progress, payment requests, and time extension requests, and shall not, in any manner, impose a duty of care upon City, or act to relieve Contractor of its responsibility for means and methods of construction.

e Transmit each item under form approved by City.

- Identify Project with the City Project number, and name of Contractor.
- Provide space for Contractor's approval stamp and City's review stamps.
- Submittals received from sources other than Contractor will be returned to Contractor without City's review.

B. Initial and Original Progress Schedule

Initial Schedule submitted for review at the Preconstruction Conference shall serve as Contractor's schedule for up to 30 Days after the Notice to Proceed.

Initial Schedule must indicate detailed plan for the Work to be completed in first 30 Days of the Contract; details of planned mobilization of plant and equipment; sequence of early operations; and procurement of materials and equipment. Show Work beyond 30 Days in summary form.

Contractor shall submit its Original Schedule for review no later than first progress payment. Original Schedule and all updates shall comply with all standards herein.

All Schedules shall be time-scaled.

All Schedules shall be cost- and resource-loaded. Accepted cost- and resource-loaded Schedule will be used as basis for monthly progress payments. Use of Initial Schedule for progress payments shall not exceed 30 Days.

Except as otherwise expressly provided in this Document, meet with City to review and discuss the each Schedule (i.e., Initial, Original and monthly updates) within seven Days after each Schedule has been submitted to City.

City's review and comment on any Schedule shall be limited to Contract conformance (with sequencing, coordination, and milestone requirements).

Contractor shall make corrections to Schedule necessary to comply with Contract requirements and shall adjust Schedule to incorporate any missing information requested by City. Resubmit Initial Schedule if requested by City.

If Contractor is of the opinion that any of the Work included on its Schedule has been impacted, submit to City a written Time Impact Evaluation (TIE) in accordance with this Section. The TIE shall be based on the most current update of the Initial Schedule.

C. Schedule Format and Level of Detail

Each Schedule (Initial, Original and updates) shall indicate all separate fabrication, procurement and field construction activities required for completion of the Work, including but not limited to the following:

1. All Contractor, Subcontractor, and assigned Contractor work shall be shown in a logical work sequence that demonstrates a coordinated plan of work for all contractors. The intent is to provide a common basis of acceptance, understanding, and communication, as well as interface with other contractors.

2. Activities related to the delivery of Contractor and City-furnished equipment to be Contractor-installed per Contract shall be shown.

3. All activities shall be identified through codes or other identification to indicate the building (i.e. buildings, Site work) and Contractor/Subcontractor responsibility to which they pertain.

4. Break up the Work schedule into activities of durations of approximately 21 Days or less each, except for non-field construction activities or as otherwise deemed acceptable by City.

5. Show the critical path in red. For each activity, show early start, late start, early finish, late finish, durations measured in Days, float, resources, predecessor and successor activities, planned workday/week for the activity, man power loading, and scheduled/actual progress payments.

Seasonal weather conditions (which do not constitute a delay as defined herein) shall be considered in the planning and scheduling of all work influenced by high or low ambient temperatures or presence of high moisture for the completion of the Work within the allotted Contract Time.

Failure by Contractor to include any element of Work required for performance of the Work on the detailed construction schedule shall not excuse Contractor from completing all Work required within the Contract Time.

A two-week “look ahead,” detailed daily bar chart schedule shall be updated and issued weekly. Utilize computer-scheduling software, such as Microsoft Project software or approved equivalent, for all scheduling including schedule updates.

D. Monthly Schedule Update Submittals

Following acceptance of Contractor’s Initial Schedule, monitor progress of Work and adjust Schedule each month to reflect actual progress and any anticipated changes to planned activities.

Each Schedule update submitted shall be complete, including all information requested for the Initial Schedule and Original Schedule submittal.

Each update shall continue to show all Work activities including those already completed. These completed activities shall accurately reflect “as built” information by indicating when activities were actually started and completed, and Contractor warrants the accuracy of as-built information as shown.

Within five Days after monthly Schedule update, submit the updated Schedule.

Within five Days of receipt of above-noted revised submittals, City will either accept or reject monthly schedule update submittal.

1. If accepted, percent complete shown in monthly update will be basis for Application for Payment by Contractor. The schedule update shall be submitted as part of Contractor’s Application for Payment.

2. If rejected, update shall be corrected and resubmitted by Contractor before the Application for Payment is submitted.

Updating, changing or revising of any report, curve, schedule or narrative submitted to City by Contractor under this Contract, nor City’s review or acceptance of any such report, curve, schedule or

narrative shall not have the effect of amending or modifying, in any way, the Contract Substantial Completion date or milestone dates or of modifying or limiting, in any way, Contractor's obligations under this Contract.

E. Schedule Revisions

Updating the Schedule (Initial and Original) to reflect actual progress shall not be considered revisions to the Schedule. Since scheduling is a dynamic process, however, revisions to activity durations and sequences are expected on a monthly basis.

To reflect revisions to the Schedule, provide City with a written narrative with a full description and reasons for each Work activity revised. For revisions affecting the sequence of Work, provide a schedule diagram that compares the original sequence to the revised sequence of Work. Provide the written narrative and schedule diagram for revisions three Days in advance of the monthly schedule update. Clearly show and discuss any changes in the critical path.

Schedule revisions shall not be incorporated into any schedule update until City has reviewed the revisions. City may request further information and justification for schedule revisions and, within three Days, provide City with a complete written narrative response to City's request.

If City does not accept Contractor's revision, and Contractor disagrees with City's position, Contractor has seven Days from receipt of City's letter rejecting the revision, to provide a written narrative providing full justification and explanation for the revision. Contractor's failure to respond in writing within seven Days of City's written rejection of a schedule revision shall be contractually interpreted as acceptance of City's position, and Contractor waives its rights to subsequently dispute or file a claim regarding City's position. If Contractor files a timely response as provided in this paragraph, and the parties are still unable to agree, Contractor's sole right shall be to file a claim as provided in this Document.

At City's discretion, Contractor can be required to provide Subcontractor certifications of performance regarding proposed schedule revisions affecting said Subcontractors.

F. Recovery Schedule

If a Schedule update shows a substantial completion date 21 Days beyond any Contract Substantial Completion date, or individual Milestone completion dates, submit to City within seven Days the proposed revisions to recover the lost time. As part of this submittal, provide a written narrative for each revision made to recapture the lost time. If the revisions include sequence changes, provide a schedule diagram comparing the original sequence to the revised sequence of Work. If City requests, show the intended critical path; secure appropriate Subcontractor and supplier consent to the recovery Schedule; submit a narrative explaining trade flow and construction flow changes, duration changes, added/deleted activities, critical path changes and identify all near critical paths and man hour loading assumptions for major Subcontractors.

The revisions shall not be incorporated into any Schedule update until City has reviewed the revisions. If City does not accept Contractor's revisions, City and Contractor shall follow the procedures in paragraphs above.

At City's discretion, Contractor can be required to provide Subcontractor certifications for revisions affecting said Subcontractors.

G. Time Impact Evaluation (TIE) For Change Orders and Other Delays

When Contractor is directed to proceed with changed work, prepare and submit, within 14 Days from the direction to proceed, a TIE that includes both a written narrative and a schedule diagram depicting how the changed work affects other schedule activities. The schedule diagram shall show how Contractor proposes to incorporate the changed work in the schedule, and how it impacts the current Schedule update critical path or otherwise. Contractor is also responsible for requesting time extensions based on the TIE's impact on the critical path. The diagram shall be tied to the main sequence of scheduled activities to enable City to evaluate the impact of changed work to the scheduled critical path.

Comply with the requirements of this Section for all types of delays such as, but not limited to, Contractor/Subcontractor delays, adverse weather delays, strikes, procurement delays, fabrication delays, etc.

Contractor is responsible for all costs associated with the preparation of TIEs, and the process of incorporating TIEs into the current schedule update. Provide City with four copies of each TIE.

Once agreement has been reached on a TIE, the Contract Time will be adjusted accordingly. If agreement is not reached on a TIE, the Contract Time may be extended in an amount City allows, and Contractor may submit a claim for additional time claimed by Contractor as provided in this Document.

H. Time Extensions

Contractor is responsible for requesting time extensions for time impacts that, in the opinion of Contractor, impact the critical path of the current schedule update. Notice of time impacts shall be given in accordance with this Document

Where an event for which City is responsible impacts the projected Substantial Completion date, provide a written mitigation plan, including a schedule diagram, which explains how (e.g., increase crew size, overtime, etc.) the impact can be mitigated. Also include a detailed cost breakdown of the labor, equipment, and material Contractor would expend to mitigate City-caused time impact. Submit mitigation plan to City within 14 Days from the date of discovery of said impact. Contractor is responsible for the cost to prepare the mitigation plan.

Failure to request time, provide TIE, or provide the required mitigation plan will result in Contractor waiving its right to a time extension and cost to mitigate the delay.

No time will be granted under the Contract Documents for cumulative effect of changes.
City will not be obligated to consider any time extension request unless requirements of Contract Documents are complied with.

Failure of Contractor to perform in accordance with the current schedule update shall not be excused by submittal of time extension requests.

Notwithstanding any other provision of this Section, if Contractor does not submit a TIE within the required 14 Days for any issue, Contractor hereby agrees that Contractor does not require a time extension for that issue.

I. Project Status Reporting

In addition to submittal requirements for scheduling identified in this Section, provide a monthly project status report (i.e., written narrative report) to be submitted in conjunction with each Schedule as specified herein. Status reporting shall be in form specified in this paragraph below.

Prepare monthly written narrative reports of status of Project for submission to City. Written status reports shall include:

1. Status of major Project components (percent complete, amount of time ahead or behind schedule) and an explanation of how Project will be brought back on schedule if delays have occurred.

2. Progress made on critical activities indicated on each Schedule, including inspections.

3. Explanations for any lack of work on critical path activities planned to be performed during last month.

4. Explanations for any schedule changes, including changes to logic or to activity durations.

5. List of critical activities scheduled to be performed during the next month.

6. Status of major material and equipment procurement.

7. Any delays encountered during reporting period.

8. Provide printed report indicating actual versus planned resource (labor, materials and equipment) loading for each trade and each activity. This report shall be provided on weekly and monthly basis.

   a. Actual resource shall be accumulated in field by Contractor, and shall be as noted on Contractor's daily reports. These reports will be basis for information provided in monthly and weekly printed reports.
   b. Explain all variances and mitigation measures.

9. Contractor may include any other information pertinent to status of Project. Include additional status information requested by City at no additional cost.

10. Status reports, and the information contained therein, shall not be construed as claims, notice of claims, notice of delay, or requests for changes or compensation.

At the close of each workday provide City with report of Contractor and its Subcontractors' work activities for that day, including trades, equipment, work activities worked on, staff levels, and equipment deliveries.

7.5 Temporary Suspension of Work

By written order to Contractor, City may suspend the Work wholly or in part for an indefinite period, or for such period as City may deem necessary, for any of the following reasons:

- Weather conditions or other conditions which are unfavorable for the proper prosecution of the Work;
- Failure of Contractor to carry out orders given or to perform any provisions of the Contract; or
- The convenience and benefit of City**.**

Such suspension shall be effective upon receipt by Contractor of the written order suspending the Work and shall be terminated upon receipt by Contractor of the written order terminating the suspension.

If, under authority of Convenience and benefit of City, as stated above, City orders a suspension of all or a portion of the Work, which is the current controlling operation, it will be cause for a time extension if it affects the controlling item of Work.

7.6 Liquidated Damages

In case all the Work called for under the Contract in all parts and requirements is not finished or completed within the number of days as set forth in Document 00520 (Contract), it is agreed that damage will be sustained by City, and that it is and will be impracticable and extremely difficult to ascertain and determine the actual damage which City will sustain in the event of and by reason of such delay; and it is, therefore, agreed that Contractor will pay to City the sum set forth in Document 00520 (Contract) per day for each and every day's delay in finishing the Work in excess of the number of days prescribed; and Contractor agrees to pay said liquidated damages herein provided for, and further agrees that City may deduct the amount thereof from any moneys due, or that may become due, to Contractor under the Contract.

7.7 Termination of Control

Failure to supply an adequate working force or material of proper quality, or in any other respect to prosecute the Work with the diligence and force specified by the Contract, is grounds for termination of Contractor's control over the Work and for taking over the Work by City.

7.8 Termination of Contract for Cause

Contractor shall be in default of the Contract Documents and City may terminate Contractor's right to proceed under the Contract Documents, for cause, should Contractor commit a material breach of the Contract Documents and not cure such breach within ten (10) calendar days of the date of notice from City to Contractor demanding such cure; or, if such breach is curable but not curable within such ten (10) day period, within such period of time as is reasonably necessary to accomplish such cure. (In order for Contractor to avail itself of a time period in excess of 10 calendar days, Contractor must provide City within the ten (10) day period with a

written plan acceptable to City to cure said breach, and then diligently commence and continue such cure according to the written plan).

In the event of termination by City as provided above for cause, Contractor shall deliver to City possession of the Work in its then condition, including but not limited to, all designs, engineering, Project records, cost data of all types, plans and specifications and contracts with vendors and subcontractors, all other documentation associated with the Project, and all construction supplies and aids dedicated solely to performing the Work which, in the normal course of construction, would be consumed or only have salvage value at the end of the construction period. Contractor shall remain fully liable for the failure of any Work completed and materials and equipment provided through the date of such termination to comply with the provisions of the Contract Documents. The provisions of this Section shall not be interpreted to diminish any right which City may have to claim and recover damages for any breach of the Contract Documents or otherwise, but rather, Contractor shall compensate City for all loss, cost, damage, expense, and/or liability suffered by City as a result of such termination and failure to comply with the Contract Documents.

In the event a termination for cause is later determined to have been made wrongfully or without cause, then the termination shall be treated as a termination for convenience, and Contractor shall have no greater rights than it would have had following a termination for convenience. Any Contractor claim arising out of a termination for cause shall be made in accord with Section 9 herein. No other loss, cost, damage, expense or liability may be claimed, requested or recovered by Contractor.

7.9 Termination of Contract for Convenience

A. City may terminate performance of the Work under the Contract Documents in accordance with this clause in whole, or from time to time in part, whenever City shall determine that termination is in City's best interest. Termination shall be effected by City delivering to Contractor notice of termination specifying the extent to which performance of the Work under the Contract Documents is terminated and the effective date of the termination.

B. After receiving a notice of termination, and except as otherwise directed by City, Contractor shall:

1. Stop Work under the Contract Documents on date and to extent specified in notice of termination;
2. Place no further orders or subcontracts for materials, services, or facilities except as necessary to complete portion of Work under the Contract Documents which is not terminated;
3. Terminate all orders and subcontracts to extent that they relate to performance of Work terminated by the notice of termination;
4. Assign to City in manner, at times, and to extent directed by City, all right, title, and interest of Contractor under orders and subcontracts so terminated. City shall have the right, in its sole discretion, to settle or pay any or all claims arising out of termination of orders and subcontracts;
5. Settle all outstanding liabilities and all claims arising out of such termination of orders and subcontracts, with approval or ratification of City to extent City may require. City's approval or ratification shall be final for purposes of this section;
6. Transfer title to City, and deliver in the manner, at the times, and to the extent, if any, directed by City, all fabricated or un-fabricated parts, Work in process, completed Work, supplies, and all other material produced as part of, or acquired in connection with performance of, Work terminated by the notice of termination, and completed or partially completed drawings, drawings, specifications, information, and other property which, if the Project had been completed, would have been required to be furnished to City;
7. Use its best efforts to sell, in manner, at times, to extent, and at price or prices that City directs or authorizes, any property of types referred to in preceding paragraph, but Contractor shall not be required to extend credit to any purchaser, and may acquire any such property under conditions prescribed and at price or prices approved by City. Proceeds of transfer or disposition shall be applied to reduce payments to be made by City to Contractor under the Contract Documents or shall otherwise be credited to the price or cost of Work covered by Contract Documents or paid in such other manner as City may direct;
8. Complete performance of the part of the Work which was not terminated by the notice of termination; and

9. Take such action as may be necessary, or as City may direct, to protect and preserve all property related to Contract Documents which is in Contractor's possession and in which City has or may acquire interest.

C. After receipt of a notice of termination, Contractor shall submit to City its termination claim, in form and with all certifications required by Section 9. Contractor's termination claim shall be submitted promptly, but in no event later than 6 months from effective date of the termination. Contractor and City may agree upon the whole or part of the amount or amounts to be paid to Contractor because of a total or partial termination of Work under this Section. If Contractor and City fail to agree on the whole amount to be paid to Contractor because of the termination of the Work under this Section, City's total liability to Contractor by reason of the termination shall be the total (without duplication of any items) of:

1. The reasonable cost to Contractor, without profit, for all Work performed prior to the effective date of the termination, including Work done to secure the Project for termination. Reasonable cost may not exceed the applicable percentage completion values derived from the progress schedule and the schedule of values. Deductions shall be made for cost of materials to be retained by Contractor, cost of Work defectively performed, amounts realized by sale of materials, and for other appropriate credits against cost of Work. Reasonable cost will include reasonable allowance for Project overhead and general administrative overhead not to exceed a total of ten percent of direct costs of such Work. When, in City's opinion, the cost of any item of Work is excessively high due to costs incurred to remedy or replace defective or rejected Work, reasonable cost to be allowed will be the estimated reasonable cost of performing the Work in compliance with requirements of Contract Documents and excessive actual cost shall be disallowed.

2. A reasonable allowance for profit on cost of Work performed as determined in the preceding paragraph, provided that Contractor establishes to City's satisfaction that Contractor would have made a profit had the Project been completed, and provided further that the profit allowed shall not exceed 5 percent of cost.

3. Reasonable costs to Contractor of handling material returned to vendors, delivered to City or otherwise disposed of as directed by City.

4. A reasonable allowance for Contractor's internal administrative costs in preparing termination claim.

5. Except as provided in this Section, City shall not be liable for costs incurred by Contractor or Subcontractors after receipt of a notice of termination. Such non-recoverable costs include, but are not limited to, anticipated profits on Work not performed as of the date of termination, post-termination employee salaries, post-termination general administrative expenses, post-termination overhead or unabsorbed overhead, costs of preparing and submitting Contractor's Bid, attorney's fees of any type, and all costs relating to prosecution of claim or lawsuit.

6. City shall have no obligation to pay Contractor under this Section unless and until Contractor provides City with updated and acceptable as-builts and Project Record Documents for Work completed prior to termination.

D. In arriving at the amount due Contractor under this clause, there shall be deducted in whole (or in the appropriate part[s] if the termination is partial):

1. All unliquidated advances or other payments on account previously made to Contractor, including without limitation all payments applicable to the terminated portion of Contract Documents;

2. Any claim which City may have against Contractor in connection with Contract Documents; and

3. The agreed price for, or proceeds of sale of, any materials, supplies, or other things kept by Contractor or sold under provisions of this Section, and not otherwise recovered by or credited to City.

7.10 Contractor's Cost Data

Contractor shall maintain cost accounting records for the contract pertaining to, and in such a manner as to provide a clear distinction between, the following six categories of costs of work during the life of the contact:

A. Direct costs of contract item work.

B. Direct costs of changes in character in conformance with Section 3.3, Change in Work.

C. Direct costs of extra work in conformance with Section 3.3, Change in Work.

D. Direct costs of work not required by the contract and performed for others.

E. Direct costs of work performed under a notice of potential claim in conformance with the provisions in Section 9.

F. Indirect costs of overhead.

See also section 3.4, Change in Contract Price, regarding cost accounting records for daily extra work.

City shall have the right to inspect, audit, and copy Contractor's books and records related to the Project wherever located, and to inspect the Site, including Contractor's trailer, or other job Site office, and this requirement shall be contained in the subcontracts of Subcontractors working on Site. Contractor shall maintain in good order and City shall have the right to inspect and obtain copies of the following documents at all times: all Contract Documents, all planning and design documents, all Bid Documents, all design modification proposals, all value engineering or other cost reduction proposals, all revisions made to the original design, and all job progress reports and photographs, and as-built drawings maintained by Contractor.

City or any of its duly authorized representatives shall, from start of work until the expiration of 4 years after filing the Notice of Completion and Acceptance under this Contract or any subcontract under it, have access to and the right to examine any of Contractor's or subcontractor's payrolls, records of personnel, invoices of materials, records of plant and equipment costs, and any and all other directly pertinent books, documents, papers, and records of such Contractor or subcontractors, involving transactions related to said Contract or subcontracts. In the event State or Federal funds are involved in the financing of the project, the State or Federal Government shall have the same rights of inspection as City.

The cost accounting records for this Contract shall be maintained separately from other contracts during the life of this Contract, and for a period of not less than 3 years after the date of acceptance of the Work. If Contractor intends to file claims against City, Contractor shall keep all required cost accounting records until complete resolution of all claims has been reached.

7.11 Coordination with Utilities

In general, the location of existing utility facilities as shown on the Drawings is approximate. This information has been obtained from utility maps furnished by the various agencies involved, and City does not guarantee either the correctness of locations or the extent of such locations.

Service laterals, such as house sanitary, water, electrical, gas, cable TV, storm or telephone cables, or appurtenances, may not all be shown on the Drawings. City may not indicate the presence of service laterals or appurtenances whenever the presence of such utilities can be inferred from the presence of other visible facilities, such as buildings, meter boxes or junction boxes, on or adjacent to the construction Site. No changes in the Contract Price or Contract time will be made due to the presence of unidentified or incorrectly located service laterals or appurtenances. It shall be the responsibility of Contractor to ascertain the exact location of the utility facilities.

Unless otherwise indicated on the Drawings or specified in the Specifications, Contractor shall maintain in service all utilities including house services, power, lighting, and telephone conduits, and any other surface or subsurface structure or facility of any nature that may be affected by the Work; provided, however, that Contractor, for convenience, may arrange with the owner to temporarily disconnect house service lines or other facilities along the line of the work. The cost of disconnecting and restoring such utilities shall be borne by Contractor.

In the event that a main or trunk line utility facility is encountered which interferes with the Work and is neither shown on the Drawings nor specified in the Specifications, Contractor shall immediately notify City in writing. City will either have the appropriate utility company or public agency relocate the facility, or City will direct Contractor to relocate the facility in accordance with Section 3.3, Change in Work.

In the event that a main or trunk line utility facility is encountered which interferes with the Work and which Contractor believes is not shown on the Drawings or indicated in the Specifications with reasonable accuracy, Contractor shall immediately notify City in writing. Reasonable accuracy is defined as being within the tolerances noted on the Drawings. If City determines that the main or trunk line utility facility was shown on the Drawings or indicated in the Specifications with reasonable accuracy, Contractor shall be solely responsible for relocation or removal, and no additional time will be granted nor will additional compensation be made for any additional work required. If City determines that the main or trunk line utility facility was not shown on the Drawings or indicated in the Specifications with reasonable accuracy, City will either have the appropriate utility company or public agency relocate the facility, or City will direct Contractor to relocate the facility in accordance with Section 3.3, Change in Work.

When a delay in the completion of the project is caused by the failure of City or the owner of a utility facility to provide for removal or relocation of existing main or trunk line utility facilities which are not shown on the Drawings or indicated in the Specifications, or which are not shown on the Drawings or indicated in the Specifications with reasonable accuracy, the Contract time will be extended in accordance with Section 3.5, Change of Contract Time.

7.12 Temporary Facilities

A. Temporary Electricity

Contractor shall provide, maintain, and pay for electrical power at the Site for construction purposes and for Contractor's and Construction Manager's trailers. Contractor must provide all necessary wiring and appurtenances for connection to City's system.

B. Temporary Communications

Provide, maintain, and pay for all applicable communications and data services, without limitation, to Contractor's field office commencing at time of Project mobilization, including all installation and connection charges.

C. Temporary Water

1. Provide, maintain, and pay for suitable quality water service required for construction operations.

2. All water required for and in connection with the Work, including without limitation for dust control, shall be furnished by and at the expense of Contractor. Contractor will be responsible for all costs/fees associated with water usage. Contractor shall furnish necessary pipe, hose, nozzles, meter, and tools and perform all necessary labor. Unnecessary waste of water will not be permitted. Special hydrant wrenches shall be used for opening and closing fire hydrants; in no case shall pipe wrenches be used for this purpose. Contractor to coordinate services with the appropriate Water Company.

D. Fence

1. All existing fences affected by the Work shall be maintained by Contractor until Final Completion. Fences which interfere with construction operations shall not be relocated or dismantled until City gives written permission to do so, and the period the fence may be left relocated or dismantled has been agreed upon. Where fences must be maintained across the construction easement, adequate gates shall be installed. Gates shall be kept closed and locked at all times when not in use.

2. On completion of the Work across any tract of land, Contractor shall restore all fences to their original or to a better condition and to their original locations. Contractor will be responsible for all costs associated with the relocating of the fence as required for new installation of work.

E. Temporary Sanitary Facilities

1. Provide and maintain required temporary buildings with sanitary toilets for use of all workers. At a minimum, sanitary facilities shall be located at trailer site, staging area, and adjacent to

work area and as far away from adjacent residences as possible. Location must be approved by City prior to placement.

2. Sanitary facilities shall be of reasonable capacity, properly maintained throughout the construction period, and obscured from public view to the greatest practical extent. If toilets of the chemically treated type are used, at least one toilet will be furnished for each 20 persons. Contractor shall enforce the use of such sanitary facilities by all personnel at the Site.

3. Comply with all minimum requirements of the Health Department or other public agency having jurisdiction; maintain in a sanitary condition at all times.

7.13 Project Record Documents

A. Project Record Drawings

1. During the construction period, maintain a set of prints of Contract Drawings and Shop Drawings for Project Record Documents purposes. Label each document (on first sheet or page) "PROJECT RECORD" in 2-inch high printed letters. Keep record documents current. Note: A reference by number to a Change Order, CCD, RFI, RFQ, RFP, Field Order or other such document is not acceptable as sufficient record information on any record document. Do not permanently conceal any Work until required information has been recorded

2. Mark the PROJECT RECORD drawings to indicate the actual installation where the installation varies appreciably from the installation shown originally. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later. Items required to be marked include but are not limited to:

- Dimensional changes to the Drawings
- Revisions to details shown on the Drawings
- Depths of various elements of foundation level or survey datum
- Horizontal and vertical location of underground utilities and appurtenances referenced to permanent surface improvements
- Location of internal utilities and appurtenances concealed in construction referenced to visible and accessible features of structure
- Locations of underground work, points of connection with existing utilities, changes in direction, valves, manholes, catch basins, capped stub outs, invert elevations, and similar items
- Actual numbering of each electrical circuit
- Field changes of dimension and detail
- Revisions to routing of piping and conduits
- Revisions to electrical circuitry
- Actual equipment locations
- Duct size and routing
- Changes made by Change Order or CCD
- Details not on original Contract Drawings
- Mark completely and accurately Project Record Drawing prints of Contract Drawings or Shop Drawings, whichever is the most capable of showing actual physical conditions. Where Shop Drawings are marked, show cross-reference on Contract Drawings location.
- Mark Project Record Drawing sets with red, erasable colored pencil; use other colors to distinguish between changes for different categories of the Work at the same location.
- Mark important additional information that was either shown schematically or omitted from original Drawings.
- Note CCD numbers; alternate numbers, Change Order numbers, and similar identification.

- Responsibility for Mark-up: Where feasible, the individual or entity who obtained Project Record Drawing data, whether the individual or entity is the installer, Subcontractor, or similar entity, is required to prepare the mark-up on Project Record Drawings.
  - (a) Accurately record information in an understandable and legible drawing technique.
  - (b) Record data as soon as possible after it has been obtained. In the case of concealed installations, record and check the mark-up prior to concealment.

3. Preparation of Record Drawings: Immediately prior to inspection for Certification of Substantial Completion, review completed marked-up Project Record Drawings with City. When authorized, prepare a full set of correct transparencies of Contract Drawings and Shop Drawings.
   - a. Incorporate changes and additional information previously marked on print sets. Erase, redraw, and add details and notations where applicable. Identify and date each Drawing; include the printed designation "PROJECT RECORD DRAWING" in a prominent location on each Drawing.
   - b. Refer instances of uncertainty to City for resolution.
   - c. Distribution: Whether or not changes and additional information were recorded, organize and bind original marked-up set of prints that were maintained during the construction period into manageable sets. Bind the set with durable paper cover sheets, with appropriate identification, including titles, dates, and other information on cover sheets.
4. Distribution of Marked-Up Drawings: Submit the marked-up Project Record Drawings set to City for City's records.
5. Shop Drawings and Samples: Maintain as record documents; legibly annotate Shop Drawings and Samples to record changes made after review.

B. Project Record Specifications

During the construction period, maintain one copy of the Project Specifications, including addenda and modifications issued, for Project Record Documents purposes.

Mark the Project Record Specifications to indicate the actual installation where the installation varies substantially from that indicated in Specifications and Modifications issued. Note related Project Record Drawing information, where applicable. Give particular attention to substitutions, selection of product options, Change Order and Construction Change Directive work, and information on concealed installation that would be difficult to identify or measure and record later.

1. In each Specification Section where products, materials or units of equipment are specified or scheduled, mark the copy with the proprietary name and model number of the product furnished.
2. Record the name of the manufacturer, catalog number, supplier and installer, and other information necessary to provide a record of selections made and to document coordination with Project Record Product Data submittals and maintenance manuals.
3. Note related Project Record Product Data, where applicable, for each principal product specified, indicate whether Project Record Product Data has been submitted in maintenance manual instead of submitted as Project Record Product Data.
4. Upon completion of mark-up, submit Project Record Specifications to City for City's records.

C. Additional Requirements for Final Project Record Documents

1. Prior to Substantial Completion of the Work, City will make available to Contractor originals of the Drawings and Specifications, as current Microsoft® Word for Windows, and current AutoCAD Land Development Desktop for Windows in drawing format (.DWG) files. Note all changes thereon for the final Project Record Documents and provide one set of mylar reproducibles, one set of revised Specifications and one set of disks or CDs to be submitted to City.

2. After Substantial Completion and before Final Completion, carefully transfer all data shown on the job set of Record Drawings to the corresponding computer files, coordinating the information as required.
   Clearly indicate at each affected detail and other drawings a full description of changes made during construction, and the actual location of items as previously specified.
   "Cloud" all affected areas.
   Stamp each Record Drawing with the following information:
   a. Project Record Document.
   b. Prepared by: Contractor's name, permanent address.
   c. Date prepared.
   d. Contractor's signature.
   e. City Project Number.

D. Project Record Product Data

1. During the construction period, maintain one copy of each Project Record Product Data submittal for Project Record Document purposes.
   a. Mark Project Record Product Data to indicate the actual product installation where the installation varies substantially from that indicated in Project Record Product Data submitted. Include significant changes in the product delivered to the Site, and changes in manufacturer's instructions and recommendations for installation.
   b. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
   c. Note related Change Orders and mark-up of Project Record Drawings, where applicable.
   d. Upon completion of mark-up, submit a complete set of Project Record Product Data to City for City's records.
   e. Where Project Record Product Data is required as part of maintenance manuals, submit marked-up Project Record Product Data as an insert in the manual, instead of submittal as Project Record Product Data.
   f. Contractor is responsible for mark-up and submittal of Project Record Product Data for its own Work.
2. Material, Equipment, and Finish Data:
   a. Provide data for primary materials, equipment and finishes as required under each Specification Section.
   b. Submit two sets prior to final inspection, bound in 8-1/2 inches by 11 inches three-ring binders with durable plastic covers; provide typewritten table of contents for each volume.
   c. Arrange by Specification Section number and give names, addresses, and telephone numbers of Subcontractors and suppliers. List:
      - Trade names.
      - Model or type numbers.
      - Assembly diagrams.
      - Operating instructions.
      - Cleaning instructions.
      - Maintenance instructions.
      - Recommended spare parts.
      - Product data.

E. Miscellaneous Project Record Submittals

Refer to other Specification Sections for miscellaneous record keeping requirements and submittals in connection with various construction activities. Immediately prior to Substantial Completion, complete miscellaneous records and place in good order, properly identified and bound or filed, ready for use and reference. Submit to the City for City's records. Categories of requirements resulting in miscellaneous records include, but are not limited to, the following:

- Field records on excavations and foundations
- Field records on underground construction and similar work

- Survey showing locations and elevations of underground lines
- Invert elevations of drainage piping
- Surveys establishing lines and levels
- Authorized measurements utilizing unit prices or allowances
- Records of plant treatment
- Ambient and substrate condition tests
- Certifications received in lieu of labels on bulk products
- Batch mixing and bulk delivery records
- Testing and qualification of tradespersons
- Documented qualification of installation firms
- Load and performance testing
- Inspections and certifications by governing authorities
- Leakage and water-penetration tests
- Fire resistance and flame spread test results
- Final inspection and correction procedures

F. Recording

Post changes and modifications to the Contract Documents as they occur. Do not wait until the end of the Project. City may periodically review Project Record Documents to assure compliance with this requirement.

G. Submittal

1. At completion of Project, deliver Project Record Documents to City.
2. Accompany submittal with transmittal letter containing:
   a. Date
   b. Project title and number
   c. Contractor's name and address
   d. Number and title of each Project Record Document
   e. Certification that each document as submitted is complete and accurate, and signature of Contractor or Contractor's authorized representative.

7.14 Preconstruction Conference

City will call for and administer Preconstruction Conference at time and place to be announced (usually the week prior to start of Work at the Site).

Contractor, all major Subcontractors, and major suppliers shall attend Preconstruction Conference.

Agenda will include, but not be limited to, the following items.

- Schedules
- Personnel and vehicle permit procedures
- Use of premises
- Location of the Contractor's on-Site facilities
- Security
- Housekeeping
- Submittal and RFI procedures
- Inspection and testing procedures, on-Site and off-Site
- Utility shutdown procedures
- Control and reference point survey procedures
- Injury and Illness Prevention Program
- Contractor's Initial Schedule
- Contractor's Schedule of Values
- Contractor's Schedule of Submittals

City will distribute copies of minutes to attendees. Attendees shall have 7 Days to submit comments or additions to minutes. Minutes will constitute final memorialization of results of Preconstruction Conference.

7.15 Weekly Progress Meeting

City will schedule and administer weekly progress meetings throughout duration of Work. Progress meetings will be held weekly unless otherwise directed by City.

Meetings shall be held at Contractor's on-Site office unless otherwise directed by City.

An City representative will prepare agenda and distribute it 4 Days in advance of meeting to Contractor.

City will record. Within 3 Days after meeting, City will distribute minutes to Contractor, who will distribute to those affected by decisions made at meeting. Attendees can either submit comments or additions to minutes prior to the next progress meeting, or may attend the next progress meeting and submit comments or additions there. Minutes will constitute final memorialization of results of meeting.

Progress meetings shall be attended by Contractor's job superintendent, major Subcontractors and suppliers, City, and others as appropriate to agenda topics for each meeting.

Agenda will contain the following items, as appropriate:

- Review, revise as necessary, and approve previous meeting minutes
- Review of Work progress since last meeting
- Status of Construction Work Schedule, delivery schedules, adjustments
- Submittal, RFI, and Change Order status
- Review of the Contractor's safety program activities and results, including report on all serious injury and/or damage accidents
- Other items affecting progress of Work

7.16 Right of Way Delays

If, through the failure of the City to acquire or clear right of way, Contractor sustains loss which could not have been avoided by the judicious handling of forces, equipment and plant, there shall be paid to the Contractor that amount that the Engineer may find to be a fair and reasonable compensation for that part of the Contractor's actual loss, that, in the opinion of the Engineer, was unavoidable, determined as follows:

Compensation for idle time of equipment will be determined in the same manner as determinations are made for equipment used in the performance of extra work paid for on a force account basis, as provided in Section 3.04 of this document with the following exceptions:

- The right of way delay factor for each classification of equipment shown in the Department of Transportation publication entitled Labor Surcharge And Equipment Rental Rates, which is a part of the contract, will be applied to that equipment rental rate.
- The time for which the compensation will be paid will be the actual normal working time during which the delay condition exists, but in no case will exceed 8 hours in any one day.
- The days for which compensation will be paid will be the calendar days, excluding Saturdays, Sundays and legal holidays, during the existence of the delay, except that when rental of equipment is paid for under the provisions in Section 3.4, Change in Contract Price, no payment will be made for right of way delays in conformance with the provisions of Section 7.11, Coordination with Utilities.

Actual loss shall be understood to include no items of expense other than idle time of equipment and necessary payments for idle time of workers, cost of extra moving of equipment and cost of longer hauls. Compensation for idle time of equipment will be determined as provided in this Section and compensation for idle time of workers will be determined as provided in Section 3.4, Change in Contract Price, and no markup will be added in either case for overhead and profit.

The cost of extra moving of equipment and the cost of longer hauls will be paid for as extra work as provided in Section 3.3, Change in Work.

If performance of the Contractor's work is delayed as the result of the failure of the City to acquire or clear right of way, an extension of time determined pursuant to the provisions in Section 7.6, Liquidated Damages, will be granted.

SECTION 8. MEASUREMENT AND PAYMENT

8.1 Measurement of Quantities

All Work except Work based on time and materials will be paid for at a contract price per unit of measurement and will be measured by City in accordance with the United States Standard Measures and Metric. Unless otherwise specifically provided, City will compute quantities by a method which, in City's opinion, is best suited to obtain an accurate determination. The weights of metalwork, pipe, and other metal parts to be paid for on the basis of weight, will be determined by City. City will not provide scales for weighing material. City will determine the weight of each part or item in the most practicable manner and will use for that purpose manufacturer's weights, or in their absence, catalog weights or estimated weights, in that order; provided, that weights of nonmetallic coatings will be excluded.

8.2 Deductions from Payments

City may, at its option and at any time, retain out of any amounts due Contractor, sums sufficient to cover claims, filed pursuant to Section 3179 et seq. of the Civil Code.

8.3 Progress Payment

Unless otherwise agreed, Contractor shall submit to City, on or before the first (1st) day of each month, five (5) copies of a request for payment for the cost of the Work put in place during the period from the 1st day of the previous month to the 30th day of the previous month. Such requests for progress payments shall be based upon prices of all labor and acceptable materials incorporated in the Work up until midnight of the last day of that one month period, less the aggregate of previous payments. If Contractor is late submitting its payment request, that payment request may be processed at any time during the succeeding one month period, resulting in processing of Contractor's payment request being delayed for more than a day for day basis.

Acceptable materials shall be those materials which will become a part of the finished construction work. The basis for partial payments of lump sum or other unit Contract items will be determined by Contract between City and Contractor. City shall retain 5 percent of such estimated value of work done and 5 percent of the value of the materials so estimated to have been furnished and delivered and unused as aforesaid, and shall pay to Contractor, while carrying on the Work, the balance not retained as aforesaid, after deducting therefrom all previous payments and all sums to be kept or retained under the provisions of the Contract. No such estimate or payment shall be required to be made when, in the judgment of City, the Work is not proceeding in accordance with the provisions of the Contract, or when, in City's judgment, the total value of the Work done since the last estimate amounts to less than $1,000. No such estimate or payment shall be considered to be an acceptance of any defective Work or improper materials. All progress estimates and payments shall be subject to correction in the final estimate.

Contractor shall, at the time any payment request is submitted, certify in writing the accuracy of the payment request and that Contractor has fulfilled all scheduling requirements of this Document 00700 including updates and revisions. The certification shall be executed by a responsible officer of Contractor.

When an item of work is designated as (F) in the Bid Form, (Document 00400), the estimated quantity for that item of work shall be the final pay quantity, unless the dimensions of any portion of that item are revised by the Engineer, or the item or any portion of the item is eliminated. If the dimensions of any portion of the item are revised, and the revisions result in an increase or decrease in the estimated quantity of that item of work, the final pay quantity for the item will be revised in the amount represented by the changes in the dimensions, except as otherwise provided for minor structures in Caltrans Standard Specifications, Section 51, "Measurement." If a final pay item is eliminated, the estimated quantity for the item will be eliminated. If a portion of a final pay item is eliminated, the final pay quantity will be revised in the amount represented by the eliminated portion of the item of work.

The estimated quantity for each item of work designated as (F) in the Bid Form, (Document 00400) shall be considered as approximate only, and no guarantee is made that the quantity which can be determined by computations, based on the details and dimensions shown on the plans, will equal the estimated quantity. No allowance will be made in the event that the quantity based on computations does not equal the estimated quantity.

In case of discrepancy between the quantity shown in the Bid Form for a final pay item and the quantity or summation of quantities for the same item shown on the plans, payment will be based on the quantity shown in the Bid Form.

When an item of work is designated as (P) in the Bid Form, (Document 00400), a portion of the estimated quantity for that item of work shall be eligible for partial payment.

8.4 Final Payment

As soon as practicable after Final Acceptance of the Work, Contractor shall submit to City five (5) copies of a final request for payment for the cost of the Work, which request will show deductions for prior payments and any other amounts to be retained under Section 8.2, Deduction from Payments. The amount determined due, less the amount retained, will be paid. This retained amount will not be due or payable until 35 days after the completion of all of the Work including punch list items and the recording of Notice of Completion and Final Acceptance in the manner provided by law, and until after Contractor has furnished City a release of any and all claims by Contractor or Subcontractors (Document 00650) against City arising by virtue of this Contract, except such claims in definite amounts as Contractor may specifically exempt from the operation of the release and the furnishing of any guaranty.

8.5 Scope of Payment

Payment for all items of Work at the unit or lump sum price shall be considered as full compensation for furnishing all labor, materials, tools, equipment, and incidentals necessary to complete the item of Work, and no additional allowance will be made therefor.

Payment for items of Work which are called for in the Specifications or shown on the Drawings but which are not separately identified in the Bid form shall be compensated as part of the bid price of one or more of the items which are listed, and no additional allowance will be made therefor.

8.6 Substitution Of Securities In Lieu Of Retention

Pursuant to provisions of Public Contract Code Section 22300, substitution of securities for any monies withheld under the Contract Documents to insure performance is permitted under following conditions:

At request and expense of Contractor, securities listed in Section 16430 of the Government Code, bank or savings and loan certificates of deposit, interest bearing demand deposit accounts, standby letters of credit, or any other security mutually agreed to by Contractor and City which are equivalent to the amount withheld under retention provisions of the Contract Documents shall be deposited with Controller or with a state or federally chartered bank in California, as the escrow agent, who shall then pay such monies to Contractor. Upon final acceptance and 35 days after the completion of all of the work including punch list items and the recording of the Notice of Completion, securities shall be returned to Contractor.

Alternatively, Contractor may request and City shall make payment of retentions earned directly to the escrow agent at the expense of Contractor. At the expense of Contractor, Contractor may direct the investment of the payments into securities and Contractor shall receive the interest earned on the investments upon the same terms provided for in this section for securities deposited by Contractor. Upon final acceptance and 35 days after the completion of all of the work including punch list items and the recording of the Notice of Completion, Contractor shall receive from escrow agent all securities, interest, and payments received by the escrow agent from City, pursuant to the terms of this section. Contractor shall pay to each subcontractor, not later than twenty (20) Days after receipt of the payment, the respective amount of interest earned, net of costs attributed to retention withheld from each subcontractor, on the amount of retention withheld to insure the performance of Contractor.

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

Contractor shall enter into escrow agreement according to Document 00680 (Escrow Agreement), as authorized under Public Contract Code Section 22300, specifying amount of securities to be deposited, terms and conditions of conversion to cash in case of default of Contractor, and termination of escrow upon completion of the Contract Work.

8.7 Effect of Payment

Payment will be made by City, based on City's observations at the Site and the data comprising the Application for Payment. Payment will not be a representation that City has:

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

SECTION 9. CLAIMS BY CONTRACTOR

9.1 General

A Contract Interpretation Disputes:

Should it appear to Contractor that the Work to be performed or any of the matters relative to the Contract Documents are not satisfactorily detailed or explained therein, or should any questions arise as to the meaning or intent of the Contract Documents, Contractor shall give written notice to City. Contractor shall bear all costs incurred in the giving of such notice. All issues regarding the interpretation of the Specifications shall be referred to City for interpretation and determination. City shall have the right but not the obligation to affirm or disaffirm any City interpretation of the Plans or Specifications, which affirmance or disaffirmance shall be final. All issues regarding the Contract Documents shall be determined by City whose determination shall be final. If Contractor should disagree with City's determination regarding any aspect of the Contract Documents, Contractor's sole and exclusive remedy is to file a claim in accordance with this Section. Notwithstanding and pending the resolution of any claim, Contractor shall diligently prosecute the Disputed Work (as defined in following paragraphs) to Final Completion.

B Work Disputes:

Should any dispute arise under the Contract Documents respecting the true value of any Work performed, the implementation of the Work required by the Contract Documents, any Work omitted, any extra Work which Contractor may be required to perform or time extensions, respecting the size of any payment to Contractor during the performance of the Contract Documents, or of compliance with Contract Documents procedures, the dispute shall be decided by City and its decision shall be final and conclusive. If Contractor disagrees with City's decision, Contractor's sole and exclusive remedy is to file a claim in accordance with this Section. Notwithstanding and pending the resolution of any claim, Contractor shall diligently prosecute the Disputed Work to Final Completion.

The claim notice and documentation procedure described in this Section applies to all claims and disputes arising under the Contract Documents, including without limitation any claim or dispute by any Subcontractor or material supplier. All Subcontractor and supplier claims of any type shall be brought only through Contractor as provided in this Section. Under no circumstances shall any Subcontractor or supplier make any direct claim against City.

"Claim" means a written demand or written assertion by Contractor seeking, as a matter of right, the payment of money, the adjustment or interpretation of the Contract Documents terms, or other relief arising under or relating to the Contract Documents. In order to qualify as a "claim," the written demand must state that it is a claim submitted under this Section.

A voucher, invoice, payment application, or other routine or authorized form of request for payment is not a claim under the Contract Documents. If such request is disputed as to liability or amount, then the disputed Portion of the submission may be converted to a claim under the Contract Documents by submitting a separate claim in compliance with claim submission requirements.

The provisions of this Section constitute a non-judicial claim settlement procedure, and also a claim presentment procedure by agreement under Section 930.2 of the Government Code, shall survive termination or completion of the Contract Documents, and may not be changed, waived, modified, or its requirements reduced absent a written change order approval by City Council. Contractor shall bear

all costs incurred in the preparation and submission of a claim. Pursuant to Government Code Section 930.2, the one-year period in Government Code section 911.2 shall be reduced to 150 days. Any claims presented in accordance with the Government Code shall affirmatively indicate Contractor's prior compliance with the claims procedure herein and previous dispositions under Section 9.2, Procedures, below.

Contractor shall impose the claim notice and documentation requirements in this Contract on Contractor's subcontractors of all tiers, and require them to submit to Contractor all claims against Contractor and/or City within the times and containing the documentation required by this Section. The claim notice and documentation procedure described in this Section applies to all claims and disputes arising under the Contract Documents, whether or not specifically referred to in any specific Portion of the Contract. Government Code Section 930.2 et. seq. applies to this procedure.

9.2 Procedures

Should any clarification, determination, action or inaction by City, Work, or any other event, in the opinion of Contractor, exceed the requirements of or not comply with the Contract Documents, or otherwise result in Contractor seeking additional compensation in time or money for any reason (collectively "Disputed Work"), then Contractor and City shall make good faith attempts to resolve informally any and all such issues, claims and/or disputes. Before commencing the Disputed Work, or within seven (7) Days after Contractor's first knowledge of the Disputed Work, whichever is earlier, Contractor must file a written notice of the Disputed Work with City stating clearly and in detail its objection and reasons for contending the Work or interpretation is outside the requirements of the Contract Documents. If a written notice of Disputed Work is not issued within this time period, or if Contractor proceeds with the Disputed Work without first having given the notice required by this Section, Contractor shall waive its rights to further claim on the specific issue.

City will review Contractor's timely notice of Disputed Work and provide a decision. If, after receiving the decision, Contractor disagrees with it or still considers the Work required of it to be outside of the requirements of the Contract Documents, it shall so notify City, in writing, within seven (7) Days after receiving the decision, that a formal claim will be issued. Within thirty (30) Days of receiving the decision, Contractor shall submit its claim in the form specified herein and all arguments, justification, cost or estimates, schedule analysis, and detailed documentation supporting its position. Contractor's failure to furnish notification within seven (7) Days and all justifying documentation within thirty (30) Days will result in Contractor waiving its right to the subject claim. If Disputed Work persists longer than thirty (30) days, then Contractor shall, every thirty (30) days until the Disputed Work ceases, submit to City a document titled "Claim Update" which shall update and quantify all elements of the Claim as completely as possible. Contractor's failure to submit a Claim Update or to quantify costs every thirty (30) days shall result in waiver of the claim for that thirty (30) day period. Claims or Claim Updates stating that damages will be determined at a later date shall not comply with this Section and shall result in Contractor waiving its claim(s).

Upon receipt of Contractor's formal claim including all arguments, justifications, cost or estimates, schedule analysis, and documentation supporting its position as previously stipulated, City or its designee will review the issue and render a final determination. City may in its discretion conduct an administrative hearing on Contractor's claim, in which case Contractor shall appear, participate, answer questions and inquiries, and present any further evidence or analysis requested by City to evaluate and decide Contractor's claim.

If Contractor's claims at project completion total less than $375,000, then claims resolution shall proceed in the manner prescribed by Section 1.5, Chapter 1, Part 3 of Division 2 of the California Public Contract Code. If such claims exceed $375,000, then Contractor shall prepare a compendium of claims not resolved as a result of these procedures, and submit them in a claim submitted under the Government Claims Act, Government. Code Section 901 *et seq.*, for final investigation and consideration of their settlement prior to initiation of any litigation thereon, as required by Government Code Section 945.4. For all claims under or over $375,000, pursuant to Government Code Section 930.2, the one-year period in Government Code Section 911.2 shall be reduced to 150 days.

Claims shall be calculated in the same manner as Change Orders per Section 3, Scope of Work. Except where provided by law, or elsewhere in these contract documents, if applicable, City shall not be liable for special or consequential damages. Contractor shall be limited in it's recovery on claims to the change order calculations set forth in Section 3, Scope of Work.

9.3 Claim Format

Contractor shall submit the claim justification in the following format: (a) Cover letter and certification of the accuracy of the contents of the claim, (b) summary of claim including underlying facts, entitlement, quantum calculations and Contract Document provisions supporting relief, (c) list of documents relating to claim including specifications, Plans, clarifications/requests for information, schedules, cost calculations, and other supporting documents, (d) chronology of events and correspondence, (e) analysis of claim merit, (f) analysis of claim cost, and (g) attach supporting documents referenced in (c).

9.4 Mediation

All claims not subject to the claim resolution procedures set forth in Section 9.2, Procedures, shall, as a condition precedent to litigation thereon, first be mediated. Mediation shall be non-binding and utilize the services of a mediator mutually acceptable to the parties, and, if the parties cannot agree, a mediator selected by the American Arbitration Association from its panel of approved mediators trained in construction industry mediation. All statutes of limitation shall be tolled from the date of the demand for mediation until a date two weeks following the mediation's conclusion. All unresolved claims shall be submitted to the same mediator. The cost of mediation shall be equally shared.

9.5 Exclusive Remedy

Contractor's performance of its duties and obligations specified in this Section and submission and mediation of a claim as provided in this Section is Contractor's sole and exclusive remedy for the payment of money, extension of time, the adjustment or interpretation of Contract Documents terms or other contractual or tort relief arising from the Work. This exclusive remedy and the limitation of liability (expressed herein and elsewhere throughout the Contract Documents) apply notwithstanding the completion, termination, suspension, cancellation, breach or rescission of the Work or the Contract Documents, negligence or strict liability by City, its representatives, consultants or agents, or the transfer of the Work or the Project to City for any reason whatsoever. Contractor waives all claims of waiver, estoppel, release, bar, or any other type of excuse for non-compliance with the claim submission requirements. Compliance with the claim submission and mediation procedures described in this Section is a condition precedent, and a prerequisite within the meaning of Section 930.6 of the Government Code, to the right to commence litigation or to seek to file a Government Code Claim (where applicable) or to commence any other legal action. No claim or issue not raised in a timely protest and timely claim submitted under this Section may be asserted in any Government Code Claim, in any subsequent litigation, or in any legal action. If Contractor fails to raise any claim(s) or issue(s) in a timely protest and timely claim submitted under this Section, then Contractor may not thereafter assert such claim(s) or issue(s) in any Government Code Claim, subsequent litigation, or legal action. City shall not be deemed to have waived any provision under this Section, if at City's sole discretion, a claim is accepted in a manner not in accord with Section.

END OF DOCUMENT

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DOCUMENT 00800

SPECIAL CONDITIONS

PART 1 GENERAL

1.1 SUMMARY

A. Document includes summary of Work including:
- 1.2 Work Covered By Contract Documents
- 1.3 Bid Items, Allowances, and Alternates
- 1.4 Work Under Other Contracts
- 1.5 Contract Time
- 1.6 Work Sequence
- 1.7 Work Days and Hours
- 1.8 Cooperation of Contractor and Coordination with Other Work
- 1.9 Maintenance, Product Handling, and Protection
- 1.10 Partial Occupancy/Utilization Requirements
- 1.11 Contractor Use of Premises
- 1.12 Lines and Grades
- 1.13 Protection of Existing Property, Structures and Utilities
- 1.14 Damage to Existing Property
- 1.15 Dust Control
- 1.16 Parking
- 1.17 Lay down / Staging Area
- 1.18 Permits
- 1.19 Punch List Verification
- 1.20 Actual Damages for Violations
- 1.21 Unfavorable Construction Conditions
- 1.22 Construction Site Access
- 1.23 Site Administration
- 1.24 Weather Delay
- 1.25 Project Record Documents
- 1.26 City Supplied Materials
- 1.27 Mobilization

- 2.1 Products Ordered In Advance (N/A)
- 2.2 City-Furnished Products

1.2 WORK COVERED BY CONTRACT DOCUMENTS

A. Work generally consists of building and landscaping improvements and all general conditions, general requirements and incidentals required to complete the Work in its entirety, as described in the Contract Documents. Work includes interior remodeling, electrical and plumbing upgrades, site concrete, AC paving, accessibility upgrades, planting and irrigation. Unless provided otherwise in the Contract Documents, all risk of loss to Work covered by Contract Documents shall rest with Contractor until Final Acceptance of the Work.

B. Contractor's use of the premises for trailer, storage and parking is limited to the construction area as approved by the City.

C. Contractor shall be solely responsible for all utilities (including without limitation electricity, water, gas, etc.) at the Site.

D. Existing equipment removed but not reused, as a part of the Work, shall be returned to the City where indicated. Contractor shall carefully remove all equipment, specified or indicated to be salvaged and reused, or to remain the property of City. Contractor shall store and protect salvaged items specified or indicated to be reused in the Work.. Salvaged items not to be reused in the Work, but to remain City's property shall be delivered by Contractor in good condition to City.

Any items indicated to be salvaged which are damaged in removal, storage, or handling, through carelessness or improper procedures, shall be replaced by Contractor in kind or with new items. Contractor may furnish and install new items, in exchange for those indicated to be salvaged, in which case such removed items will become Contractor's property. Existing materials and equipment, removed by Contractor, shall not be reused in the Work except where so specified or indicated.

E. This Document and Document 00700 (General Conditions) and the Special Provisions includes measures that Contractor shall follow to execute the work.

1.3 BID ITEMS, ALLOWANCES, AND ALTERNATES

Bid Items

A. Any Bid Item may be deleted from the Work and Contract Sum, in total or in part, prior to or after award of Contract, without compensation in any form or adjustment of other Bid Items or prices therefore, in accordance with Document 00700 (General Conditions).

B. Payment of all items is subject to the provisions of the Document 00700 (General Conditions).

C. For all Bid Items, furnish and install all work indicated and described in Specifications and all other Contract Documents, including connections to existing systems. Work and requirements applicable to each individual Bid Item, or unit of Work, shall be deemed incorporated into the description of each Bid Item. Bidder should take particular notice that any and all items of Work, called for in the Construction Documents, but not included in a description of any specific bid item, shall be considered as included in one (1) or more of the bid items and that no additional compensation for those items of Work, beyond the Base Bid, will be allowed. Work of this nature includes, but is not limited to, such items as flagmen, water, all safety requirements, or work and materials required to provide public convenience and safety, barricades, lights, vehicular detours, and pedestrian walkways.

D. For Lump Sum Bid items, bidder shall determine and include in its pricing all materials, labor, and equipment necessary to complete each Bid Item as shown and specified in the Contract Documents.

Allowances: NONE

Alternates

A. Alternative Item No. 1: The Lump Sum paid under this item shall include all costs for the construction of various landscape improvements as shown on the plans and specifications.

1.4 WORK UNDER OTHER CONTRACTS

Work at the site performed by others may include Landscaping and maintenance by City or a City's contractor.

1.5 CONTRACT TIME

The Contract Time will commence on the date indicated in the Notice to Proceed. City may give a Notice to Proceed at any time within 30 Days after the Notice of Award. Based on Contractor's swift submittal of necessary documents and expedited contract execution, Notice may be given approximately July 13, 2015. Contractor shall not do any Work pertaining to this project prior to the date on which the Contract Time commences. Contractor shall not do any Work at the Site prior to August 14, 2015.

Contractor shall achieve **Final Completion** of the entire Work and be ready for Final Payment in accordance with Section 00700 (General Conditions) by October 2, 2015.

1.6 WORK SEQUENCE

A. Constructor shall coordinate construction schedule and operations with City.

B. Contractor shall allow safe passage thru the construction area at all times. The trail must stay open for use during the project.

C. Contractor acknowledges that shoring may be required to maintain a safe excavation and protect facilities or pipelines, including both existing and recently constructed under this Contract. All expenses for shoring of excavations for construction of basins and pipelines shall be included.
D. When required by the specifications or contract documents or plans the Contractor shall follow the sequence of operations as set forth therein.

1.7 WORK DAYS AND HOURS

Work hours and noise pose a special concern for projects in residential neighborhoods. The City is very concerned for its residents and will diligently enforce the restrictions below. **Each violation of the restrictions by the general contractor, subcontractors, suppliers, Vendors and others working on the project will result in a $3,000 penalty being assessed against the General Contractor and deducted from each progress payment.**

A. **Work Days**: Monday-Friday inclusive, except as otherwise directed or approved by the City.
B. **Work Hours**: 7:00 a.m.-5:00 p.m. local time, weekdays, 9:00 a.m. – 5:00 p.m. on Saturdays, 9:00 – 4:00 p.m. Sundays. Also in accordance with the City Municipal Code Chapter 10.48 Community Noise Control.
C. **Worker Arrival and Parking**: Workers may arrive at the job site no earlier than 7:00 a.m. **Violations of these requirements will result in a $3,000 dollar penalty to Bidder/Contractor, per occurrence.**
D. **Equipment and Material Delivery and Off-Haul Hours**: No equipment or material may be delivered or off-hauled except between the hours of 7:00 a.m. and 5:00 p.m. No equipment that has a safety back up beeper may be operated before 7:00 a.m. on any day.
E. Work at the Site on weekends or holidays is not permitted, unless Contractor requests otherwise from City in writing at least 2 working days in advance and City approves in its sole discretion. In the case of Work by Contractor after normal working hours, Contractor shall be responsible for any additional inspection costs incurred by the City. Such costs may be withheld from any succeeding monthly progress payment.
F. Connections to Existing Facilities. Unless otherwise specified or indicated, Contractor shall make all necessary connections to existing facilities, including structures, drain lines, and utilities such as water, sewer, gas, telephone, and electric. In each case, Contractor shall receive permission from City or the owning utility prior to undertaking connections and coordinate as needed to accommodate the facilities operations. Contractor shall protect facilities against deleterious substances and damage.

G. Road Shutdown. Contractor shall execute the Work while roads are in operation except for the periods of permitted shutdown. For shutdown periods, Contractor shall prepare and submit a detailed plan that includes shutdown schedule, planned sequence of work, milestones and projected times of completions of activities, any anticipated problems, Contractor's supervisory personnel, actions desired of City and staff, and contingency plans. Contractor shall allow sufficient time for review and re-submittal of the shutdown plan until acceptable to City. Contractor shall employ sufficient labor, superintendence, and equipment on a 24-hour, 7 days a week basis during shutdown and other operational disruptions to complete Work within the specified periods at no additional cost to the City. Once initiated, Work may proceed on extra shift or around-the-clock basis as necessary. When required to minimize treatment process interruptions while complying with specified sequencing constraints, Contractor shall provide power, lighting, controls, instrumentation, and safety devices.

H. No non construction noise shall be allowed, this includes amplified music, radio or other noise not due to construction activities.

1.8 COOPERATION OF CONTRACTOR AND COORDINATION WITH OTHER WORK

A. Coordinate with City and any City forces, or other contractors and forces, as required by Document 00700 (General Conditions) and this document. City's facility will be accessible and useable at all times.
B. Employ a full time coordinator to constantly review Contract Documents, submittals, changes, and prepare overlay drawings as necessary to avoid conflicts, errors, omissions and untimely construction.

C. The existing facilities must be kept closed to the public for the duration of the project. Contractor is to secure the site from public access at all times. This may require the use of a security guard, signage, perimeter fencing and other measures. All payment for site security shall be included in Bid.

1.9 MAINTENANCE, PRODUCT HANDLING, AND PROTECTION

A. Transport, deliver, handle, and store materials and equipment at the Site in such a manner as to prevent the breakage, damage or intrusions of foreign matter or moisture, and otherwise to prevent damage.
B. Hazardous substance compliance: Provide City with copies of the OSHA Material Safety Data Sheets (MSDS) for all products containing a hazardous substance, examples: Adhesives, paints, sealants, and the like.
C. Packaging: Provide packaged material in manufacturer's original containers with seals unbroken and labels intact until incorporated into the Work.
D. Remove all damaged or otherwise unsuitable material and equipment promptly from the Site.
E. Protection: Protect all finished surfaces.
F. Asbestos Removal: If, during the progress of the Work, additional suspected asbestos-containing products are identified, Contractor shall stop work in the affected area and engage an asbestos removal Subcontractor to verify the materials and, if necessary, encapsulate, enclose, or remove and dispose of all asbestos in accordance with current regulations of the Environmental Protection Agency and the U. S. Department of Labor – Occupational Safety and Health Administration, the state asbestos regulating agency, and any local government agency. Payment for such work will be made by Change Order.
   Asbestos Removal Subcontractor's Qualifications. The Subcontractor for asbestos removal shall be regularly engaged in this type of activity and shall be familiar with the regulations that govern this work. The Subcontractor shall demonstrate to the satisfaction of City that it has successfully completed at least three asbestos removal projects, that it has the necessary staff and equipment to perform the work, and that it has an approved site for disposal of the asbestos. Liability insurance covering the asbestos abatement work shall be provided as specified in the Supplementary Conditions.
   Asbestos Removal Methods. The asbestos removal Subcontractor shall submit a work plan of its proposed removal procedure to City before beginning work and shall certify that the methods are in full compliance with the governing regulations. The work plan shall cover all aspects of the removal, including health and safety of employees and building occupants, hygiene facilities, employee certification, clearance criteria, transportation and disposal, enclosure techniques, and other techniques appropriate for the proposed work.
G. Cost of maintenance of systems and equipment prior to Final Acceptance will be considered as included in prices bid and no direct or additional payment will be made therefore.

1.10 PARTIAL OCCUPANCY/UTILIZATION REQUIREMENTS

A. Allow City to take possession of and use any completed or partially completed portion of the Work during the progress of the Work as soon as is possible without interference to the Work.
B. Possession, use of Work, and placement and installation of equipment by City shall not in any way evidence the completion of the Work or any part of it.
C. Contractor shall not be held responsible for damage to the occupied part of the Work resulting from City occupancy.
D. Make available, in areas occupied, on a 24-hour per day and 7-day per week basis if required, any utility services in condition to be put in operation at the time of occupancy.
   1. Responsibility for operation and maintenance of said equipment shall remain with Contractor.
   2. Make, and City shall certify, an itemized list of each piece of equipment so operated with the date operation commences.
   3. Itemized list noted above shall be basis for commencement of warranty period for equipment.
   4. City shall pay for utility cost arising out of occupancy by City during construction.
E. Use and occupancy by City prior to acceptance of Work does not relieve Contractor of its responsibility to maintain insurance and bonds required under the Contract until entire Work is completed and accepted by City.
F. Prior to date of Final Acceptance of the Work by City, all necessary repairs or renewals in Work or part thereof so used, not due to ordinary wear and tear, but due to defective materials or workmanship or to operations of Contractor, shall be made at expense of Contractor, as required in Document 00700 (General Conditions).

G. Use by City of Work or part thereof as contemplated by this Document 00800 shall in no case be construed as constituting acceptance of Work or any part thereof. Such use shall neither relieve Contractor of any responsibilities under Contract, nor act as waiver by City of any of the conditions thereof.
H. City may specify in the Contract Documents that portions of the Work, including electrical systems or separate structures, shall be substantially completed on dates described in preceding paragraphs of this Document 00800, if any, prior to substantial completion of all of the Work. Notify City in writing when Contractor considers any such part of the Work ready for its intended use and substantially complete and request City to issue a Certificate of Substantial Completion for that part of the Work.

1.11 CONTRACTOR USE OF PREMISES

A. Confine operations at Site to areas permitted by Contract Documents, permits, ordinances, and laws.
B. Do not unreasonably encumber Project Site with materials or equipment.
C. Assume full responsibility for protection and safekeeping of products stored on premises.
D. Move any stored products that interfere with operations of City or other contractor.
E. Parking, storage, staging, trailer and work areas shall be coordinated and approved by the City and comply with all other Contract documents requirements. Contractor's use of the premises for trailer, storage and parking is limited to areas the City will allow. Prior to placement of any parking, placement of equipment and supplies the Contractor shall negotiate with the City an area to be used by them.

1.12 LINES AND GRADES

A. All Work shall be done to the lines, grades, and elevations indicated on the Drawings and as specified in section 02015.
B. The Contractor is to provide all surveying for the project. The City will not be providing any points for horizontal or vertical controls. All additional survey, layout, and measurement work shall be performed by Contractor as a part of the Work and paid for in various items of work.
C. Contractor shall provide at its cost an experienced instrument person, competent assistants, and such instruments, tools, stakes and other materials required to complete the survey, layout, and measurement work. In addition, Contractor shall furnish, at its cost, competent persons and such tools, stakes, and other materials as City (and/or any Engineer) may require in establishing or designating control points, or in checking survey, layout, and measurement work performed by Contractor.
D. Contractor shall keep City informed, a reasonable time in advance, of the times and places at which it wishes to do Work, so that any checking deemed necessary by City may be done with minimum inconvenience to City and minimum delay to Contractor.
E. Contractor shall remove and reconstruct Work that is improperly located.

1.13 PROTECTION OF EXISTING PROPERTY, STRUCTURES AND UTILITIES

A. The Drawings may indicate existing above-grade and below-grade structures, drainage lines, storm drains, sewers, water, gas, electrical, water, phone and data cable and other similar items and utilities that are known to City.
B. Contractor shall locate these known existing installations before proceeding with trenching or other operations which may cause damage, shall maintain them in service where appropriate, and shall repair any damage to them caused by the Work, at no increase in Contract Sum.
C. Additional utilities whose locations are unknown to City are suspected to exist. Contractor must be alert to their existence. If additional utilities are encountered, Contractor must immediately report to City for disposition.
D. In addition to reporting, if a utility is damaged, Contractor must take appropriate action as provided in Document 00700 (General Conditions).
E. Additional compensation or extension of time on account of utilities not indicated or otherwise brought to Contractor's attention including reasonable action taken to protect or repair damage shall be determined as provided in Document 00700 (General Conditions).
F. Contractor shall carry out construction activities in a manner that does not disrupt privacy, access to private property, or traffic, except as allowed by permit, or does not disrupt the flow of storm water or impair the storm water channel.

1.14 DAMAGE TO EXISTING PROPERTY

A. Contractor will be responsible for any damage to existing structures, Work, materials, or equipment because of its operations and shall repair or replace any damaged structures, Work, materials, or equipment to the satisfaction of, and at no additional cost to, City.
B. Contractor shall protect all existing structures and property from damage and shall provide bracing, shoring, or other work necessary for such protection.
C. Contractor shall be responsible for all damage to streets, roads, curbs, sidewalks, highways, shoulders, ditches, embankments, culverts, bridges, or other public or private property, which may be caused by transporting equipment, materials, or workers to or from the Work. Contractor shall make satisfactory and acceptable arrangements with the agency having jurisdiction over the damaged property concerning its repair or replacement.

1.15 DUST CONTROL

A. Contractor shall take reasonable measures to prevent unnecessary dust. The following items shall be specifically implemented to control dust:
   1. All construction locations with active excavation shall be watered at least twice daily or more often as necessary.
   2. Cover all trucks hauling soil, sand, and other loose materials; or require all trucks to maintain at least two feet of freeboard.
   3. Pave, apply water daily, or apply non-toxic soil stabilizers on all un-paved access roads, parking areas, and staging areas at construction site.
   4. Sweep daily or more often as necessary, with water sweepers all paved access roads, parking areas, and staging areas at construction sites during project.
   5. Enclose, cover, or water twice daily, exposed stockpiles (dirt, sand, etc.)
   6. Limit the speed of all construction vehicles to 5 miles per hour while on the Site.

B. Buildings, swimming pools, or operating facilities which may be affected adversely by dust shall be adequately protected from dust. Existing and new machinery, motors, instrument panels, or similar equipment shall be protected by suitable dust screens. Proper ventilation shall be included with dust screens.

1.16 PARKING

If construction site parking is not available for Contractor's workers then workers must park vehicles on one of the streets adjacent to or near the project site, without blocking residential driveways and access, or elsewhere offsite.

1.17 LAYDOWN/STAGING AREA

Contractor shall utilize an area approved by the City for storage of all construction materials. This area shall be fenced and locked by Contractor for security purposes.

1.18 PERMITS

Applicable permits: Permits, agreements, or written authorizations that are known by the City to apply to this project are listed below:

Cal/OSHA Permit: The Contractor shall obtain, as applicable, a permit as required by Cal/OSHA for each of the following:

- Construction of trenches or excavations that are five feet or more in depth and into which a person is required to descend.
- Construction or demolition of any building, structure, or scaffolding for false-work more than three stories high, or the equivalent height (36 feet).
- Erection or dismantling of vertical shoring systems more than three stories high, or the equivalent height (36 feet).

All other permits that may be required, such as electrical, fire prevention, slope protection, etc., have not been applied for and shall be obtained by Contractor. Applicable permit fees will be reimbursed to the extent specified in Document 00700 (General Conditions).

1.19 PUNCH LIST VERIFICATION

A punch list examination will be performed upon Substantial Completion of Work. One follow-up review of punch list items for each discipline will be provided. If multiple Site visits are required to review punch list items, due to incompleteness of the Work by Contractor, Contractor may be required to reimburse City for these visits.

1.20 ACTUAL DAMAGES FOR VIOLATIONS

A. In addition to damages which are impracticable or extremely difficult to determine, for which liquidated damages will be assessed as described in Document 00700 (General Conditions) and Document 00520 (Contract), City may incur actual damages resulting from loss of use of any permit described in this Document, or from use in violation of legal or regulatory requirements where the violations result from Contractor's activities. Violations or threatened violations may subject the City to fines and/or other costs or civil liabilities.

B. Contractor shall be liable for and shall pay City the amount of any actual losses in addition to liquidated damages or other remedies provided by the Contract Documents.

C. The amount of liquidated damages provided in Document 00520 (Contract) is not intended to include, nor does the amount include, any damages incurred by City for reasons other those listed in that paragraph. Any money due or to become due to Contractor may be retained by City to cover both the liquidated and the actual damages described above and, should such money not be sufficient to cover such damages, City shall have the right to recover the balance from Contractor or its sureties.

1.21 UNFAVORABLE CONSTRUCTION CONDITIONS

During unfavorable weather, wet ground, or other unsuitable construction conditions, Contractor shall confine its operations to Work, which will not be affected adversely by such conditions. No portion of the Work shall be constructed under conditions, which would affect adversely the quality or efficiency thereof, unless special means or precautions are taken by Contractor to perform the Work in a proper and satisfactory manner.

1.22 CONSTRUCTION SITE ACCESS

Contractor shall, at all times, limit access to the Site to necessary personnel only. All personnel associated with construction of the Project shall enter the site through Contractor's access gate. Access for construction personnel shall be limited to the hours between 7:00 a.m. and 5:00 p.m. local time. All mail and deliveries (Federal Express, equipment, etc.) shall be sent to a separate address (at Contractor's gate), specifically arranged by Contractor for the Project. Contractor is responsible for providing adequate signage to alert delivery persons to the new address. Contractor is to secure the site from public access at all times. This may require the use of a security guard, signage, perimeter fencing and other measures. All payment for site security shall be included in Bid.

1.23 SITE ADMINISTRATION

Contractor shall be responsible for all areas of the Site used by it and by all Subcontractors in the performance of the Work. Contractor shall exert full control over the actions of all employees and other persons with respect to the use and preservation of property and existing facilities, except such controls as may be specifically reserved to City or others. Contractor shall have the right to exclude from the Site all persons who have no purpose related to the Work or its inspection, and may require all persons on the Site (except City's employees) to observe the same regulations Contractor requires of its employees.

1.24 WEATHER DELAY

See Document 00700 section 3.5 Change of Contract Time, subsection B. Extensions of Time for Delay Due to Excusable Inclement Weather.

1.25 PROJECT RECORD DOCUMENTS

Contractor shall prepare Record Drawings and Specification in accordance with Document 00700, recording and tracking changes in a timely manner. Contractor shall make copies of the annotated Project

Record Drawings and Specifications available to City and the Engineer of Record at intervals convenient to the Engineer of Record. Prior to any payment the Project Record Drawing will be reviewed by the City or City representative to verify that changes are being tracked.

1.26 CITY SUPPLIED MATERIALS

See Section 2.2 below.

1.27 MOBILIZATION

Mobilization shall conform to the provisions in Section 9-1.16D, "Mobilization" of the 2010 Standard Specifications and is eligible for partial payments since the contract documents contain a bid item for mobilization.

1.28 RECYCLING

The Contractor shall divert from landfill a minimum of 60 percent of all construction and demolition waste, in accordance with the City of Cupertino's Ordinance No. 10-2070. Submit a properly completed "Waste Management Plan" as a part of the permit application process. An application fee will not be required. Comply with the General Conditions, Article 3.13 – Inert Solids and Plant Materials Recycling for requirements for the collection of debris, identification and disposal of recyclable materials, and the documentation of recycling.

PART 2 PRODUCTS

2.1 PRODUCTS ORDERED IN ADVANCE (N/A)

2.2 CITY-FURNISHED PRODUCTS

A. City will furnish items as specified in the Technical Provisions.
B. City's Responsibilities:
   1. Arrange for and deliver City-reviewed Shop Drawings, Product Data, and Samples, to Contractor.
   2. Arrange and pay for delivery to site.
   3. On delivery, inspect City provided products jointly with Contractor.
   4. Submit claims for transportation damage and replace damaged, defective, or deficient items.
   5. Arrange for manufacturers' warranties, inspections, and service.
B. Contractor's Responsibilities:
   1. Review City-reviewed Shop Drawings, Product Data, and Samples.
   2. Receive and unload City and Contractor provided products at site; inspect for completeness or damage jointly with City.
   3. Handle, store, install, and finish products.
   4. Repair or replace items damaged after receipt.
   5. Install into Project per Contract Documents.

PART 3 EXECUTION – NOT USED

END OF DOCUMENT

DOCUMENT 00821

INSURANCE

A. At or before the date specified in Document 00200 (Instructions to Bidders), Contractor shall furnish to City satisfactory proof that Contractor has taken out for the entire period covered by the Contract the following classes of insurance in the form and with limits and deductibles specified below:

1. Comprehensive General Liability Insurance covering claims for personal injury, bodily injury and property damage arising out of the Work and in a form providing coverage not less than that of a standard Commercial General Liability Insurance policy ("Occurrence Form"). Such insurance shall provide for all operations and include independent contractors, products liability, completed operations for one year after Final Completion of the last Phase to be completed and acceptance of the final payment for the Work, contractual liability, and coverage for explosion, collapse and underground hazards. The limits of such insurance shall not be coverage of less than $2,000,000 each occurrence, $4,000,000 general aggregate limit.. The policies shall be endorsed to provide Broad Form Property Damage Coverage.
2. Comprehensive Automobile Liability Insurance covering all owned, non-owned, and hired vehicles. Such insurance shall provide coverage not less than the standard Comprehensive Automobile Liability policy with limits not less than $1,000,000 each person Bodily Injury, $1,000,000 each occurrence Bodily Injury, and $1,000,000 each occurrence Property Damage.
3. All-Risk Course of Construction Insurance **N/A** for physical loss or damage to the Work, temporary buildings, falsework, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws, water damage, flood, and damage caused by frost and freezing, in the amount of 100 percent of the completed value of the Work to be performed under this Contract. Deductible shall not exceed $25,000. Each loss shall be borne by Contractor.
4. Workers' Compensation Insurance for all persons whom the Contractor may employ in carrying out Work contemplated under Contract Documents, in accordance with the Act of Legislature of State of California, known as "Workers' Compensation Insurance and Safety Act," approved May 26, 1913, and all acts amendatory or supplemental thereto, in the statutory amount, $1,000,000 each occurrence.

B. All policies of insurance shall be placed with insurers acceptable to City. The insurance underwriter(s) must have an A. M. Best Company rating of A, 7 or better or otherwise acceptable to the City. Required minimum amounts of insurance may be increased should conditions of Work, in opinion of City, warrant such increase. Contractor shall increase required insurance amounts upon direction by City.

C. Required Endorsements: The policies required under paragraphs A.1, A.2 and A.3 of this Document shall be endorsed as follows:

1. Name the City of Cupertino, a Municipal Corporation of the State of California, its City Council, and their employees, representatives, consultants (including without limitation Consulting Engineer), and agents, and Engineers, as additional insureds, but only with respect to liability arising out of the activities of the named insured.
2. Each such policy shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limit of the insurance company's liability required under paragraphs A.1, A.2 and A.3 of this Document 00821.(Endorsement of Aggregate Limits of Insurance Per Project)
3. Insurance shall be primary and no other insurance or self-insured retention carried or held by City shall be called upon to contribute to a loss covered by insurance for the named insured.
4. Insurance shall contain a provision requiring the insurance carriers to waive their rights of subrogation against City and all additional insureds, as well as other insurance carriers for the Work.

D. Certificates of insurance and endorsements shall be on forms provided in Document 00530, (Insurance Forms) have clearly typed thereon City Project Number and title of Contract Documents. Written notice of cancellation, non-renewal, or reduction in coverage of any policy shall be mailed to City (Attention: Contract Administration/Inspection) at the address listed in Document 00520 (Contract), 30 Days in advance of the effective date of the cancellation, non-renewal, or reduction in coverage. Contractor shall maintain insurance in full force and effect during entire period of performance of Contract Documents, the following insurance in amounts not less than the amounts specified. Contractor shall keep insurance in force during warranty and guarantee periods, except that Contractor may discontinue All-Risk Course of Construction Insurance after Final Payment. At time of making application for extension of time, and during all periods exceeding the Contract Time resulting from any cause, Contractor shall submit evidence that insurance policies will be in effect during requested additional period of time.

Upon City's request, Contractor shall submit to City, within 30 Days, copies of the actual insurance policies or renewals or replacements.

E. Contractor shall pay all insurance premiums, including any charges for required waivers of subrogation or the endorsement of additional insureds. If Contractor fails to maintain insurance, City may take out comparable insurance, and deduct and retain amount of premium from any sums due Contractor under Contract Documents.

F. If injury occurs to any employee of Contractor, Subcontractor or sub-subcontractor for which the employee, or the employee's dependents in the event of employee's death, is entitled to compensation from City under provisions of the Workers' Compensation Insurance and Safety Act, as amended, or for which compensation is claimed from City, City may retain out of sums due Contractor under Contract Documents, amount sufficient to cover such compensation, as fixed by the Act, as amended, until such compensation is paid, or until it is determined that no compensation is due. If City is compelled to pay compensation, City may, in its discretion, either deduct and retain from the Contract Sum the amount so paid, or require Contractor to reimburse City.

G. Nothing in this Document 00821 shall be construed as limiting in any way the extent to which Contractor or any Subcontractor may be held responsible for payment of damages resulting from their operations.

H. Except that Subcontractors need to obtain coverage of not less than $2,000,000 each occurrence, $4,000,000 general aggregate limit of Comprehensive General Liability insurance, all Subcontractors shall maintain the same insurance required to be maintained by Contractor with respect to their portions of the Work, and Contractor shall cause the Subcontractors to furnish proof thereof to City within ten Days of City's request.

I. The following provisions apply to any licensed professional engaged by Contractor to perform portions of the Work ("Professional").

1. Each Professional shall maintain the following insurance at its sole cost and expense:

a. Provided such insurance is customarily required by City when professionals engaged in the profession practiced by Professional directly contract with City, Professional Liability Insurance, insuring against professional errors and omissions arising from Professional's work on the Project, in an amount not less than $1,000,000 combined single limit for each occurrence. If Professional cannot provide an occurrence policy, Professional shall provide insurance covering claims made as a result of performance of Work on this Project and shall maintain such insurance in effect for not less than two years following Final Completion of the Project.

b. All insurance required by paragraphs A.1, A.2 and A.4 of this Document 00821. Professional shall satisfy all other provisions of paragraphs A, B, C, D, E and F of this Document 00821 relating to that insurance, including without limitation providing required insurance certificates (containing the required endorsements) before commencing its Work on the Project.

J. If required by City, Contractor shall obtain and maintain Contractor's Pollution Legal Liability Insurance in a form, with limits, and from an insuring entity reasonably satisfactory to City.

END OF DOCUMENT

DOCUMENT 00822

APPRENTICESHIP PROGRAM

Contractor and Subcontractors shall comply with the requirements of California Labor Code Sections 1776, 1777.5, and 1777.6 concerning the employment of apprentices by Contractor or Subcontractors. Willful failure to comply may result in penalties, including loss of the right to Bid on or receive public works contracts.

Section 1777.5, as amended, requires a Contractor or Subcontractor employing tradespersons in any apprenticeable occupation to apply to the joint apprenticeship committee nearest the site of a public works project and which administers the apprenticeship program in that trade for a certification of approval. The certificate shall also fix the ratio of apprentices to journeypersons that will be used in performance of the Contract. The ratio of work performed by apprentices to journeypersons in such cases shall not be less than one hour of apprentices work for every five hours of labor performed by journeypersons (the minimum ratio for the land surveyor classification shall not be less than one apprentice for each five journeypersons), except:

A. When unemployment for the previous three-month period in the area exceeds an average of 15 percent;

B. When the number of apprentices in training in the area exceeds a ratio of one to five;

C. When a trade can show that it is replacing at least 1/30 of its membership through apprenticeship training on an annual basis state-wide or locally; or

D. Assignment of an apprentice to any work performed under a public works contract would create a condition which would jeopardize his or her life or the life, safety, or property of fellow employees or the public at large or if the specific task to which the apprentice is to be assigned is of such a nature that training cannot be provided by a journeyperson.

Contractor is required to make contributions to funds established for administration of apprenticeship programs if Contractor employs registered apprentices or journeypersons in any apprenticeable trade on such contracts and if other contractors on the public works site are making such contributions.

Information relative to apprenticeship standards, wage schedules, and other requirements may be obtained from the Director of the California Department of Industrial Relations, or from the Division of Apprenticeship Standards and its branch offices.

END OF DOCUMENT

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SECTION 05 50 00
METAL FABRICATIONS

1 PART 1.00 GENERAL

1.1 DESCRIPTION:

A. SECTION INCLUDES

1. Miscellaneous metal and fabricated ferrous metal items, galvanized and prime painted.

2. Metal support frames.

B. PRODUCTS FURNISHED BUT NOT INSTALLED UNDER THIS SECTION

Furnish metal fabrications to be cast in structural concrete.

C. RELATED SECTIONS

1. Section 09 90 00 - Painting: Field applied paint finish for metal fabrications.

2. Other metal items are specifically called for and described in other sections.

3. Structural Drawings and specifications.

1.2 REFERENCES

A. ANSI A14.3 - Safety Requirements for Fixed Ladders.

B. ASTM A53 - Hot-Dipped, Zinc-Coated Welded and Seamless Steel Pipe.

C. ASTM A283 - Low and Intermediate Tensile Strength Carbon Steel Plates, Shapes and Bars.

D. ASTM A307 - Low-Carbon Steel Externally and Internally Threaded Fasteners.

E. ASTM A370 - Mechanical Testing of Steel Products.

F. ASTM A386 - Zinc-Coating (Hot-Dip) on Assembled Steel Products.

G. ASTM A500 - Cold-formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes.

H. AWS D1.1 - Structural Welding Code.

I. CBC – 2013 - California Building Code.

J. FS TT-P-31 - Paint, Oil: Iron Oxide, Ready Mix, Red and Brown.

K. FS TT-P-641 - Primer Coating, Zinc Dust-Zinc Oxide (for Galvanized Surfaces.)

1.3 SUBMITTALS

A. Submit under provisions of Division 01.

B. Shop Drawings: Indicate profiles, sizes, connection attachments, reinforcing, anchorage, size and type of fasteners, and accessories of fabricated items. Include erection drawings, elevations, and details where applicable. Indicate welded connections using standard AWS welding symbols. Indicate net weld lengths.

1.4 QUALIFICATIONS

Welders' Certificates: Submit under provisions of Division 01, certifying welders employed on the work have passed AWS qualification tests within the previous 12 months.

1.5 FIELD MEASUREMENTS

Verify that field measurements are as indicated on shop drawings.

2 PART 2.00 PRODUCTS

2.1 MATERIALS

A. Steel Plates and Bars: ASTM A283.

B. Steel Pipe: ASTM A53, Grade B, Schedule 40.

C. Sheet Steel: ASTM A366, cold rolled sheet steel; 24 gauge minimum thickness.

D. Bolts, Nuts, and Washers: ASTM A307; no upset threads permitted.

E. Welding Materials: AWS D1.1; type required for materials being welded.

F. Shop and Touch-Up Primer: FS TT-P-31, red or brown.

G. Touch-up Primer for Galvanized Surfaces: FS TT-P-641.

2.2 FABRICATION

A. Verify dimensions on site prior to shop fabrication.

B. Fabricate items with joints tightly fitted and secured.

C. Fit and shop assemble in largest practical sections, for delivery to site.

D. Grind exposed welds flush and smooth with adjacent finished surface. Ease exposed edges to small uniform radius.

E. Exposed Mechanical Fastenings: Flush countersunk screws or bolts; unobtrusively located; consistent with design of structure, except where specifically noted otherwise.

F. Make exposed joints butt tight, flush, and hairline.

G. Supply components required for anchorage of metal fabrications. Fabricate anchorage and related components of same material and finish as metal fabrication, except where specifically noted otherwise.

2.3 FINISH

A. Clean surfaces of rust, scale, grease, and foreign matter prior to finishing.

B. Do not prime surfaces in direct contact bond with concrete and where field welding is required.

C. Prime paint interior items with one coat unless noted otherwise. Finish paint any exposed surface (visible from any point within the occupied portion of the building)

3 PART 3.00 - EXECUTION

3.1 EXAMINATION

A. Verify that field conditions are acceptable and are ready to receive work.

B. Beginning of installation means erector accepts existing conditions.

3.2 PREPARATION

A. Obtain Owner's authorization prior to site cutting and making adjustments not scheduled.

B. Clean and strip site primed steel items to bare metal where site welding is scheduled.

C. Make provision for erection loads with temporary bracing. Keep work in alignment.

D. Supply items required to be cast into concrete with setting templates, to appropriate sections.

3.3 INSTALLATION

A. Install items plumb and level, accurately fitted, free from distortion or defects.

B. Perform field welding in accordance with AWS D1.1.

C. After installation, touch-up field welds, scratched and damaged surfaces with primer.

END OF SECTION

SECTION 06 10 00
ROUGH CARPENTRY

1 PART 1.00 - GENERAL

1.1 DESCRIPTION

A. SECTION INCLUDES

1. Wood framing and sheathing

2. Light gauge metal connectors.

3. Bolts, lag screws, washers, spikes and nails necessary for connecting wood framing and sheathing.

4. Miscellaneous metal connectors

5. Temporary bracing

B. RELATED SECTIONS

1. Section 05 50 00 – Metal Fabrications

1.2 REFERENCES

A. APA - American Plywood Association "Grades and Specifications."

B. ACLIB, Standard Grading and Dressing Rules No. 17

C. CBC 2010 California Building Code

1.3 QUALITY ASSURANCE

A. Deliver products to site, store and protect under provisions of Section 01.

B. All framing lumber shall be identified by the grade stamp of the West Coast Lumber Inspection Bureau.

2 PART 2.00 - PRODUCTS

2.1 FRAMING

A. General: Faming shall be Douglas Fir Coast Region, conforming to West Coast Lumber Inspection Bureau Standard Grading and Dressing Rule No. 17, as amended to date.

2.2 PLYWOOD

A. General: Plywood shall conform to U.S. Product Standard PS 1-95, American Plywood Association. Each sheet shall be stamped with the PS and/or APA grademark.

1. Specific types and grades are noted on the drawings.

2.3 ACCESSORIES

A. Light Gauge Metal connectors: Simpson Company Strong Tie Connectors, or equal, unless noted otherwise on the drawings.

B. Nails: as specified on drawings.

3 PART 3.00 - EXECUTION

3.1 GENERAL

A. All framing operations shall conform to the requirements of the 2013 California Building code.

B. Set horizontal and sloped members with crown up. Do not notch, bore or cut members for pipes, ducts, conduits, or other reasons except as shown on the drawings. Make all bearings full and all blocking solid unless others indicated on the drawings. Finish all bearing surfaces on which structural members are to rest so as to give sure and even support. Where framing members slope, cut or notch the ends as required to give uniform bearing surface.

C. Place solid blocking at ends of spans and over supports.

D. Remove all wood, including form lumber, scrap lumber, shavings and sawdust in contact with ground. Leave no wood buried in any fill or backfill.

E. Contractor shall consult with other trades to coordinate and set furring and blocking where required for backing, pipes, conduit, equipment or architectural features

F. Install fire blocking in accordance with the Building Code.

G. All other lumber materials, not specifically described but required for the proper completion of the work, shall be new, first quality of their respective kinds and subject to the approval of the Architect/ Engineer.

3.2 WORKMANSHIP

A. All rough carpentry shall produce joist true, tight, and well nailed with all members assembled in accordance with the drawings and with all pertinent regulations.

B. Cut all wood members to fit. Do not shim.

C. Erect all members straight, plumb and accurately located.

3.3 INSTALLATION

A. Contractor will be responsible to erect the wood framing true to line and grade.

1. The Contractor shall temporarily brace the wood framing in both directions and shall maintain walls, joists, beams, and other framing members plumb until the final connections of the framework and construction of diaphragms are complete.

2. The Contractor shall provide such temporary shoring and bracing of wood framing as required to adequately and safely support any or all loads imposed upon the structure during construction.

3.4 PREPARATION FOR SITE FINISHING

A. Set exposed fasteners, except as otherwise specified. Apply wood filler in exposed fastener indentations. Sand work smooth.

B. Site Finishing: Refer to Section 09 90 00 - Painting.

3.5 PROTECTION

A. Protect surrounding areas from damage during construction.

3.6 Cleanup

A. Keep premises clean and clear of debris caused from this portion of the work.

END OF SECTION

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SECTION 06 41 00
CASEWORK

1 PART 1.00 - GENERAL

1.1 DESCRIPTION:

A. SECTION INCLUDES

1. Plastic Laminate faced cabinet units.

2. Cabinet hardware.

B. RELATED SECTIONS

1. Section 06 10 00 - Rough Carpentry: Grounds and support framing.

2. Section 06 42 00 – Finish Carpentry

3. Section 11 90 00 – Equipment

4. Section 12 36 63 – Quartz Countertops

1.2 REFERENCES

A. ALA - American Laminators Association.

B. ANSI A208.1 - Mat Formed Wood Particleboard.

C. CBC – 2013 California Building Code.

D. FS MM-L-736 - Lumber Hardwood.

E. NEMA LD3 - High Pressure Decorative Laminates.

F. PS 1 - Construction and Industrial Plywood.

G. PS 20 - American Softwood Lumber Standard.

H. AWI (Architectural Woodwork Institute) “Architectural Woodwork Standards”.

1.3 DEFINITIONS

A. Exposed Portions:

1. Surfaces visible when doors and drawers are closed.

2. Underside of bottoms of cabinets over 4'-0" above finished floor.

3. Visible front edges of web frames, ends, divisions, tops, shelves, and hanging stiles.

4. Sloping tops of cabinets that are visible.

5. Visible portions of bottoms, tops and ends in front of sliding doors.

6. Visible portions of open shelves, including top, front and bottom.

7. Top, sides, back and bottom of cabinet with open shelves.

B. Semi-Exposed Portions:

1. Shelves inside cabinet doors

2. Divisions behind doors and drawers.

3. Interior face of ends, backs, and bottoms.

4. Drawer sides, subfronts, backs and bottoms.

5. The underside of bottoms of cabinets between 2'-6" and 4'-0" above the finished floor. (except those with open shelves. See note A.7 above)

6. Interior faces of hinged doors.

7. Visible surfaces in open cabinets or behind glass.

C. Concealed Portions:

1. Toe space unless otherwise specified.

2. Sleepers.

3. Web frames, stretchers, and solid sub-tops.

4. Security panels.

5. Underside of bottoms of cabinets less than 2'-6" above the finished floor.

6. Flat tops of cabinets 6'-0" or more above the finished floor, except if visible from an upper building level.

7. The three non-visible edges of adjustable shelves.

8. The underside of countertops, knee spaces, and drawer aprons.

9. The faces of cabinet ends of adjoining units that butt together.

1.4 DESIGN REQUIREMENTS

A. Design wall hung cabinets, storage shelving and connections with sufficient strength to resist stresses imposed by design loads.

1. Vertical Design Load: Per Table 16A-B, Special Loads, CBC Chapter 16A.

2. Lateral Design Load: Per Table 16A-O, Horizontal Force Factor Cp, CBC Chapter 16A.

1.5 SUBMITTALS

A. Submit under provisions of Division 01 General Requirements.

B. Shop Drawings: Include minimum requirements per Architectural Woodwork Standards Section 1 for casework including laminated plastic countertops and facings. The first sheet of the shop drawings shall bear the AWI Certified Compliance label.

C. Samples:

1. Submit samples, minimum 2 x 3 inches in size, illustrating finishes, colors and textures of high pressure plastic laminates and low pressure decorative laminates specified.

2. Submit samples of door and drawer pulls.

3. Submit samples of adjustable storage shelving system.

D. Certificates: Submit AWI Certified Compliance Certificates for laminate faced wood cabinets and countertops.

1. For Material and Workmanship: Submit certificates prior to delivery of casework to the site.

2. For Installation: Submit certificates upon completion of work of this section.

1.6 QUALITY ASSURANCE

A. Perform work to quality specified in accordance with Architectural Woodwork Institute "Architectural Woodwork Standards."

B. Provide AWI certification. Affix AWI Certified Compliance Labels to each elevation of casework.

1.7 REGULATORY REQUIREMENTS

Conform to CBC

1.8 DELIVERY, STORAGE AND HANDLING

A. Deliver products to site, store and protect under provisions of Division 01.

B. Do not deliver cabinets and countertops until painting, wet work, grinding and similar operations have been completed in installation area.

C. Store cabinets and countertops in installation areas or in areas with ambient conditions meeting same requirements.

1.9 ENVIRONMENTAL REQUIREMENTS

A. Do not deliver or install cabinets and countertops until temperature and relative humidity required by manufacturer have been stabilized in installation areas.

B. Maintain required temperature and humidity in installation areas from date of delivery through remainder of construction.

1.10 FIELD MEASUREMENTS

A. Verify that field measurements are as indicated on shop drawings.

B. Field measure base cabinets after installation to verify sizes and shapes of countertops prior to fabrication of countertops.

2 PART 2.00 - PRODUCTS

2.1 LUMBER MATERIALS

A. Softwood Lumber: PS 20; graded in accordance with AWI; maximum moisture content of 6 percent; Douglas Fir, Ponderosa or Sugar Pine; custom grade for opaque finish.

B. Hardwood Lumber: FS MM-L-736; graded in accordance with AWI; maximum moisture content of 6 percent; Select white maple, plain sliced, custom grade for opaque finish.

2.2 SHEET WOOD MATERIALS

A. Hardwood Plywood: PS 51; graded in accordance with AWI; veneer core material; type of glue recommended for application; Birch or Lauan face veneers; rotary cut; custom grade for opaque finish.

B. Wood Particleboard: ANSI A208.1, Grade 1-M-2.

C. Fiberboard: Medium density conforming to ANSI A208.2.

D. Hardboard: Per AWI standards, pressed wood fiber with resin binder, standard and tempered grades, smooth two sides.

E. Medium Density Overlay (MDO) Plywood: PS 1; APA Group 2, B-B Douglas fir plywood, exterior glue, resin fiber overlay both faces.

F. Modified Veneer Core Plywood: Minimum 3 ply Douglas fir plywood core with particleboard face and back veneers; Selply "Veneer-Core" with "Bison Board" skins, States Industries, Inc. "Armor-Core," or equal product substituted under provisions of Division 01.

2.3 LAMINATE MATERIALS

A. High Pressure Plastic Laminate:

1. Horizontal Surfaces: NEMA LD-3; matte finish.

   a. Flat Surfaces and Edges: GP - 50 General Purpose Type.
   b. Curved Edges: PF - 42 Post-forming Type.

2. Vertical Surfaces: NEMA LD - 3, GP - 28 Vertical Surfacing Type; matte finish.

3. Manufacturers and Colors/Patterns: Substitutions under provisions of Division 01.

   a. Wilsonart: style and color to be selected by Architect from all available colors and textures.

B. Laminate Backing Sheet: NEMA LD-3, BK-20 Backer Type undecorated plastic laminate.

C. Cabinet Lining Material:

1. Interior Faces of Hinged Doors: NEMA LD-3, GP-28 Vertical Surfacing Type, color to match high pressure decorative laminate. Submit to Architect for review.

2. Other Surfaces: Low pressure decorative laminate conforming to ALA standards; satin gloss; color to match Selply Polyboard color “White.”

   a. Plywood Core: Polyester.
   b. Particleboard and Fiberboard Cores: Melamine or polyester.

D. Primer: Alkyd primer sealer type.

2.4 EDGE BANDING – CABINET DOORS AND SHELVES

A. PVC Edges

1. Cabinet Doors: Exposed and Semi-Exposed edges. 3mm thickness, match door color.

2.5 ACCESSORIES

A. Adhesive:

1. Vinyl Edge Banding: Hot melt type recommended by edge banding manufacturer.

2. Other Surfaces: AWI Type II to suit application.

B. Fasteners: Size and type to suit application.

1. Bolts, Nuts, Washers, Lags, Pins, and Screws: Of size and type to suit application; plain finish in concealed and exposed locations.

2. Concealed Joint Fasteners: Threaded steel.

2.6 HARDWARE

A. Shelf Rests for Adjustable Shelves: Steel with pins for 5 mm diameter drilled holes.

1. Shelves to 5'-0" Above Finish Floor: Angle form with riveted side pin; Hafele 282-24-713.

2. Shelves Over 5'-0" Above Finish Floor: Angle form with riveted side and top pin; Hafele 282-24-722; America "Sekura" 50-016-721.

3. Substitutions: Under provisions of Division 01.

B. Drawer and Door Pulls: Metal wire type pull; 5/15 inch diameter; 3-1/2 inches center to center; 7/8 inch clearance; Trimco #562-3 or equal product substituted under provisions of Section 01400.

C. Catches: Magnetic; adjustable; aluminum case; self aligning; pull strength 3-1/2 to 4-1/2 pounds, KV #918, Epco #593, Ives #323; provide two catches on doors over 48 inches high.

D. Drawer and Shelf Slides:

1. Typical Drawers; Full extension slides; roller side guides; 75 pound capacity; positive out stop; Accuride #3800, Grass #V503, or equal product substituted under provisions of division 01.

E. Hinges: Concealed European type; all metal; screw mounted; automatic spring; minimum 125 degree door opening; adjustable; integral finger guard; nickel plated finish; mounting plates as required; plastic trim caps for hinge arm; Hafele America Co. “A-Form Hinges” or equal product substituted under provisions of Division 01.

F. Finish: BHMA 626, satin chromium, unless specified otherwise.

2.7 FABRICATION - PLASTIC LAMINATE COVERED CABINETS

A. Fabricate plastic covered cabinets in accordance with AWI Section 10 for custom grade, frameless style, Type 1 construction with Type A flush overlay doors and drawers with vinyl edge banding.

B. Fabricate lower cases and tall cases with bases and sleepers separate from cabinet body.

C. Apply high pressure plastic laminate finish to exposed horizontal and vertical surfaces

D. Apply cabinet lining material to semi-exposed surfaces except as otherwise specified above.

E. Finish front edge of shelves and edges of drawer fronts and doors with edge banding. Use full length pieces only.

F. Self edge exposed and semi-exposed edges. Use full length pieces only.

G. Cabinet Backs: Minimum 1/4 inch thick particleboard core.

H. Cabinet Tops, Bottoms, Ends and Divisions: Minimum 3/4 inch thick particleboard core.

I. Door and Drawer Fronts: 3/4 inch thick fiberboard core.

J. Shelves:

1. Spans Up to 32 Inches: Minimum 3/4 inch thick particleboard, MDO plywood or modified veneer core plywood core.

2. Spans 32 Inches to 43 Inches: Minimum 1 inch thick particleboard, MDO plywood or modified veneer core plywood core.

3. Spans 48 Inches and Longer: As detailed on Drawings.

K. Drill cabinet ends and dividers for adjustable shelf brackets.

L. Apply plastic laminate finish in full uninterrupted sheets consistent with manufactured sizes. Make corners and joints hairline. Slightly bevel edges.

M. When necessary to cut and fit on site, provide materials with ample allowance for cutting. Provide trim for scribing and site cutting.

N. Seal unfinished edges of particle board shelves.

3 PART 3.00 - EXECUTION

3.1 EXAMINATION

Verify adequacy of backing and support framing.

3.2 INSTALLATION

A. Set and secure casework in place rigid, plumb, and level in accordance with WIC.

B. Use purpose designed fixture attachments at concealed locations for wall-mounted components.

C. Use threaded steel concealed joint fasteners to align and secure adjoining cabinet units and counter tops.

D. Carefully scribe casework which is against other building materials, leaving gaps of 1/32 inch maximum. Do not use additional overlay trim for this purpose.

E. Secure cabinet and counter bases to floor and wall framing using appropriate anchorages.

F. Counter-sink anchorage devices at exposed locations used to wall mount components, and conceal with solid plugs of hardwood with finish to match surround. Finish flush with surrounding surfaces.

G. Install hardware.

3.3 ADJUSTING

A. Adjust work under provisions of Division 01.

B. Adjust doors, drawers, hardware, fixtures and other moving and operating parts to function smoothly and correctly.

3.4 CLEANING

A. Clean work under provisions of Division 01.

B. Clean casework, counters, shelves, hardware, fittings and fixtures.

3.5 PROTECTION

Protect completed work from damage during construction.

END OF SECTION

SECTION 06 42 00
FINISH CARPENTRY

1 PART 1.00 - GENERAL

1.1 DESCRIPTION

A. SECTION INCLUDES

1. Finish carpentry items, other than shop fabricated case work

2. Hardware and accessories.

B. RELATED SECTIONS

1. Section 06 10 00 - Rough Carpentry:

2. Section 06 41 00 - Custom Casework: Shop fabricated custom cabinetwork.

3. Section 09 90 00 - Painting: Backpriming, painting and finishing of finish carpentry items.

1.2 REFERENCES

A. APA - American Plywood Association "Grades and Specifications."

B. ASTM C920 - Elastomeric Joint Sealers.

C. FS MM-L-736 - Lumber, Hardwood.

D. PS 20 - American Softwood Lumber Standard.

E. RIS (Redwood Inspection Service): Standard Specifications for Grades of California Redwood Lumber.

F. AWI (Architectural Woodwork Institute): Architectural Woodwork Standards.

1.3 DELIVERY, STORAGE, AND HANDLING

A. Deliver products to site, store and protect under provisions of Section 01.

B. Store materials in ventilated, interior locations.

1.4 SEQUENCING AND SCHEDULING

Coordinate installation of interior and exterior woodwork with backpriming of woodwork specified under Section 09 90 00.

2 PART 2.00 – PRODUCTS

2.1 Softwood Lumber: PS 20.

A. Redwood: RIS grades as scheduled; kiln dried; maximum moisture content of 12 percent.

B. Douglas Fir, Hemlock or Cedar: AWI grade for transparent finish where scheduled, kiln dried with maximum moisture content of 12 percent.

C. Douglas Fir: AWI grade for opaque finish where scheduled, maximum moisture content of 12 percent.

D. Other Species/ Millwork: AWI custom grade for opaque finish; maximum moisture content of 10 percent; species as scheduled.

2.2 Hardwood Lumber:

A. Poplar: graded for opaque finish with no visible defects.

B. Hardwood trim to match existing: Custom grade for trim receiving stain.

2.3 ACCESSORIES

A. Nails: Size and type to suit application; hot dipped galvanized, plain finish for interior.

B. Bolts, Nuts, Washers, Blind Fasteners, Lags, and Screws: Size and type to suit application; galvanized finish for exteriors; plain finish for interior.

C. Wood Filler: Solvent base, tinted to match surface finish color.

3 PART 3.00 - EXECUTION

3.1 EXAMINATION

A. Verify that surfaces and openings are ready to receive work.

B. Verify mechanical, electrical, and building items affecting work of this section are placed and ready to receive this work.

C. Beginning of installation means acceptance of existing conditions.

3.2 PREPARATION

A. Before installation, prime paint surfaces of items or assemblies to be in contact with cementitious materials.

B. Coordinate backpriming of wood trim and millwork. Backpriming is specified under Section 09 90 00.

3.3 INSTALLATION

A. Install interior millwork and trim in accordance with AWI Section 6 for custom grade.

1. Set and secure materials and components in place, plumb and level.

2. Install trim and millwork with nails unless otherwise indicated.

3. Work abutting other components shall be properly scribed.

B. Install all exterior trim with hot dipped galvanized nails of sufficient length to secure trim in place. Set heads flush with surface.

C. Install plastic laminate storage shelving and storage brackets where indicated on drawings. Wall bracket standards to be installed to studs spaced 32 inches o.c. maximum and 8 inches from ends maximum; see Section 06 41 00 - Custom Casework.

3.4 PREPARATION FOR SITE FINISHING

A. Set exposed fasteners, except as otherwise specified. Apply wood filler in exposed fastener indentations. Sand work smooth.

B. Site Finishing: Refer to Section 09 90 00 - Painting.

3.5 PROTECTION

Protect finished installation from damage during construction.

3.6 SCHEDULE

A. Provide and install items listed in schedule and shown on Drawings with anchorage and attachments necessary for installation.

B. The schedule is a list of principal items only. Refer to Drawing details for items not specifically scheduled.

C. Exterior:

Fascia, Rake, Miscellaneous Trim: Redwood, RIS Select, S4S.

Exposed Decking, Rafter tails, Corbels: Douglas fir, AWI custom grade for opaque finish.

D. Interior

1. Stain grade: match existing type and profile.

2. Paint grade: poplar

END OF SECTION

SECTION 07 21 00
BUILDING INSULATION

1 PART 1.00 - GENERAL

1.1 DESCRIPTION

A. SECTION INCLUDES

1. Batt insulation in exterior wall.

2. Batt insulation for filling crevices in wall and roof assembly.

B. RELATED SECTIONS

1. Section 06 10 00 – Rough Carpentry

2. Section 06 42 00 – Finish Carpentry

3. Section 09 29 00 - Gypsum Board

4. Division 22 Plumbing - Piping and ductwork insulation:

1.2 REFERENCES

A. ASTM C665 - Mineral-Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing.

B. ASTM E84 - Surface Burning Characteristics of Building Material.

C. ASTM E119 - Fire Tests of Building Construction and Materials.

D. ASTM C518- “R” Value for insulation.

1.3 SYSTEM DESCRIPTION

Materials of this section shall provide a thermal barrier at building enclosure elements.

1.4 SUBMITTALS

A. Submit under provisions of Division 01.

B. Product Data: Provide data on product characteristics, performance criteria, and limitations.

C. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.

2 PART 2.00 - PRODUCTS

2.1 MANUFACTURERS

A. Batt Insulation:

1. Owens-Corning Fiberglas Corporation

2. Thermafiber, Inc.

3. Certainteed Corporation

B. Substitutions: Under provisions of Division 01.

2.2 MATERIALS

A. Batt Insulation: Preformed glass fiber batt:

1. Type 1 in exterior walls: ASTM C665, R-13, 3-1/2" thick, Type FRK Foil-Faced flame spread of 25 or less per ASTM E84; smoke developed of 50 or less per ASTM E84.

B. Staples: Of size and type to support insulation.

3 PART 3.00 - EXECUTION

3.1 PREPARATION

A. Verify adjacent materials are dry and ready to receive installation.

B. Verify mechanical and electrical services within walls have been installed and tested.

C. Do not begin installation until unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. Batt Insulation:

1. Install batt insulation in accordance with manufacturer's instructions, all applicable building codes, and the schedule at the end of this section.

2. Install batt insulation in ceilings without gaps or voids.

3. Trim insulation neatly to fit spaces. Use batts free of damage. Insulate miscellaneous gaps and voids.

4. Fit insulation tight in spaces and tight to exterior side of mechanical and electrical services within the plane of insulation. Leave no gaps or voids.

5. Install insulation with factory applied membrane facing warm side of building spaces.

6. Install insulation over ceilings with vapor barrier in substantial contact with exposed face of ceiling.

7. Fill perimeter shim spaces with unfaced batts.

8. Where vapor barrier is not in contact with unexposed face of ceiling or wall, finish install insulation with flame spread rating of 25 or less and smoke development of 50 or less.

3.3 SCHEDULE

A. Exterior wall- with vapor barrier in contact with interior wall finish: Type 1, with flanges.

END OF SECTION

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SECTION 07 26 16
UNDER SLAB VAPOR BARRIER

1.1 WORK INCLUDED

A. Installation of vapor retarder and compacted granular fill under concrete slab on grade.

1.2 RELATED SECTIONS

A. Cast-in-Place Concrete

1.3 REFERENCES

A. ASTM E1745, “Standard Specification for Plastic Water Vapor Retarders used in contact with soil or granular fill under concrete slabs”.

B. ASTM E154, “Standard Test Methods for Water Vapor Retarders used in contact with earth under concrete slabs, on walls, or as ground covers”.

1.4 SUBMITTALS

A. Submit the following in accordance with Division 01.

B. Product Data: Submit manufacturer’s product data, including installation instructions and test data.

1.5 DELIVERY, STORAGE AND HANDLING

A. Protect products against damage during field handling and installation.

B. If sheet products are damaged during placement of reinforcing steel or other materials, the Contractor must replace with new materials before construction continues.

2 PART 2.00 – PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

A. Established Standard: Stego Industries LLC

B. Other Acceptable Manufacturers: Fortafiber, Raven Industries

2.2 MATERIALS

A. Underslab Vapor Barrier: Stego Wrap 15-Mil Class A Vapor Barrier

1. Puncture Resistance; 2445 grams, ASTM D-1709

2. Water Vapor Permeance; .012 perms, ASTM F-1249, ASTM E-96.

B. Sealing Material: Mastic adhesive or pressure-sensitive adhesive tape as recommended by sheet material manufacturer.

C. Compacted Granular Fill: Clean well graded granular fill (not sand), free from excessive dirt, debris, organic matter, and fines smaller than No. 200 sieve size.

3 PART 3.00 - EXECUTION

3.1 EXAMINATION

A. Insure items which pass through membrane are properly and rigidly installed and substrate is free of projections and irregularities that may be detrimental to proper installation of membrane.

B. Beginning installation means acceptance of substrate conditions.

3.2 INSTALLATION

A. Sheeting:

1. Lay out to minimize running and side joints. Offset intermediate joints in adjacent sheets to not less than four (4) feet.

2. Spread sheeting over subgrade to lay smooth and even. Lap edge and end joints 6 inches minimum. Turn up perimeters to lap against concrete edges at least 2 inches, or as indicated in Drawings.

3. Seal laps and perimeter using continuous beads or strips of sealing material applied to bottom layer. Apply top layer and press sufficiently to assure complete contact.

4. Penetrations:

a. Cut sheeting to fit closely and neatly.

b. Slip sheeting over penetrations where possible, otherwise slit from penetration hole to nearest edge.

c. Seal edges around penetrations.

d. Repair slits using 12-inch wide strips of sheeting, set centered on slit and seal each side.

5. Compacted granular fill cushion: Spread over surfaces required. Work to fill voids and compact with a vibratory compactor. Leave in stable condition with finished surfaces reasonably uniform at established grade.

END OF SECTION

SECTION 07 65 00
FLEXIBLE FLASHING

1 PART 1.00 GENERAL

1.1 SECTION INCLUDES

A. Flexible Flashing system for roof penetrations.

1.2 REFERENCES

A. ASTM D 412 Tensile Strength, Elongation

B. ASTM E 96 Method E – Permeability to Water Vapor

C. ASTM D 836 - Standard Test Method for Elastomeric Waterproofing.

D. ASTM D 4060 - Standard Test Method for Abrasion Resistance

1.3 SUBMITTALS

A. Submit under provisions of Division 01.

B. Product Data: Manufacturer's data sheets on each product to be used, including:
   1. Preparation instructions and recommendations.
   2. Storage and handling requirements and recommendations.
   3. Installation methods.

C. Maintenance Instructions: Deliver to Owner.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Deliver products in manufacturer’s original containers, dry, undamaged, with seals and labels intact.

B. Store products in weather protected environment, clear of ground and moisture.

C. Stand roll materials on end.

D. Reject compressed rolls and materials exhibiting signs of prolonged storage and moisture absorption. Remove rejected materials from site on a daily basis or store off the roof separate from other materials

E. Protect materials against damage from construction traffic and operations.

F. Store materials in weather protected environment, clear of ground and moisture.

1.5 WARRANTY

A. Provide two-year contractor's warranty covering workmanship and materials.

1.6 PROJECT CONDITIONS

A. 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.

2 PART 2.00 PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

1. Established Standard: Johns Manville International, Inc.

2. Other Acceptable Manufacturers: Certain Teed Corp., GAF Materials Corp.

2.2 MATERIALS

A. MBR Flashing Cement Base

B. MBR Activator or MBR Flashing Cement Cartridges

C. PermaFlash Primer

D. PermaFlash Scrim

3 PART 3.00 - EXECUTION

3.1 EXAMINATION

A. Verify that surfaces and site conditions are ready to receive work.

B. Verify that deck is smooth, free of depressions, waves, or projections, and properly sloped to drains.

C. Verify that deck surfaces are clean, dry and free of dirt, dust, debris, rust and oils.

D. Verify that roof openings, curbs, pipes, sleeves, ducts and vents through roof are solidly set, and curbs and platforms are in place.

E. Beginning of installation means installer accepts existing surfaces.

3.2 SCRIM AND PRIMER INSTALLATION

A. Remove contaminants such as oils with a suitable solvent cleaner. For best results, it is recommended that surfaces such as metals and plastics be abraded.

B. Mask off with tape any area not intended to receive the MBR Flashing Cement.

C. Lay out scrim around penetration and cut to fit. Scrim must wrap around penetration and bridge all vertical to horizontal transitions. Scrim must extend 6 inches up vertical surfaces and 6 inches out on horizontal surfaces..

D. Apply PermaFlash Primer to all nonporous surfaces to receive MBR Flashing Cement no more than 1 hour prior to application

E. Apply primer by wiping surface with a cloth rag. Surfaces only need to be wiped once.

F. Primer may also be applied with spray bottles or Judson type sprayers. Apply only a light mist when spraying. Do not over spply, creatin puddles or runs..

G. The PermaFlash Primer must be dry prior to applying MBR Flashing Cement.

3.3 FLASHING CEMENT INSTALLATION

A. Mix MBR Cement Base with activator. Mix with a ½" drill as directed in detailed instructions.

B. Apply MBR Flashing Cement with roller, brushes, or trowel/ putty knives..

C. Apply a thin base coat, 20 mils minimum, of the MBR Flashing Cement to the penetration and the target area around the penetration. Immediately embed the precut scrim into the wet coating. Allow for 30 minutes curing time before applying a second coat.

D. Apply a second coat of MBR Flashing Cement to the exposed scrim so as to completely encapsulate the scrim. A minimum of 60 mils will be required to cover the scrim.

E. MBR Flashing Cement should extend 2 inches past the scrim in all directions.

3.4 CLEANING AND PROTECTION

A. Protect coated areas from damaging conditions such as construction traffic and weather until material cure to a solid membrane. Cure times will vary depending on temperature. Warmer temperatures will decrease cure times. Cooler temperatures will increase cure times.

B. Clean membrane and adjacent wall surfaces of debris.

END OF SECTION

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SECTION 07 92 00
JOINT SEALERS

1 PART 1.00 GENERAL

1.1 WORK INCLUDED

A. Preparing sealant substrate joint surfaces.

B. Sealant and backing materials.

1.2 RELATED SECTIONS

A. Section 06 41 00 – Casework

B. Section 06 42 00 – Finish Carpentry

C. Section 09 90 00 - Painting

1.3 REFERENCES

A. ASTM C804 – Recommended Practice for use of solvent release type sealants

B. ASTM C920 - Elastomeric Joint Sealants.

1.4 SUBMITTALS

A. Submit the following in accordance with Division 01.

B. Product Data: Submit data indicating sealant chemical characteristics; performance criteria, limitations, and color availability. Include accessory items necessary for successful completion of work and recommendations for primer.

C. Samples: Submit samples of exposed sealant manufacturer's full range of colors for Architect's selection.

D. Manufacturer's Instructions: Include manufacturer's requirements for surface preparation, temperature and humidity; application equipment and procedures for sealants and primers.

E. Submit manufacturer’s certificate that sealants meet or exceed specified requirements.

F. Certificate of Compliance: Upon completion of the work, submit certificate signed by the Contractor, applicator, stating that sealant and caulking application complies with contract requirements and manufacturer's recommendations, and is proper and adequate for conditions requiring sealants and caulking.

1.5 QUALITY CONTROL

A. Comply with manufacturer's printed instruction for surface preparation, priming, installation, tooling, and curing, except where more stringent requirements are specified.

B. Compatibility: Before purchase of each required material, confirm its compatibility with each other material to which it will be applied in the joint system.

1.6 ENVIRONMENTAL REQUIREMENTS

A. Do not install solvent curing sealants in enclosed building spaces.

B. Examine the substrate and the conditions under which sealant Work is to be performed. Do not proceed with the Work until unsatisfactory conditions have been corrected.

C. Maintain temperature and humidity recommended by sealant manufacturer during and after installation.

1.7 DELIVERY, STORAGE AND HANDLING

A. Follow manufacturer's recommendations for storage temperature during and after installation.

B. Use recommended solvents and cleaning agents for cleaning tools, equipment and skin.

1.8 WARRANTY

A. Provide five (5)-year warranty under provisions of Section 01900. Cover damage to work resulting from failure to resist penetration of moisture.

B. Warranty: Replace sealants that fail because of loss of cohesion or adhesion, failure due to cracking or sealants that do not cure.

2 PART 2.00 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

A. The product noted for each type of sealant is the established standard. Equal products by other listed manufacturers are acceptable.

B. Other Acceptable Manufacturers: Sonneborn, Sika Corporation

2.2 SEALANT MATERIALS

A. Sealant Type 1 - Typical Exterior Building Sealant: ASTM C920, Type M, Grade NS, Class 25; multi-component; polyurethane base; non-sag; Tremco Dymeric 240FC

B. Sealant Type 2 – Sheet Metal Flashing Sealant: ASTM C920, Type S, Grade NS, Class 50; single component; polyurethane base; moisture cured; non-sag; Tremco Dymonic 100.

C. Sealant Type 3 - Sealant for Horizontal Joints Subject to Traffic Abrasion; Multipart polyurethane sealant meeting FS TT-S- 00227E, Type I, Class A and ASTM C920; Tremco Vulkem 445 SSL.

D. Sealant Type 4 - Sanitary Sealant: One part mildew resistant silicone; ASTM C920, Type S, Grade NS, Class 25; formulated with fungicide for sealing interior joints with non-porous substrates around ceramic tile, showers, sinks, and plumbing fixtures; Tremco Tremsil 200.

E. Sealant Type 5 - Typical Interior Building Sealant: One part, non-sag, acrylic, mildew resistant, acrylic-emulsion sealant complying with ASTM C834; formulated to be paintable and recommended for exposed applications on interior involving joint movement of not more than ±75 percent; Tremflex 834.

F. Sealant Type 6 - For Non-Staining application of natural surfaces per ASTM C-510. Silicone sealant complying with ASTM C 920, Type S, Grade NS, Class 50. Tremco's Spectrem 3.

G. Substitutions: Under provisions of Division 01.

2.3 ACCESSORIES

A. Primer: Quick-drying, colorless, 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 Filler: ASTM D1056, round, closed cell polyethylene foam rod; oversized 30 to 50 percent.

D. Bond Breaker: Pressure sensitive tape recommended by sealant manufacturer to suit application.

E. Masking Tape: Non-staining, non-absorbent type compatible with joint sealants and surfaces adjacent to joints.

3 PART 3.00 - EXECUTION

3.1 EXAMINATION

A. Verify joint dimensions, physical, and environmental conditions are acceptable to receive work of this section. Verify sealant system compatibility with proposed substrates.

B. Beginning of installation means acceptance of substrate.

3.2 PREPARATION

A. Clean out joints immediately before installing sealants.

B. Remove any loose materials and other foreign matter that might impair adhesion of sealant.

C. Verify proper surface and ambient temperatures.

D. Examine joint dimension and size materials to achieve required width/ depth ratios.

E. Verify that joint backing and release tapes are compatible with sealant.

F. Protect elements surrounding the work of this section from damage or disfiguration. Use masking tape where required to prevent contact of sealant with adjoining surfaces.

G. Prime joint surfaces where recommended by joint sealant manufacturers. Apply primer to comply with joint sealant manufacturer's recommendations.

3.3 INSTALLATION

A. Install sealant and gaskets in accordance with manufacturer's instructions.

B. Perform work in accordance with ASTM C804 for solvent release sealants.

C. Install joint backing to achieve neck dimension no greater than 1/3 the joint width.

D. Apply sealant within recommended temperature ranges. Consult manufacturer when sealant cannot be applied within recommended temperature ranges.

E. Install sealant free of air pockets, foreign embedded matter, ridges, and sags, with concave joints.

F. Remove masking tape immediately after tooling joints without disturbing joint seal.

3.4 CLEANING AND REPAIRING

A. Clean work under provisions of Section 01770 “Closeout Procedures”.

B. Clean adjacent soiled surfaces.

C. Repair or replace defaced or disfigured finishes caused by work of this section.

3.5 PROTECTION OF FINISHED WORK

A. Protect sealants until cured.

END OF SECTION

SECTION 08 14 00
WOOD DOORS

1 PART 1 GENERAL

1.1 DESCRIPTION:

A. SECTION INCLUDES

1. Flush wood doors, interior exposure.

B. RELATED SECTIONS

1. Section 06 42 00 Finish Carpentry

2. Section 08 71 00 - Door Hardware

3. Section 09 90 00 – Painting

1.2 REFERENCES

A. Architectural Woodwork Institute (AWI) - Architectural Woodwork Quality Standards.

B. Window and Door Manufacturers Association (WDMA) - I.S.1A - Industry Standard for Architectural Flush Wood Doors.

1.3 SUBMITTALS

A. Submit under provisions of Division 01.

B. Shop Drawings: Indicate door opening criteria, elevations, sizes, types, swings, special beveling, and cutouts for glazing.

C. Product Data: Indicate door core materials and constructions; facing type, and characteristics; factory machining characteristics.

D. Manufacturer's Certificates:

1. Certify that doors meet or exceed specified fire rated requirements.

1.4 QUALITY ASSURANCE

A. Conform to requirements of AWI, Custom Grade.

B. Conform to the requirements of AWI Section 2 for Care and Storage of Wood Doors.

1.5 QUALIFICATIONS

Manufacturer: Company specializing in manufacturing wood doors specified in this section with minimum 3 years documented experience.

1.6 DELIVERY, STORAGE, AND PROTECTION

A. Package doors in protective wrap with identifying marks; slit wrap on site to permit ventilation, but do not remove until ready to install.

B. Do not deliver doors until building is substantially water and weather tight and HVAC system is operational.

C. Store doors flat and level, with spacers between doors to allow for air circulation, in protected, dry area.

D. Maintain humidity in storage areas between 25 and 55 percent.

1.7 FIELD MEASUREMENTS

Verify that field measurements are as indicated on shop drawings.

1.8 COORDINATION

Coordinate the work with door opening construction, door frame and door hardware installation.

1.9 WARRANTY

A. General: Warranties shall be in addition to, and not a limitation of, other rights the Owner may have under the Contract Documents.

B. Door Manufacturer's Warranty: Submit written agreement in door manufacturer's standard form signed by Manufacturer, Installer and Contractor, agreeing to repair or replace defective doors that have warped, delaminated, or that show telegraphing of core construction in face veneers.

1. Warranty shall include installation that may be required due to repair or replacement of defective doors where defect was not apparent prior to hanging.

C. Warranty shall be in effect for the Life of installation01.

2 PART 2.00 - PRODUCTS

2.1 FLUSH WOOD DOORS

A. Manufacturers:

1. Commercial Mill, San Jose, CA

2. Algoma Hardwoods, Inc.

3. Haley Bros.,Inc.

4. Substitutions: Under provisions of Division1.

B. Door Types:

1. Full Flush Interior Doors: 1-3/4 inches thick; solid core construction; full flush configuration; AWI custom grade.
2.

C. Door Construction:

1. Core:

a. Non-Rated: Staved lumber core; combination of block or strips not more than 2-1/2 inches wide; one species of wood with 6 to 9 percent moisture content; joints tight and staggered between adjacent rows.

2. Crossbanding/ Facing Construction: 5 ply construction.

3. Facing: NWWDA grade I ;rotary cut natural birch; paint grade.

4. Adhesive: AWI Type I or II.
5.

2.2 FABRICATION

A. Fabricate standard non-rated doors in accordance with AWI Section 9 quality standard requirements.

B. Stiles: Solid stock or 2 ply laminated lumber of species optional with door manufacturer.

C. Top and Bottom Rails: Solid stock lumber of a species optional with door manufacturer.

D. Bond stiles and rails to cores with adhesive under pressure.

E. Provide internal blocking for lockset, closers, exit devices, and flush bolts in mineral core doors.

F. Bevel strike edge of single acting doors 1/8 inch in 2 inches.

G. Factory machine doors for hardware in accordance with hardware requirements and dimensions. Do not machine for surface hardware.

3 PART 3.00 - EXECUTION

3.1 EXAMINATION

A. Verify that opening sizes and tolerances are acceptable.

B. Do not install doors in frame openings that are not plumb or are out of tolerance for size or alignment.

C. Do not begin installation until unsatisfactory conditions are corrected. Beginning installation means acceptance of existing conditions.

3.2 INSTALLATION

A. Install standard non-rated doors in accordance with AWI Section 9.

B. If field cutting for height is necessary, cut bottom edge only, ¾ inch maximum.

C. Seal field cut surfaces with paint or stain, [same finish as door faces.]

D. Pilot drill screw and bolt holes. Use threaded through bolts for surface hardware.

E. Prepare doors to receive finish hardware in accordance with NWWDA requirements. Machine cut for hardware. Core for handsets and cylinders.

F. Coordinate installation of doors with installation of frames and hardware.

G. Where installation requires on-site cutting, reseal cut surfaces.

3.3 INSTALLATION TOLERANCES

A. Conform to AWI Section 9 requirements for fit tolerances.

3.4 ADJUSTING

Adjust doors for smooth and balanced door movement.

END OF SECTION

SECTION 08 31 13
ACCESS DOORS

1 PART 1.00 - GENERAL

1.1 WORK INCLUDED

A. Non-rated access doors and frames.

1.2 RELATED SECTIONS

A. Section 06 10 00 – Rough Carpentry

B. Section 09 29 99 - Gypsum Board

C. Section 09 90 00 - Painting

D. Plumbing Work General: Access doors and frames for plumbing and mechanical components requiring access.

1.3 REFERENCES

A. CBC – California Building Code, latest edition.

1.4 SUBMITTALS

A. Submit the following in accordance with Division 01, Submittal Procedures.

B. Product Data: Submit manufacturer's product data. Include sizes, types, finishes, scheduled locations, and details of adjoining work.

C. Manufacturer's Instructions: Submit manufacturer's installation instructions for access doors.

1.5 DELIVERY, STORAGE AND HANDLING

A. Protect products against damage during field handling and installation.

2 PART 2.00 – PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

A. Established Standard: Milcor, Inc.

B. Other Acceptable Manufacturers: Karp Associates Incorporated, JL Industries.

C. Substitutions: Under provisions of Division 01

2.2 ACCESS UNITS

A. In Non-Fire Rated Gypsum Board Ceilings and Partitions: Flush steel door; integral drywall bead at frame; prime coat finish; sizes as indicated on Drawings or as required for access to utility; Milcor style DW.

1. In Ceilings and Partitions in Unoccupied Areas: Flush screwdriver operated cam lock.

2. Partitions in Occupied Areas: Key operated cam lock; all cylinders keyed alike. Provide one key for each lock to Owner prior to Substantial Completion.

B. In Non-Fire Rated Ceramic Tile Partitions: Flush stainless steel door; integral stainless steel frame; latch bolt operated by flush key operated cylinder; sizes as indicated on Drawings or as required for access to utility; Milcor Style M. Provide one key for each lock to Owner prior to Substantial Completion.

2.3 FABRICATION:

Weld, fill, and grind joints to assure flush and square unit.

2.4 FINISH:

Factory Primed or stainless steel finish as specified.

3 PART 3.00 - EXECUTION

3.1 EXAMINATION

A. Verify rough openings for door and frame are correctly sized and located.

B. Do not begin installation until unsatisfactory conditions have been corrected. Beginning of installation means acceptance of existing conditions.

3.2 INSTALLATION

A. Install units in accordance with manufacturer's instructions.

B. Install frame plumb and level in wall and ceiling openings.

C. Position to provide convenient access to concealed work requiring access.

END OF SECTION

SECTION 08 71 00
DOOR HARDWARE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. This Section includes items known commercially as finish or door hardware that are required for swing, sliding, and folding doors, except special types of unique hardware specified in the same sections as the doors and door frames on which they are installed.

B. This Section includes the following, but is not necessarily limited to:

1. Door Hardware

2. Thresholds, gasketing and weather-stripping.

3. Door silencers or mutes.

C. Related Sections: The following sections are noted as containing requirements that relate to this Section, but may not be limited to this listing.

1. Section 06 42 00 – Finish Carpentry

2. Section 08 14 00 - Wood doors

1.3 REFERENCES (Use date of standard in effect as of Bid date.)

A. ADAAG - Americans with Disabilities Act (ADA) Accessibility Guidelines for Buildings and Facilities.

B. BHMA - Builders' Hardware Manufacturers Association.

C. CCR - California Code of Regulations, Tile 24, Part 2, California State Accessibility Standards.

D. DHI - Door and Hardware Institute.

E. NFPA - National Fire Protection Association.

1. NFPA 80 - Fire Doors and Windows

2. NFPA 105 - Smoke and Draft Control Door Assemblies

F. CBC - California Building Code.

G. UL - Underwriters Laboratories.

1. UL 10C - Fire Tests of Door Assemblies

2. UL 305 - Panic Hardware

a) H. WHI - Warnock Hersey Incorporated

b) I. SDI - Steel Door Institute

1.4 SUBMITTALS & SUBSTITUTIONS

A. General: Submit in accordance with Conditions of the Contract and Division 1 Specification sections.

B. Submit product data (catalog cuts) including manufacturers' technical product information for each item of door hardware, installation instructions, maintenance of operating parts and finish, and other information necessary to show compliance with requirements.

C. Submit six (3) copies of schedule organized vertically into “Hardware Sets” with index of doors and headings, indicating complete designations of every item required for each door or opening. Include following information:

1. Type, style, function, size and finish of each hardware item.

2. Name, part number and manufacturer of each item.

3. Fastenings and other pertinent information.

4. Location of hardware set coordinated with floor plans and door schedule.

5. Explanation of all abbreviations, symbols and codes contained in schedule.

6. Mounting locations for hardware.

7. Door and frame sizes and materials.

8. List of manufacturers used and their nearest representative with address and phone number.
9. Keying information.

D. Make substitution requests in accordance with Division 1. Substitution requests must be made prior to bid date. Include product data and indicate benefit to the project. Furnish samples of any proposed substitution.

E. Wiring Diagrams: Provide product data and wiring and riser diagrams for all electrical products listed in the Hardware Schedule portion of this section.

F. Keying Schedule: Submit separate detailed schedule indicating clearly how the Owner's final instructions on keying of locks has been fulfilled.

G. Templates for doors, frames, and other work specified to be factory prepared for the installation of door hardware. Check shop drawings of other work to confirm that adequate provisions are made for locating and installing door hardware to comply with indicated requirements.

H. Furnish as-built/as-installed schedule with close-out documents, including keying schedule, wiring/riser diagrams, manufacturers' installation, adjustment and maintenance information.

1.5 QUALITY ASSURANCE

A. Obtain each type of hardware (latch and lock sets, hinges, closers, exit devices, etc.) from a single manufacturer.

B. Supplier Qualifications: A recognized architectural door hardware supplier, with warehousing facilities in the project's vicinity, that has a record of successful in-service performance for supplying door hardware similar in quantity, type, and quality to that indicated for this project and that employs an experienced architectural hardware consultant (AHC) who is available to Owner, Architect, and Contractor, at reasonable times during the course of the Work, for consultation.

1. Responsible for detailing, scheduling and ordering of finish hardware.

2. Meet with Owner to finalize keying requirements and to obtain final instructions in writing.

3. Stock parts for products supplied and be capable of repairing and replacing hardware items found defective within warranty periods.

C. Hardware Installer**:** Company specializing in the installation of commercial door hardware with five years documented experience.

D. Fire-Rated Openings: Provide door hardware for fire-rated openings that complies with NFPA Standard No. 80 and requirements of authorities having jurisdiction. Provide only items of door hardware that are listed and tested by UL or Warnock Hersey for given type/size opening and degree of label. Provide proper latching hardware, door closers, approved-bearing hinges and seals whether listed in the Hardware Schedule or not.

1. Where emergency exit devices are required on fire-rated doors, (with supplementary marking on doors' UL labels indicating "Fire Door to be Equipped with Fire Exit Hardware") provide UL label on exit devices indicating "Fire Exit Hardware".

D. Exit Doors: Operable from inside with single motion without the use of a key or special knowledge or effort.

1.6 DELIVERY, STORAGE AND HANDLING

A. Coordinate delivery of packaged hardware items to the appropriate locations (shop or field) for installation.

B. Hardware items shall be individually packaged in manufacturers' original containers, complete with proper fasteners. Clearly mark packages on outside to indicate contents and locations in hardware schedule and in work.

C. Provide locked storage area for hardware, protect from moisture, sunlight, paint, chemicals, etc.

D. Inventory door hardware jointly with representatives of hardware supplier and hardware installer until each is satisfied that count is correct.

1.7 WARRANTY

A. Provide warranties of respective manufacturers' regular terms of sale from day of final acceptance as follows:

1. Closers: Thirty (30) years, except electronic closers which shall be two (2) years.

2. Exit devices: Three (3) years.

3. Mechanical Locksets: Seven (7) years.

4. All other hardware: Two (2) years.

1.8 MAINTENANCE

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

PART 2 - PRODUCTS

2.1 MANUFACTURERS

	Item	Manufacturer	Acceptable Substitutes
A.	Hinges	Stanley	Hager, McKinney
B.	Locks, Latches & Cylinders	Schlage	District Standard, no substitute
C.	Exit Devices	Von Duprin	District Standard, no substitute
D.	Closers	LCN	District Standard, no substitute
E.	Push, Pulls & Protection Plates	Ives	Trimco, BBW, Quality
F.	Flush Bolts	Ives	Trimco, BBW, Quality

G.	Dust Proof Strikes	Ives	Trimco, BBW, Quality
H.	Coordinators	Ives	Trimco, BBW, Quality
I.	Stops	Ives	Trimco, BBW, Quality
J.	Overhead Stops	Glynn-Johnson	None
K.	Thresholds	National Guard	Pemko, Zero
L.	Seals & Bottoms	National Guard	Pemko, Zero

2.2 MATERIALS

A. Hinges: Exterior out-swinging door butts shall be non-ferrous material and shall have stainless steel hinge pins. All doors to have non-rising pins.

1. Hinges shall be sized in accordance with the following:

a. Height:

1) Doors up to 41" wide: 4-1/2" inches.

2) Doors 42" to 48" wide: 5 inches.

b. Width: Sufficient to clear frame and trim when door swings 180 degrees.

c. Number of Hinges: Furnish 3 hinges per leaf to 7'-5" in height. Add one for each additional 2 feet in height.

2. Furnish non-removable pins (NRP) at all exterior outswing doors and interior key lock doors with reverse bevels.

B. Continuous Hinges: As manufactured by Select Products Limited. UL rated as required.

C. Heavy Duty Cylindrical Locks and Latches: Schlage "ND" Series as scheduled with "Rhodes" design, fastened with through-bolts and threaded chassis hubs.

1. Locksets to comply with ANSI A156.2, Series 4000, Grade 1; tested to exceed 3,000,000 cycles. Locksets shall meet ANSI A117.1, Accessible Code.

2. Chassis: One piece modular assembly and multi-functional allowing function interchange without disassembly of lockset.

3. Spindle shall be deep-draw manufactured not stamped. Spindle and spring cage to be one-piece integrated assembly.

4. Anti-rotation plate to be interlocking to the lock chassis. Lock design utilizing bit-tabs are not acceptable.

5. Lever Trim: Accessible design, bi-directional, independent assemblies.

6. Locks shall be of such construction that when locked, the door may be opened from within by using lever and without the use of a key or special knowledge.

7. Thru-bolts to secure anti-rotation plate without sheer line. Fully threaded thru-bolts are not acceptable.

8. Spring cage to have double compression springs. Manufacturers utilizing torsion springs are not acceptable.

9. Latchbolt to be steel with minimum ½" throw deadlatch on keyed and exterior functions; ¾" throw anti-friction latchbolt on pairs of doors.

10. Strikes: ANSI curved lip,1-1/4" x 4-7/8", with 1" deep dust box (K510-066). Lips shall be of sufficient length to clear trim and protect clothing.

D. Exit devices: Von Duprin as scheduled with push-through pad design, no exposed touch bar fasteners, no exposed cavities when operated. Five (5) pound operating force.

1. Provide certificate by independent testing laboratory that device has completed over 1,000,000 cycles and can still meet ANSI/BHMA A156.3 - 1994 standards.

2. All internal parts shall be of cold-rolled steel with zinc dichromate coating.

3. Mechanism case shall have an average thickness of .140".

4. Compression spring engineering.

5. Non-handed basic device design with center case interchangeable with all functions.

6. All devices shall have quiet return fluid dampeners.

7. All latchbolts shall be deadlocking with ¾" throw and have a self-

8. lubricating coating to reduce friction and wear.

9. Device push bar must release when a force of 32 pounds, or less, of pressure is applied when a force of 250 pounds is applied to the door.

10. Device shall bear UL label for fire and or panic as may be required.

11. All surface strikes shall be roller type and utilize a plate underneath to prevent movement.

12. Exit Devices shall be sex-bolted only to hollow metal doors and wood fire rated doors with mineral cores.

13. Panic Hardware shall comply with CBC Section 1008.1.8.2 and 1008.1.9 and shall be mounted between 34" and 48" above the finished floor surface. The unlatching force shall not exceed 15 lbs. applied in the direction of travel.

0 E. Closers: LCN as scheduled. Place closers inside building, stairs, room, etc.

1. Door closer cylinders shall be of high strength cast iron construction with double heat treated pinion shaft to provide low wear operating capabilities of internal parts throughout the life of the installation. All door closers shall be tested to ANSI/BHMA A156.4 test requirements by a BHMA certified testing laboratory. A written certification showing successful completion of a minimum of 10,000,000 cycles must be provided.

2. All door closers shall be fully hydraulic and have full rack and pinion action with a shaft diameter of a minimum of 11/16 inch and piston diameter of 1 inch to ensure longevity and durability under all closer applications.

3. All parallel arm closers shall incorporate one piece solid forged steel arms with bronze bushings. 1-9/16" steel stud shoulder bolts, shall be incorporated in regular arms, hold-open arms, arms with hold open and stop built in. All other closers to have forged steel main arms for strength, durability, and aesthetics for versatility of trim accommodation, high strength and long life.

4. Closers shall be installed to permit doors to swing 180 degrees.

5. All closers shall utilize a stable fluid withstanding temperature range of 120 degrees F. to -30 degrees F. without requiring seasonal adjustment of closer speed to properly close the door.

6. Provide the manufactures drop plates, brackets and spacers as required at narrow head rails and special frame conditions. NO wood plates or spacers will be allowed.

7. Maximum effort to operate closers shall not exceed 5 lbs., such pull or push effort being applied at right angles to hinged doors. Compensating devices or automatic door operators may be utilized to meet the above standards. When fire doors are required, the maximum effort to operate the closer may be increased but shall not exceed 15 lbs. when specifically approved by fire marshal. All closers shall be adjusted to operate with the minimum amount of opening force and still close and latch the door. These forces do not apply to the force required to retract latch bolts or disengage other devices that hold the door in a closed position. Door shall take at least 5 seconds to move from an open position of 70 degrees to a point of 3 inches from the latch jamb. Reference CBC Sections 1133B.2.5 & 1133B2.5.1.

8. Provide sex-bolted or through bolt mounting for all door closers.

F. Flush Bolts & Dust Proof Strikes: Automatic Flush Bolts shall be of the low operating force design. Utilize the top bolt only model for interior doors where applicable and as permitted by testing procedures.

1. Manual flush bolts only permitted on storage or mechanical openings as scheduled.

2. Provide dust proof strikes at openings using bottom bolts.

G. Coordinators:

1. Coordinator shall be a 1-5/8” wide by 5/8” high aluminum channel with the length variable to the door opening. It shall have a safety mechanism which will allow the active door to close first if under extreme pressure.

H. Door Stops:

1. Unless otherwise noted in Hardware Sets, provide wall type with appropriate fasteners. Where wall type cannot be used, provide floor type. If neither can be used, provide overhead type.

2. Do not install floor stops more than four (4) inches from the face of the wall or partition (Title 24, 1133B.8.6).

3. Overhead stops shall be made of stainless steel and non-plastic mechanisms and finished metal end caps. Field-changeable hold-open, friction and stop-only functions.

I. Protection Plates: Fabricate either kick, armor, or mop plates with four beveled edges. Provide kick plates 10" high and 2" LDW. Sizes of armor and mop plates shall be listed in the Hardware Schedule. Furnish with machine or wood screws of bronze or stainless to match other hardware.

J. Lock Protectors: Lock astragals shall be provided with internally threaded fasteners for flat head machine screws. No hex head or carriage bolt fasteners will be permitted. Must be through bolted to door.

K. Thresholds: As Scheduled and per details.

1. Thresholds shall not exceed 1/2" in height, with a beveled surface of 1:2 maximum slope.

2. Set thresholds in a full bed of butyl-rubber or polyisobutylene mastic sealant complying with requirements in Division 7 “Thermal and Moisture Protection”.

3. Use ¼” fasteners, red-head flat-head sleeve anchors (SS/FHSL).

4. Thresholds shall comply with CBC Section 1133B.2.4.1.

L. Seals: Sponge silicone gasketing to meet ASTM E 283-1984 test standards. Provide silicone gasket at all rated and exterior doors.

M. Rain Drips: Provide rain drips at the heads of all exterior doors where there is not enough overhang to protect the opening.

N. Door Shoes & Door Top Caps: Provide door shoes at all exterior wood doors and top caps at all exterior out-swing doors.

O. Silencers: Furnish silencers for interior hollow metal frames, 3 for single doors, 2 for pairs of doors. Omit where sound or light seals occurs, or for fire-resistive-rated door assemblies.

2.3 KEYING

A. Furnish a Grand Master, Master, keyed alike or keyed different system as directed by the Owner or Architect. Locks are to be keyed to the College District's Schlage "Everest Primus Level 9Z Keyway".

B. Provide construction keying for doors during construction; construction cores shall all be keyed alike and be furnished from the factory as specified below with "TD" option. Furnish permanent keys and cores directly to Owner.

C. Key Blanks: Schlage original "Everest "6" pin bow key blank; tag to identify.

D. Supply keys and blanks as follows:

1. Supply 2 cut change keys for each different change key code.

2. Supply 1 uncut key blank for each change key code.

3. Supply 6 cut master keys for each different master key set.

4. Supply 3 uncut key blanks for each master key set.

2.4 FINISHES

A. Generally to be satin chrome US26D (626 on bronze and 652 on steel) unless otherwise noted.

A. Door closers shall be powder-coated to match other hardware, unless otherwise noted.

B. Aluminum items to be finished anodized bronze except thresholds which can be furnished as standard mill finish.

2.5 FASTENERS

A. Screws for strikes, face plates and similar items shall be flat head, countersunk type, provide machine screws for metal and standard wood screws for wood.

B. Screws for butt hinges shall be flathead, countersunk, full-thread type.

C. Fastening of closer bases or closer shoes to doors shall be by means of sex bolts and spray painted to match closer finish.

D. Provide expansion anchors for attaching hardware items to concrete or masonry.

E. All exposed fasteners shall have a phillips head.

F. Finish of exposed screws to match surface finish of hardware or other adjacent work.

G. Lock Protectors shall be fastened to the door by the means of through bolts. Exit Devices and Lock Protectors shall be fastened to the door by the means of sex bolts or through bolts if they are in the category of Hollow metal doors or wood fire rated mineral core doors.

H. Only UL Tested & Labeled products shall be installed with approved factory supplied fasteners (i.e. Fasteners supplied by Schlage). All other fasteners no supplied by the manufacturer will be rejected.

PART 3 - EXECUTION

3.1 INSPECTION

A. Verify that doors and frames are square and plumb and ready to receive work and dimensions are as instructed by the manufacturer.

B. Beginning of installation means acceptance of existing conditions.

3.2 INSTALLATION

A. Install hardware in accordance with manufacturer's instructions and requirements of DHI.

B. Use the templates provided by hardware item manufacturer.

C. Mounting heights for Accessible Hardware shall be as shown in CBC Section 1133B.2.5.2. Operating hardware will to be centered between 30" and 44" above the floor.

D. Set units level, plumb and true to line and location. Adjust and reinforce the attachment substrate as necessary for proper installation and operation.

E. Drill and countersink units that are not factory-prepared for anchorage fasteners. Space fasteners and anchors in accordance with industry standards.

F. Set thresholds for exterior doors in full bed of butyl-rubber sealant.

G. If hand of door is changed during construction, make necessary changes in hardware at no additional cost.

3.3 ADJUST AND CLEAN

A. Adjust and check each operating item of hardware and each door, to ensure proper operation or function of every unit. Replace units which cannot be adjusted to operate freely and smoothly as intended for the application made.

B. Clean adjacent surface soiled by hardware installation.

C. Final Adjustment: Wherever hardware installation is made more than one month prior to acceptance or occupancy of a space or area, return to the work during the week prior to

acceptance or occupancy, and make final check and adjustment of all hardware items in such space or area. Clean operating items as necessary to restore proper function and finish of hardware and doors. Adjust door control devices to compensate for final operation of heating and ventilating equipment.

D. Instruct Owner's Personnel in proper adjustment and maintenance of hardware finishes, during the final adjustment of hardware.

E. Continued Maintenance Service: Approximately six months after the completion of the project, the Contractor accompanied by the Architectural Hardware Consultant, shall return to the project and re-adjust every item of hardware to restore proper functions of doors and hardware. Consult with and instruct Owner's personnel in recommended additions to the maintenance procedures. Replace hardware items which have deteriorated or failed due to faulty design, materials or installation of hardware units. Prepare a written report of current and predictable problems (of substantial nature) in the performance of the hardware.

3.4 HARDWARE LOCATIONS

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

3.5 FIELD QUALITY CONTROL

A. Architectural Hardware Consultant (AHC) to inspect installation and certify that hardware and it's installation have been furnished and installed in accordance with manufacturer's instructions and as specified herein.

3.6 SCHEDULE

A. The items listed in the following schedule shall conform to the requirements of the foregoing specifications.

B. The Door Schedule on the Drawings indicates which hardware set is used with each door.

Manufacturers Abbreviations (Mfr.)

	B/O	=	By Others	
	GLY	=	Glynn-Johnson	Overhead Door Stop & Holders
	IVE	=	Ives	Bolts, Coordinators, Dust Proof Strikes, Push, Pulls & Protection Plates, Door Stops & Silencers
	LCN	=	LCN	Door Closers
2	NGP	=	National Guard Products	Thresholds, Gasketing & Weather-stripping
	SCH	=	Schlage Lock Company	Locks, Latches & Cylinders
	VON	=	Von Duprin	Exit Devices & Mullions

HARDWARE GROUP NO. 01(PAIR OF STORAGE ROOM DOORS)

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
6	EA	HINGE	5BB1 4.5 X 4.5 NRP	652	IVE
1	SET	CONSTANT LATCH BOLT	FB61T	630	IVE
1	EA	STOREROOM LOCK	ND80TD RHO	626	SCH
1	EA	I.C. CORE	FURNISHED BY OWNER	626	MED
2	EA	OVERHEAD STOP	90S	652	GLY
2	EA	SILENCER	SR64	GRY	IVE

HARDWARE GROUP NO. 02 (EXISTING EXTERIOR DOOR)

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
1	EA	DEADLOCK	B664T	626	SCH
1	EA	EXIT LOCK	ND25D RHO	626	SCH
1	EA	I.C. CORE	FURNISHED BY OWNER	626	MED
			REUSE ALL OTHER HARDWARE		

END OF SECTION

SECTION 09 29 00
GYPSUM BOARD

1 PART 1.00 - GENERAL

1.1 DESCRIPTION

A. SECTION INCLUDES

1. Gypsum board.

2. Trim and accessories.

3. Taped and sanded joint treatment.

B. RELATED SECTIONS

1. Section 06 10 00 Rough Carpentry

2. Section 06 42 00 Finish Carpentry

3. Section 09 90 00 - Painting.

1.2 REFERENCES

A. ASTM C36 - Gypsum Wallboard.

B. ASTM C630 - Water-Resistant Gypsum Backing Board.

C. ASTM C1002 - Steel Drill Screws for the Application of Gypsum Board.

D. ASTM E84 - Surface Burning Characteristics of Building Materials.

E. ASTM E119 - Fire Tests of Building Construction and Materials.

F. CBC – 2013 California Building Code.

G. GA 201 - Gypsum Board for Walls and Ceilings.

H. GA 216 - Recommended Specifications for the Application and Finishing of Gypsum Board.

1.3 SUBMITTALS

A. Submit under provisions of Division 01.

B. Product Data: Provide product data on gypsum board, gypsum board trim, fasteners, joint tape and compound.

C. Manufacturer's Installation Instructions.

1.4 QUALITY ASSURANCE

A. Perform gypsum board systems work in accordance with recommendations of GA 201 and GA 216 unless otherwise specified in this section.

B. Keep copy of GA 201 and GA 216 in field office for duration of project.

1.5 QUALIFICATIONS

A. Applicator: Company specializing in gypsum board systems.

2 PART 2.00 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

A. Acceptable Manufacturers: National Gypsum Company, USG Corporation, Certain Teed Corporation, Georgia Pacific Corporation.

2.2 GYPSUM BOARD MATERIALS

A. Mold and Moisture Resistant Gypsum Board:5/8 inch thick, moisture and mold-resistant core encased in moisture and mold-resistant face.

2.3 GYPSUM BOARD ACCESSORIES

A. Provide gypsum board accessories in accordance with GA 216.

B. Metal Trim: All-metal galvanized steel; flanges perforated for face nailing.

1. Corner Beads: 1-1/4 perforated flanges; 1/8 inch nose; United States Gypsum's Dur-A-Bead Corner Bead #103, Western's Drywall Corner Bead, or Gold Bond's Wallboard Corner Bead.

2. Edge Trim: Minimum 7/8 inch perforated flanges; 1/8 inch bead.

a. Locations with Exposed Gypsum Board Edges: "LC" bead; United States Gypsum's #200-A, Western's #108 U-Metal, or Gold Bond's #100 Wallboard Casing.

b. Other Locations: "L" bead; United States Gypsum's #200-B, Western's "L" Metal #202, or Gold Bond's #200 Wallboard Casing.

C. Fasteners: GA 201; ASTM C1002.

1. To Metal Framing or Furring: "HI-LO" Type S bugle head drywall screws; 1-1/4 inch or length sufficient to penetrate framing minimum 3/8 inch, whichever is greater.

2. To Wood Framing or Furring: Bugle head drywall screws; length as specified below or sufficient to penetrate framing minimum 5/8 inch, whichever is greater.

a. Single Ply Gypsum Board Applications: Type W; 1 1/4 inches long.

D. Reinforcing Tape, Joint Compound, Adhesive and Water: GA 201 and GA 216.

E. Substitutions: Under provisions of Division 01.

3 PART 3.00 - EXECUTION

3.1 EXAMINATION

A. Verify that site conditions are ready to receive work and opening dimensions are as instructed by manufacturer.

B. Do not begin installation until unsatisfactory conditions have been corrected. Beginning of installation means acceptance of substrate.

3.2 GYPSUM BOARD INSTALLATION

A. Install gypsum board in accordance with recommendations of GA 201 and GA 216.

B. Where listed designs are proprietary, use products of the listed manufacturer throughout the system. Do not mix components of alternate proprietary design.

C. For non-rated partitions, install single layer gypsum board perpendicular to framing.

D. Use screws when fastening gypsum board to metal and to wood furring and framing, except as noted on drawings at rated walls.

E. In rated assemblies, space fasteners in accordance with listed designs. In non-rated partitions, space fasteners in accordance with CBC Table 25A-G.

F. Place corner beads at external corners. Use longest practical lengths. Place edge trim where gypsum board terminates, abuts dissimilar materials and as detailed. Face screw to framing.

3.3 JOINT TREATMENT

A. Tape, fill and sand exposed joints, fastener heads, edges and corners to produce smooth finish.

B. Apply three coats of compound to joints, corners, fasteners, and trim. Feather each coat beyond edge of previous coat so that maximum camber is 1/32 inch. Allow compound to thoroughly dry between coats. Sand between second and third coats; lightly sand third coat to eliminate laps and to smooth surface while taking care not to roughen face paper of gypsum board.

C. At joints, embed reinforcing tape in joint compound. Apply second coat of joint compound and third coat of finishing compound over tape.

1. At tapered edges, feather second coat approximately 2 inches beyond first coat and feather third coat approximately 6 inches on each side of joint.

2. On square ends and at field cuts, feather second coat approximately 6 inches on each side of joint and feather third coat approximately 8 inches on each side of joint.

D. Spot apply joint compound to fastener heads; finish compound level with board surface. Apply 2 thin coats of finishing compound over joint compound feathering each coat approximately 2 inches beyond edge of previous coat.

E. Apply joint compound to corner beads and trim; feather from ground to board surface. Feather each coat approximately 2 inches beyond edge of previous coat.

F. Backfill cutouts with joint compound so that space between gypsum board and fixture or receptor does not exceed 1/8 inch.

G. Provide Level 4; smooth wall finish per GA-214.

3.4 TOLERANCES

Maximum Variation from True Flatness: 1/8 inch in 10 feet in any direction.

END OF SECTION

SECTION 09 65 00
RESILIENT FLOORING

1 PART 1.00 - GENERAL

A. SECTIONS INCLUDES

1. Preparation of surfaces to receive resilient flooring.

2. Resilient sheet flooring

3. Resilient tile flooring

4. Resilient coved base

5. Accessories.

B. RELATED SECTIONS

1. Section 09 29 00 - Gypsum Board: Wall materials to receive base.

2. Section 10 26 23 – Fiber Reinforced Plastic

1.2 REFERENCES

A. ASTM E84 - Surface Burning Characteristics of Building Materials.

B. ASTM E662 - Specific Optical Density of Smoke Generated by Solid Materials.

C. FS L-F-475 - Floor Covering, Vinyl Surface (Tile and Roll).

D. FS SS-T-312B - Tile, Floor, Asphalt, Rubber, Vinyl and Vinyl Composition.

E. FS SS-T-312B - Tile, Floor, Asphalt, Rubber, Vinyl and Vinyl Composition

F. FS SS-W-40 - Wall Base: Rubber and Vinyl Plastic.

G. FloorScore: Indoor Air Quality Certified to SCS-EC10.2-2007, California Specification 01350 (Standard Method v1.1) for the school classroom and private office parameters

1.3 SUBMITTALS

A. Submit under provisions of Division 01.

B. Product Data: Provide data on each type of floor material, base, edge strip, cove trim and stick, subfloor filler, primer, adhesive, wax and sealer used describing physical characteristics.

C. Samples:

D. Submit samples, minimum 3 x 3 inches in size illustrating colors and patterns specified for each floor material.

Submit samples, minimum 3 inches long illustrating colors specified for edge strips and cove trim.

OPERATION AND MAINTENANCE DATA

Submit cleaning and maintenance data under provisions of Division 01.

Include maintenance procedures, recommended maintenance materials, and suggested schedule for cleaning.

DELIVERY, STORAGE AND HANDLING

Deliver materials in their original packages with seals unbroken and with manufacturer's name and product identification clearly visible.

Store materials in a protected area. Keep materials dry. Maintain temperature between 40 degrees F and 100 degrees F.

ENVIRONMENTAL REQUIREMENTS

Store materials for three days prior to installation in area of installation to achieve temperature stability.

Maintain ambient temperature required by adhesive manufacturer three days prior to, during, and 24 hours after installation of materials

Deposit all packaging materials in appropriate container on site for recycling or reuse.

At least 80% of resilient materials shall meet at least on of the following requirements:

Certified under the Resilient Floor Covering Institute (RFCI) FloorScore program.

Compliant with the VOC-emission limits and testing requirements specified in the California Department of Public Health 2010 Standard Method for the Testing and Evaluation Chambers.

Compliant with the California collaborative for Hight Performance Schools (CA-CHPS) Criteria Interpretation for EQ 2.2.

Compliant with CDPH criteria as certified under the Greenguard Children’s & Schools Program.

Installer must present documentation to verify resilient flooring materials meet the pollutant emission limits.

EXTRA MATERIALS

Submit and safely store material under provisions of Division 01.

Deliver 15 square feet of each type and color of resilient flooring used.

Deliver 10 linear feet of each type and color edge strip used.

Deliver 25 consecutive linear feet and 10 preformed corners of each type and color resilient base used.

Clearly identify each box or roll.

PART 2.00 - PRODUCTS

VINYL COMPOSITION TILE FLOORING

Established Standard: Excelon Tile flooring manufactured by Armstrong World Industries.

Acceptable Manufacturers: Mannington, Johnsonite.

Substitutions: Under provisions of Division 01.

.Description: Tile composed of polyvinyl chloride resin, plasticizers, fillers, stabilizers and pigments with colors and texture dispersed uniformly throughout its entire thickness.
Vinyl composition tile shall conform to the requirements of ASTM F 1066, 'Standard Specification for Vinyl Composition Floor Tile", Class 2, through-pattern

Armstrong Excelon Tile – 12 x 12 x 1/8

Color to be selected by Architect from standard colors.

RESILIENT SHEET FLOORING

Established Standard: Altro

Toll-free: 800.377-5597.1696 Tel: 925 708-5425

E-mail: info@altrofloors.com Web Site: www.altrofloors.com.

Substitutions: Under provisions of Division 01.

Slip Resistant Sheet Flooring: ASTM D2047
Acceptable material: Altro Maxis Unity

Thickness: 0.10" (2.5 mm); Roll Width: 6' 7" (2 m); Roll Length: 66' (20 m); Slip Resistance (Dry): 0.85. Color: Rock UBI2504.

1.4 ACCESSORIES

A. Subfloor Filler for VCT: Latex type recommended by adhesive material manufacturer for commercial installation; Armstrong S-180 Latex Underlayment.

B. Adhesive: Types recommended by flooring manufacturer for specific material.

C. Sealer and Wax: Types recommended by flooring manufacturer.

D. Vinyl welding rod: Acceptable material:
   1. Altro weld rod

E. Cove former: Acceptable material, sized to suit application:
   1. Altro Cove former

F. Gulley edge: Acceptable material, vinyl, sized to suit application:
   1. Altro Gulley Edge

G. Cap strip: Stainless steel or anodized aluminum:
   1. Square top cove cap: Futura or approved equal

H. Joint cover strip: Acceptable material, vinyl, sized to suit application:
   1. Altro Joint Cover

I. Acrylic Adhesive: For dry areas with no spillage, use Ecofix, a one-part, water-based, acrylic adhesive as recommended by manufacturer.

J. Polyurethane Adhesive: For areas subjected to spillage, extreme temperature changes or heavy rolling loads, use Altrofix 30 or 300, a two-part resin-based polyurethane adhesive.

K. Subfloor Filler and Leveler: Use only gray Portland cement-based underlayments, and patching compounds. Use for filling cracks, holes or leveling. White gypsum materials are not acceptable. Contact Altro for more information and recommendations.

1.5 BASE

A. Integral Coved Base

   1. For integral flash cove base: Provide integral flash cove wall base by extending sheet flooring [4 in. (10.16 cm)] up the wall using adhesive, welding rod, and accessories recommended and approved by the flooring manufacturer

B. Top set Rubber Base: Manufacturers/Products:

1. Established Standard: Burke Industries: Burke Base - Commercial Series

2. Other Acceptable Manufacturers: Nora Rubber by Freudenberg Building Systems, Johnsonite.

3. Base: FS SS-W-40, Type I; molded rubber; 4 inches high; 1/8 inch thick; 120 foot rolls; flame spread rating of 75 or less per ASTM E84. Top Set Style, with coved toe. Colors to be selected by Architect.

2 PART 3.00 -EXECUTION

2.1 EXAMINATION

A. Examine condition of substrate to determine acceptability for new installation.

B. Verify that surfaces are smooth and flat with maximum variation of 1/8 inch in 10 feet and are ready to receive work.

C. Do not begin installation until unsatisfactory conditions have been corrected. Beginning of installation means acceptance of existing substrate and site conditions.

2.2 SUBFLOOR PREPARATION

A. The subfloor must be structurally sound, solid, dry, free from active cracks, clean and free of all contaminants such as grease, oil, paint, wax, curing and sealing compounds that would impair adhesion.

B. Test the substrate in accordance with applicable standards relative to moisture content.

C. Any weakly bonded or soft surface material such as loose adhesive residues, leveling compounds, floor coverings or coatings must be removed by shot blasting, abrading, grinding or wet scraping. Thoroughly vacuum off all loose material or dust.

2.3 INSTALLATION – SHEET FLOORING

A. Install resilient sheet flooring in accordance with manufacturer's instructions.

B. Spread only enough adhesive to permit installation of materials before initial set.

C. Set flooring in place, press with heavy roller to attain full adhesion.

D. Lay flooring with seams parallel to building lines to produce minimum number of seams.

E. Install flooring parallel to length of room. Provide minimum 1/3 full width.

F. Recess scribe seams; continuously heat weld seams to eliminate cracks that can accumulate water, dust and dirt.

G. Terminate flooring at centerline of door openings where adjacent floor finish is dissimilar.

H. Turn flooring up to form 4 inch high integral cove base. Back floor and wall junction with cove stick. Provide cove trim to cap base; mechanically fasten trim to wall.

I. Install edge strips at unprotected or exposed edges, and where floor terminates.

J. Scribe floor to walls, columns, cabinets, floor outlets, and other appurtenances to produce tight joints.

2.4 INSTALLATION – RESILIENT TILE FLOORING

A. Install resilient tile flooring in accordance with manufacturer’s instructions.

B. Snap straight lines to set perimeter where tile does not meet walls or thresholds.

C. Scribe, cut, and fit to permanent fixtures, columns, walls, partitions, pipes, outlets, and built-in furniture and cabinets.

D. Install flooring with adhesives, tools, and procedures in strict accordance with the manufacturer's written instructions. Observe the recommended adhesive trowel notching, open times, and working times.

2.5 INSTALLATION OF ACCESSORIES

A. Apply top set wall base to walls, columns, casework, and other permanent fixtures in areas where top-set base is required. Install base in lengths as long as practical, with inside corners fabricated from base materials that are mitered or coped. Tightly bond base to vertical substrate with continuous contact at horizontal and vertical surfaces.

B. Fill voids with plastic filler along the top edge of the resilient wall base or integral cove cap on masonry surfaces or other similar irregular substrates.

C. Place resilient edge strips tightly butted to flooring, and secure with adhesive recommended by the edge strip manufacturer. Install edge strips at edges of flooring that would otherwise be exposed.

D. Apply edge strips where shown on the drawings. Coordinate with flooring installation. Secure units to the substrate, complying with the edge strip manufacturer's recommendations.

2.6 PROTECTION

A. Cover and protect finished installation from damage from other trades using a non-staining, temporary floor protection system, such as a reusable textured plastic sheeting

B. Protect the newly installed flooring from foot traffic for 24 hours and heavy rolling traffic for 72 hours.

2.7 CLEANING

A. Repair or replace damaged installed products.

B. Clean installed products in accordance with manufacturer's instructions prior to Owner's acceptance.

C. Remove excess adhesive from floor, base, and wall surfaces without damage.

2.8 WARRANTIES

A. Manufacturers: All materials supplied by the flooring manufacturers shall be guaranteed against manufacturing defects for ten (10) years from Substantial Completion.

B. Contractor: All work shall be guaranteed for two (2) years from Substantial Completion.

C. Installers must present documentation to verify resilient flooring materials meet the pollutant emission limits.

END OF SECTION

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SECTION 09 90 00
PAINTING

1 PART 1.00 - GENERAL

1.1 DESCRIPTION:

A. SECTION INCLUDES

1. Surface preparation of newly installed surfaces to receive finish.

2. Surface finish schedule.

B. RELATED SECTIONS

1. Section 06 42 00 – Finish Carpentry

2. Section 08 14 00 – Wood Doors

3. Section 09 29 00 – Gypsum Board

4. Shop primed products specified in other sections.

1.2 REFERENCES

A. ASTM D16 - Definitions of Terms Relating to Paint, Varnish, Lacquer, and Related Products.

B. ASTM D2016 - Test Method for Moisture Content of Wood.

C. CBC – 2013 California Building Code.

1.3 DEFINITIONS

A. Conform to ASTM D16 for interpretation of terms used in this section.

1.4 SUBMITTALS

A. Submit under provisions of Division 01.

B. Product Data: Submit complete list of materials in form of paint systems scheduled listing specific product intended for each coat. Include paint conditioner if used. In addition, submit manufacturer's data for each product to be used identified by manufacturer's name and product label or stock number.

C. Samples:

1. Paint Finishes: Submit samples, minimum 8-1/2 x 11 inches in size, illustrating finishes and colors to be used. Identify each sample with color name, color number, finish name, and formula.

D. Manufacturer's Application Instructions: Indicate preparation and application requirements and procedures.

1.5 QUALIFICATIONS

A. Product Manufacturer: Company specializing in manufacturing quality paint and finish products with minimum five years experience.

B. Applicator: Company specializing in commercial painting and finishing with minimum five years experience, approved by product manufacturer.

1.6 REGULATORY REQUIREMENTS

A. Conform to CBC for flame/fuel/smoke rating requirements for finishes.

B. Conform to regulations of local Air Quality Management District and California Air Resources Board regarding use of architectural coatings (paint).

1.7 DELIVERY, STORAGE, AND HANDLING

A. Deliver products to site in sealed and labeled containers; inspect to verify acceptance.

B. Label containers to include manufacturer's name, type of paint, brand name, brand code, coverage, surface preparation, drying time, cleanup, color designation, and instructions for mixing and reducing.

C. Store paint materials at minimum ambient temperature of 45 degrees F and a maximum of 90 degrees F in well ventilated area, unless required otherwise by manufacturer's instructions.

D. Take precautionary measures to prevent fire hazards and spontaneous combustion.

1.8 ENVIRONMENTAL REQUIREMENTS

A. Provide continuous ventilation and heating facilities to maintain surface and ambient temperatures above 45 degrees F for 24 hours before, during, and 48 hours after application of finishes, unless required otherwise by manufacturer's instructions

B. Minimum Application Temperatures for Latex Paints: 45 degrees F for interiors, unless required otherwise by manufacturer's instructions.

C. Provide lighting level of 80 ft candles measured mid-height at substrate surface.

1.9 EXTRA MATERIALS

A. Submit maintenance materials and store under provisions of Division 1.

B. Deliver a one-gallon container of each color and surface finish to Owner.

C. Label each container with color, finish, and room locations, in addition to the manufacturer's label.

2 PART 2.00 - PRODUCTS

2.1 MANUFACTURERS

A. Paint: Established Standard: Dunn-Edwards Corporation

B. Other Acceptable Manufacturers:

1. Sherwin Williams

2. Kelly-Moore

C. Gypsum Board Pretreatment:

1. Hamilton Industries, Inc.: Prep Coat.

2. United States Gypsum Company: Sheetrock First Coat.

3. Substitutions: Equal products compatible with paint and substrate and acceptable to paint manufacturer may be substituted under provisions of Division 01.

D. Paint Conditioner:

1. The Flood Company: Acrylic Latex: "Floetrol."

2. Substitutions: Equal products compatible with paint and acceptable to paint manufacturer may be substituted under the provisions of Division 1.

2.2 MATERIALS

A. Coatings: Ready mixed. Process pigments to a soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating.

B. Coatings: Good flow and brushing properties, capable of drying or curing free of streaks or sags.

C. Accessory Materials: Paint thinners and other materials not specifically indicated but required to achieve the finishes specified, of commercial quality.

2.3 FINISHES

A. Refer to schedule at end of section for surface finish schedule.

3 PART 3.00 - EXECUTION

3.1 EXAMINATION

A. Verify that surfaces are ready to receive work as instructed by the product manufacturer.

B. Examine surfaces, scheduled to be finished, prior to commencement of work. Report any condition that may potentially affect proper application.

C. Measure moisture content of surfaces using an electronic moisture meter. Do not apply finishes unless moisture content of surfaces are below the following maximums:

1. Gypsum Wallboard: 12 percent

2. Concrete or Masonry: 12 percent.

3. Interior Wood: 15 percent, measured in accordance with ASTM D2016.

D. Surfaces to be clean, dry and free of dust, dirt, mildew and any other foreign matter and contaminants.

E. Do not begin installation until unsatisfactory conditions have been corrected. Beginning of installation means acceptance of existing surfaces

3.2 PREPARATION OF NEWLY INSTALLED SURFACES

A. Remove electrical raceways and plates, hardware, light fixture trim, and fittings prior to preparing surfaces or finishing.

B. Correct minor defects and clean surfaces that affect work of this section.

C. Seal marks that may bleed through surface finishes.

D. Impervious Surfaces: Remove mildew by scrubbing with solution of tri-sodium phosphate and bleach. Rinse with clean water and allow surface to dry.

E. Gypsum Board Surfaces: Latex fill minor defects. Spot prime defects after repair.

F. Concrete: Remove dirt, loose matter, scale, salt and alkali powder and other foreign matter. Remove oil and grease with solution of trisodium phosphate; rinse well and allow to dry. Remove stains caused by weathering of corroding metals with solution of sodium metasilicate after thoroughly wetting with water; allow to dry.

G. Uncoated Steel and Iron Surfaces: Remove grease, scale, dirt, and rust. Where heavy coatings of scale are evident, remove by wire brushing or sandblasting; clean by washing with solvent. Apply a treatment of phosphoric acid solution, ensuring weld joints, bolts, and nuts are similarly cleaned. Spot prime paint after repairs.

H. Shop Primed Steel Surfaces: Sand and scrape to remove loose primer and rust. Feather edges to make touch-up patches inconspicuous. Clean surfaces with solvent. Prime bare steel surfaces. Prime metal items including shop primed items.

I. Interior Wood Items Scheduled to Receive Paint Finish: Wipe off dust and grit prior to priming. Seal knots, pitch streaks, and sappy sections with sealer. Fill nail holes and cracks after primer has dried; sand between coats.

3.3 PROTECTION

A. Protect elements surrounding the work of this section from damage or disfiguration.

B. Repair damage to other surfaces caused by work of this section.

C. Furnish drop cloths, shields, and protective methods to prevent spray or droppings from disfiguring other surfaces.

D. Remove empty paint containers from site.

3.4 APPLICATION - PAINT

A. Apply products in accordance with manufacturer's instructions.

B. Spray apply paint to access doors, access panels, louvers, grilles and registers.

C. Apply material evenly, free from sags, runs, crawls, holidays, brush marks, lap marks, defects and blemishes. Cut sharply to lines.

D. Contractor's Option: Paint conditioner may be added to paint to extend wet edge time and avoid lap and brush marks at doors, door frames, columns and handrails. If used, mix conditioner with paint in accordance with manufacturer's instructions; do not exceed recommended proportion of conditioner.

E. Do not apply finishes to surfaces that are not dry.

F. Apply each coat to uniform finish.

G. Apply each coat of paint slightly darker than preceding coat unless otherwise approved.

H. Sand lightly between coats to achieve required finish.

I. Allow applied coat to dry before next coat is applied.

J. Finish top, bottoms and edges of doors same as door surfaces with same number of coats.

K. Paint every newly installed surface except as specified or noted otherwise,

1. Do not paint plated or pre-finished surfaces unless painting is specified, scheduled, or noted.

2. Do not paint exposed concrete floors.

3.5 FINISHING MECHANICAL AND ELECTRICAL EQUIPMENT

A. Prime and paint interior insulated and exposed pipes, conduit, boxes, insulated and exposed ducts, hangers, brackets, and collars and supports. Do not paint prefinished surfaces unless painting is specified, scheduled, or noted.

B. Paint exposed conduit and electrical equipment occurring in finished areas.

C. Replace electrical plates and raceways, hardware, light fixture trim, and fittings removed prior to finishing.

3.6 FIELD QUALITY CONTROL

Construction Inspector will inspect surfaces after preparation and after each application of primer and paint to ascertain compliance with specified requirements.

3.7 CLEANING

A. As work proceeds, promptly remove paint where spilled, splashed, spattered, or oversprayed.

B. Repair surfaces damaged by spilled, splashed, spattered or oversprayed paint. Replace surfaces that cannot be repaired to satisfaction of the Architect and Owner.

C. During progress of work maintain premises free of unnecessary accumulation of tools, equipment, surplus materials, and debris.

D. Collect cotton waste, cloths, and material which may constitute a fire hazard, place in closed metal containers and remove daily from site.

3.8 PAINTING AND FINISHING SCHEDULE - NEW INTERIOR SURFACES

A. Products listed are as manufactured by Dunne-Edwards Corporation.

1. Gypsum Board: Acrylic Latex – Low Sheen Finish

1st coat	“Sheetrock First Coat”
2nd coat	Suprema (SPMA40)
3rd coat	Suprema (SPMA40)

2. Gypsum Board: Acrylic Latex - Semi-Gloss Finish

1st coat	"Sheetrock First Coat"
2nd coat	Suprema (SPMA50)
3rd coat	Suprema (SPMA50)

3. Shop Primed Ferrous Metals: Acrylic Latex - Semi-Gloss Finish

Touch-up	Corrobar (43-5)
1st coat	Corrobar (43-5)
2nd coat	Suprema (SPMA50)
3rd coat	Suprema (SPMA50)

4. Wood :Acrylic Latex – Semi Gloss Finish

1st coat	E-Z Prime (EZPR00)
2nd coat	Suprema (SPMA50)
3rd coat	Suprema (SPMA50)

3.9 PAINTING AND FINISHING SCHEDULE – EXISTING INTERIOR SURFACES

A. Products listed are as manufactured by Dunne-Edwards Corporation.

1. Gypsum Board: Acrylic Latex – Low Sheen Finish

1st coat	Suprema (SPMA40)

2. Gypsum Board: Acrylic Latex - Semi-Gloss Finish

1st coat	Suprema (SPMA50)

3. Uncoated Ferrous Metals: Acrylic Latex - Semi-Gloss Finish

Touch-up	Corrobar (43-5)
1st coat	Suprema (SPMA50)

4. Wood: Acrylic Latex- Semi-Gloss Finish

Touch up	E-Z Prime (EZPR00)
1st coat	Suprema (SPMA50)

5. Wood: Acrylic Latex- Low Sheen Finish

Touch up	E-Z Prime (EZPR00)
1st coat	Suprema (SPMA40)

3.10 SCHEDULE OF PAINTED COLORS/SHEENS

A. Interior Surfaces:

1. Walls and Ceilings: See finish schedule on drawings for sheens, color to match existing and approved by Architect.

2. Wood painted Doors and frames: Match existing color and finish.

3. Wood Trim: Semi-Gloss finish, color to match existing and approved by Architect.

END OF SECTION

SECTION 10 26 23
FIBER REINFORCED PLASTIC

1 PART 1.00 GENERAL

1.1 SECTION INCLUDES

A. Fiberglass reinforced polyester panel system for adhesive mounting.

B. Moldings, adhesive, and joint sealants.

1.2 REFERENCES

A. ANSI/AHA A135.5 - Prefinished Hardboard Paneling; 1995.

B. ASTM D 256 - Standard Test Methods for Determining the Izod Pendulum Impact Resistance of Plastics; 1997.

C. ASTM D 523 - Standard Test Method for Specular Gloss; 1989 (Reapproved 1994).

D. ASTM D 570 - Standard Test Method for Water Absorption of Plastics; 1998.

E. ASTM D 638 - Standard Test Method for Tensile Properties of Plastics; 1997.

F. ASTM D 696 - Standard Test Method for Coefficient of Linear Thermal Expansion of Plastics Between -30 degrees C and 30 degrees C With a Vitreous Silica Dilatometer; 1998.

G. ASTM D 790 - Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials; 1997.

H. ASTM D 792 - Standard Test Methods for Density and Specific Gravity (Relative Density) of Plastics by Displacement; 1998.

I. ASTM D 968 - Standard Test Methods for Abrasion Resistance of Organic Coatings by Falling Abrasive; 1993.

J. ASTM D 1037 - Standard Test Methods for Evaluating Properties of Wood-Base Fiber and Particle Panel Materials; 1996a.

K. ASTM D 1308 - Standard Test Method for Effect of Household Chemicals on Clear and Pigmented Organic Finishes; 1987 (Reapproved 1998).

L. ASTM D 2197 - Standard Test Methods for Adhesion of Organic Coatings by Scrape Adhesion; 1998.

M. ASTM D 2486 - Standard Test Method for Scrub Resistance of Wall Paints; 1996.

N. ASTM D 2583 - Standard Test Method for Indentation Hardness of Rigid Plastics by Means of a Barcol Impressor; 1995.

O. ASTM E 84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 1998.

1.3 SUBMITTALS

A. Submit under provisions of Division 01.

B. Product Data: Manufacturer's data sheets on each product to be used, including:
1. Preparation instructions and recommendations.
2. Storage and handling requirements and recommendations.
3. Installation methods.

C. Maintenance Instructions: Deliver to Owner.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Store products in manufacturer's unopened packaging until ready for installation.

B. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

1.5 PROJECT CONDITIONS

A. 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.

2 PART 2.00 PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturer: Marlite; 202 Harger Street, Dover, OH 44622. ASD. Tel: (330) 343-6621. Fax: (330) 343-7296. www.marlite.com

B. Requests for substitutions will be considered in accordance with provisions of Division 01.

2.2 APPLICATIONS

A. Provide plastic paneling in areas indicated on Finish Schedule and interior elevations.

2.3 PANEL SYSTEM

A. Plastic Panel System: Factory finished panels, trim, sealant, and accessories.

B. Panels: Marlite FRP Panels; fiberglass reinforced polyester, USDA approved for incidental food contact.
   1. Surface Burning Characteristics: Flame spread index of 25 or less, smoke developed index of 450 or less, when tested in accordance with ASTM E 84 (Class A/I)
   2. Surface Texture: High-gloss, pebbled surface.
   3. Thickness: 3/32 inch (2.4 mm), nominalWidth: 48 inches (1220 mm).
   4. Height: 96 inches or 120 inches (3048 mm).
   5. Flexural Strength: 10,000 psi (69 MPa), when tested in accordance with ASTM D 790.
   6. Flexural Modulus 3,100 psi (213 MPa), when tested in accordance with ASTM D 790.
   7. Tensile Strength: 7,000 psi (48 MPa), when tested in accordance with ASTM D 638.
   8. Tensile Modulus: 1,600,000 psi (11032 MPa), when tested in accordance with ASTM D 638.
   9. Barcol Hardness: 35, when tested in accordance with ASTM D 2583.
   10. Impact Resistance: 7.2 ft-lb/in (1260 N/m), when tested in accordance with ASTM D 256, Izod method.
   11. Coefficient of Thermal Expansion: 0.0000157 in/in/degree F (0.0000283 mm/mm/degree C), measured in accordance with ASTM D 696.
   12. Water Absorption: 0.72 percent, when tested in accordance with ASTM D 570.
   13. Specific Gravity: 1.8, when tested in accordance with ASTM D 792.
   14. Color: P-100 White

C. Panel Trim: Extruded PVC, in manufacturer's standard colors.

   1. Outside corners, inside corners, edge trim, and division molding.

D. Sealant: Marlite Silicone Sealant; gunnable silicone rubber

   1. Color: match panels

3 PART 3.00 EXECUTION

3.1 EXAMINATION

A. Do not begin installation until substrates have been properly prepared.

B. If substrate preparation is the responsibility of another installer, notify General Contractor to correct unsatisfactory conditions before proceeding with work.

3.2 PREPARATION

A. Take panels out of cartons and allow acclimating to room conditions for at least 48 hours prior to installation.

B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

C. Clean surfaces thoroughly prior to installation.

D. Protect existing surfaces from damage due to installation.

3.3 INSTALLATION

A. Install in accordance with manufacturer's instructions.

B. Use the adhesives recommended by the panel manufacturer unless prohibited by local regulations; obtain manufacturer's approval of alternative adhesives.

C. Install continuous bead of silicone sealant in each joint and trim groove and between trim and adjacent construction, maintaining 1/8 inch (3 mm) expansion space.

D. Avoid contamination of panel faces with adhesives, solvents, or cleaners; clean as necessary and replace if not possible to repair to original condition.

E. Protect installed products until completion of project.

F. Touch-up, repair or replace damaged products after Substantial Completion.

END OF SECTION

SECTION 10 28 00
WASHROOM ACCESSORIES

1 PART 1.00 - GENERAL

1.1 DESCRIPTION:

A. SECTION INCLUDES

1. Toilet accessories.

2. Janitor accessories.

3. Attachment hardware.

B. PRODUCTS FURNISHED BUT NOT INSTALLED UNDER THIS SECTION

Furnish concealed block and/or anchor devices to Section 06 10 00 – Rough Carpentry

C. RELATED SECTIONS

1. Section 06 10 00 – Rough Carpentry

2. Section 06 42 00– Finish Carpentry

3. Section 08 14 00 – Wood Doors

4. Section 09 90 00 – Painting

5. Section 10 26 23 – Fiber Reinforced Plastic

6. Section 11 90 00 - Equipment

1.2 REFERENCES

A. ASTM A167 - Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet, and Strip.

B. ASTM A269 - Seamless and Welded Austenitic Stainless Steel Tubing for General Service.

C. CBC – 2013 California Building Code.

1.3 SUBMITTALS

A. Submit under provisions of Division 01.

B. Product Data: Provide data to illustrate each accessory at large scale and show installation method.

1.4 REGULATORY REQUIREMENTS

Conform to CBC Section 11-B for access for persons with disabilities.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Deliver products to site and store, protect and handle under provisions of Division 01.

B. Do not deliver accessories to site until rooms in which they are to be installed are ready to receive them.

C. Pack accessories individually in a manner to protect accessory and its finish.

1.6 FIELD MEASUREMENTS

Verify that field measurements are as indicated on product data.

1.7 COORDINATION

Coordinate the work with the placement of existing internal wall reinforcement and reinforcement of toilet partitions to receive anchor attachments.

2 PART 2.00 - PRODUCTS

2.1 MANUFACTURERS

A. Bobrick Washroom Equipment

B. U-Line Products

C. Global Industries

D. The Land of Nod: www.landofnod.com

E. The Container Store: www.containerstore.com

F. Substitutions: Under provisions of Division 01.

2.2 MATERIALS

A. Sheet Steel: ASTM A366, cold rolled stretcher leveled; 125 oz/sq ft galvanized coating.

B. Stainless Steel Sheet: ASTM A167, Type 304.

C. Fasteners:

1. Accessories mounted in or on metal stud framed walls:
   a. Vandal resistant one-way spanner or torx round head wood screws; minimum #8 x length sufficient to penetrate metal backing; zinc plated steel at concealed locations, stainless steel at exposed locations.

2. Accessories Mounted on FRP:

   a. Screws: Vandal resistant one-way, spanner or torx pan head machine screws; #8 - 32 x 3/4 inch; zinc plated steel at concealed locations, stainless steel at exposed locations.
   b. Connectors: Internally threaded bolt; #8 - 32 x 3/4 inch; stainless steel.

2.3 FINISHES

A. Bobrick accessories: Stainless Steel: No. 4 stain luster finish.

3 PART 3.00 - EXECUTION

3.1 EXAMINATION

A. Verify that site conditions are ready to receive work and dimensions are as instructed by the manufacturer.

B. Verify that backing has been provided for surface mounted units not specified to be furnished with anchor plates.

C. Before starting work, notify Architect in writing of conditions detrimental to installation or operation of accessories.

D. Do not begin installation until unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Provide templates and rough in measurements as required.

B. Verify with Architect exact location of accessories.

3.3 INSTALLATION

A. Install fixtures, accessories and items in accordance with manufacturer's instructions.

B. Conform to CBC for positioning requirements for persons with disabilities.

C. Install true, plumb, and level, securely and rigidly anchored to substrate.

D. Secure wall mounted accessories, other than grab bars, to wood backing with wood screws.

3.4 SCHEDULE OF ACCESSORIES

A. Paper Towel Dispenser: Surface mounted, stainless steel, Bobrick B-4262.

B. Soap Dispenser: Surface mounted, Classic Series, stainless steel with satin finish: Bobrick B-2111.

C. Nexel Wall-Mount Wire Shelving, Chrome.

1. Double Shelving: Height = 34”, Depth = 14”, length according to location. See interior elevations and confirm lengths.

2. Single Shelving: Height = 14”, Depth = 18”, length according to location. See interior elevations and confirm lengths.

3. Double Shelving: Height = 34”, Depth = 18”, length according to location. See interior elevations and confirm lengths.

D. Container Store Wire shelving, Door Mounted Wire shelving: Platinum Elfa Utility Door and Wall Rack System with 5 wire baskets each door.

E. The Land of Nod Wire Baskets: Down to the Wire Wall Bin – Iron wire with Powder Coat Grey finish, 14”W x 12” D x 12” H.

END OF SECTION

SECTION 10 28 00
TOILET & BATH ACCESSORIES

1 PART 1.00 - GENERAL

1.1 DESCRIPTION:

A. SECTION INCLUDES

1. Freestanding tables
2. Freestanding Wire Shelving Units
3. Related Accessories
4. Attachment hardware.

B. RELATED SECTIONS

1. Section 06 10 00 – Rough Carpentry
2. Section 06 42 00– Finish Carpentry
3. Section 10 26 23 – Fiber Reinforced Plastic
4. Section 06 41 00 - Casework

1.2 REFERENCES

A. ASTM A167 - Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet, and Strip.

B. ASTM A269 - Seamless and Welded Austenitic Stainless Steel Tubing for General Service.

C. CBC – 2013 California Building Code.

1.3 SUBMITTALS

A. Submit under provisions of Division 01.

B. Product Data: Provide data to illustrate each accessory at large with finishes and dimensions.

1.4 REGULATORY REQUIREMENTS

Conform to CBC Section 11-B for access for persons with disabilities.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Deliver products to site and store, protect and handle under provisions of Division 01.

B. Do not deliver equipment to site until rooms in which they are to be installed are ready to receive them.

C. Pack individually in a manner to protect equipment and its finish.

1.6 FIELD MEASUREMENTS

Verify that field measurements are as indicated on product data.

1.7 COORDINATION

Coordinate the work with the placement of existing internal wall reinforcement and attachment devices.

2 PART 2.00 - PRODUCTS

2.1 MANUFACTURERS

A. Metro

B. Bailey Pottery

C. U-Line Products

D. Substitutions: Under provisions of Division 01.

2.2 MATERIALS

A. Stainless Steel Sheet: ASTM A167, Type 304.
B. Fasteners:
1. Angle brackets to secure shelving units to wall at blocking.

C. Work Table: Metro MWT306FC mobile worktable, or approved equal. 14 gauge steel mobile worktable with 304 stainless steel work surface, sturdy chrome legs and 16 gauge adjustable galvanized undershelf. This 30" x 60" heavy-duty work table features four 1 5/8" legs to assure a sturdy, wobble-free surface. The bottom shelf is adjustable in 2" increments. This mobile work table features four 5" poly casters; 2 swivel and 2 brake.
Overall dimensions: 60” l x 30” w x 34” height

D. Wedging Table: Bailey Pottery, or approved equal: www.baileypottery.com
Bailey 2-person wedging table built of ¼” reinforced steel angle, supplied with a 1/16” braided cutting wire attached to a turnbuckle for accurate tensioning. Plaster slab top is 3-1/2” thick and poured in place by contractor.
Table dimensions: 48” w x 24” d x 32” high.

E. Wire shelving units: Salsbury Industries, distributed by U-Line Products, or approved equal. Stationary Wire Shelving, constructed of industrial grade welded wire with chrome plated finish and adjustable shelves.
   1. 36” w x 18” d x 74” h unit
   2. 42” w x 18” d x 74” h unit

3 PART 3.00 - EXECUTION

3.1 EXAMINATION

A. Verify that site conditions are ready to receive work and dimensions are as instructed by the manufacturer.

B. Verify that backing has been provided for shelving units.

C. Before starting work, notify Architect in writing of conditions detrimental to installation or operation of accessories.

D. Do not begin installation until unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. Install fixtures, accessories and items in accordance with manufacturer's instructions.

B. Conform to CBC for positioning requirements for persons with disabilities.

C. Install true, plumb, and level, securely and rigidly anchored to substrate.

D. Secure free standing shelf units with clips to wood backing with wood screws.

E. Wedging table: Fabricate plaster top as directed by mfr.

END OF SECTION

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SECTION 12 36 63
QUARTZ COUNTERTOPS

1 PART 1.00 - GENERAL

1.1 DESCRIPTION:

A. SECTION INCLUDES

1. Quartz countertops

2. Quartz Backsplash

3. Setting materials and accessories

B. RELATED SECTIONS

1. Section 06 10 00 - Rough Carpentry: Grounds and support framing.

2. Section 06 42 00 – Finish Carpentry

3. Section 06 41 00 - Casework

1.2 REFERENCES

A. B. ASTM International (ASTM):

1. 1. C97 - Standard Test Methods for Absorption and Bulk Specific Gravity of Dimension Stone.

2. 2. C99 - Standard Test Method for Modulus of Rupture of Dimension Stone.

3. 3. C170 - Standard Test Method for Compressive Strength of Dimension Stone.

4. 5. C256 - Method of Test for Flexural Strength of Magnesium Oxychloride Cements (Using Simple Bar with Two-Point or Single-Point Loading).

5. 6. C370 - Standard Test Methods for Moisture Expansion of Fired Whiteware Products.

6. 7. C373 - Standard Test Method for Water Absorption, Bulk Density, Apparent Porosity, and Apparent Specific Gravity of Fired Whiteware Products.

7. 10. C531 - Standard Test Method for Linear Shrinkage and Coefficient of Thermal Expansion of Chemical-Resistant Mortars, Grouts, Monolithic Surfacings, and Polymer Concretes.

1.3 SUBMITTALS

A. Submit under provisions of Division 01 General Requirements.

B. Shop Drawings: Include layout, dimensions, materials, finishes, cutouts, and attachments.

C. Samples:

1. Submit samples, 3” x 3” quartz samples in color(s) specified.

2. Submit 3” long joint sealer sample in color to match quartz materials.

D. Sustainable Design submittals.

1. Recycled Content: Certify percentages of post-consumer and pre-consumer recycled content.

2. Low-Emitting Materials: Certify volatile organic compound (VOC) content

E. Closeout submittals:

1. 1. Maintenance Data: Include recommended cleaning materials and procedures, and list of materials detrimental to quartz.

1.4 QUALITY ASSURANCE

A. Manufacturer

1. Minimum 10 years experience in manufacture of quartz surfacing materials.

B. Fabricator and Installer Qualifications:

1. Minimum 2 years experience in work of this Section.

1.5 WARRANTY

Provide manufacturer’s 10 year warranty against defects in materials and workmanship.

1.6 DELIVERY, STORAGE AND HANDLING

A. Deliver products to site, store and protect under provisions of Division 01.

1.7 FIELD MEASUREMENTS

A. Verify that field measurements are as indicated on shop drawings.

B. Field measure installed base cabinets prior to fabrication of countertops.

2 PART 2.00 - PRODUCTS

2.1 QUARTZ

A. Product: Silestone Quartz, or approved equal.

B. .Composition: Quartz aggregate, polyester resin, and color pigments formed into flat slabs.

C. Bacteriostatic Protection. With Silver Technology.

D. Color: Tigris Sand 6006-L

E. Surface finish: Leather

F. Thickness: 3/4 inch

2.2 ACCESSORIES

A. Adhesive:

1. Type recommended by quartz manufacturer.

2. Maximum VOC content: 70 grams per liter

B. Joint Sealer:

1. Latisil Tile and Stone Sealant by Laticrete International, Inc.

2. Volatile organic compound (VOC) content: Maximum 50 grams per liter.

3. Color: To be selected from manufacturer’s full color range.

2.3 FABRICATION

A. Cut quartz panels accurately to required shapes and dimensions.

B. Fabricate exposed edges to full bullnose.

C. Fabricate with hairline joints.

D. Fabricate backsplash to fit countertops. Include sides where counter abuts wall.

3 PART 3.00 - EXECUTION

3.1 PREPARATION

A. Clean surfaces to receive fabrications; remove loose and foreign matter than could interfere with adhesion.

3.2 INSTALLATION

A. Install fabrications in accordance with manufacturer's instructions and approved Shop Drawings.

B. Adhere fabrications with continuous beads of adhesive

3.3 INSTALLATION TOLERANCES

A. Maximum variation from level and plumb: 1/8 inch in 10 feet, noncumulative.

B. Maximum variation in plane between adjacent pieces at joint: Plus or minus 1/16 inch.

3.4 CLEANING

A. Clean work under provisions of Division 01.

B. Clean fabrications in accordance with manufacturer's instructions.

3.5 PROTECTION

Protect installed fabrications with nonstaining sheetcoverings.

END OF SECTION

SECTION 12 48 43
FLOOR MATS

1 PART 1.00 - GENERAL

1.1 WORK INCLUDED

A. Floor Mats for use near utility sinks.

1.2 RELATED SECTIONS

A. Section 09 65 00 Resilient Flooring

1.3 REFERENCES

A. CBC – California Building Code, latest edition.

1.4 SUBMITTALS

A. Submit the following in accordance with Division 01, Submittal Procedures.

B. Product Data: Submit manufacturer's product data. Include sizes, types, finishes, scheduled locations, and details of adjoining work.

1.5 DELIVERY, STORAGE AND HANDLING

A. Protect products against damage during field handling and installation.

2 PART 2.00 – PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

A. Established Standard: American Floor Mats – www.americanfloormats.com

B. Other Acceptable Manufacturers: Eagle Mat, MatsETC.

C. Substitutions: Under provisions of Division 01

2.2 RUBBER MATS

A. 3/8" Thick Nitrile Rubber Mat with ~1/2" wide ADA Compliant borders and 11/16" holes in the body of the mat to allow for water drainage.

B. Flame, Chemical & Weather Resistant: Exceeds requirements for FF2-70 - standard for surface flammability of small carpets.

C. Constructed of 100% skid-resistant, closed-cell Nitrile rubber, not affected by grease or oil. Made with 15% recycled content.

D. Static Control: passes AATCC 134-1996 Electrostatic Propensity of Carpets and pass ASTM F-150 IBM Surface to Ground requirements.

E. Slip resistant surface and anti-microbial treated.

3 PART 3.00 - EXECUTION

3.1 EXAMINATION

A. Verify floor surfaces, including grout, are finished and clean.

3.2 INSTALLATION

A. Install units in accordance with manufacturer's instructions.

B. Set mats in place so all surfaces are flat and not prone to moving or curling at edges.

END OF SECTION

SITE FURNISHINGS - SECTION 129300

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

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

1.02 DESCRIPTION OF WORK

A. Extent: Furnish all labor, material, equipment, tools, and incidentals necessary for the provision and installation of Site Furnishings as shown on the Drawings and as specified in this Section. The work includes all miscellaneous hardware, foundations, footings and miscellaneous appurtenances associated with the installation. Items to be installed include:
   1. Bench
   2. Picnic Tables

B. Related work includes but is not limited to:
   1. Site Concrete

1.03 STANDARDS

A. Unless otherwise shown or specified, all materials and methods shall conform to the appropriate current sections of: he State of California Department of Transportation (CALTRANS) Standard Specifications, latest edition, except for measurement and payment requirements.

B. Applicable ASTM International Standards (latest revisions) as they apply to this work and related test methods.

C. Applicable ISO Testing Standards (latest revisions) as they apply to this work.

1.04 SUBMITTALS

A. Product Data: Submit Product Data for review and approval by the Engineer for all site furnishings and accessories.

B. Shop Drawings: Submit Shop Drawings for review and approval by the Engineer for all site furnishings and accessories. Show all locations, markings, quantities, materials, sizes, and shapes and indicate all methods of connecting, anchoring, fastening, bracing, and attaching to the work of other trades.

C. Maintenance Data: At Substantial Completion submit maintenance information for site furnishings and accessories where applicable for inclusion in the Owner's maintenance manuals.

1.05 QUALITY ASSURANCE

A. Manufacturer's Instructions: Materials, products, processes, equipment or the like shall be installed or applied in strict accordance with printed instructions furnished by the manufacturer of the material for use under conditions similar to those at the job site.

B. Perform all work in accordance with all applicable State and local laws, codes and regulations.

1.06 DELIVERY, STORAGE & HANDLING

A. Delivery & Handling: Transport, store and handle precast units and manufactured items in a manner to avoid hairline cracks, staining or other damage. .

B. Storage & Protection Store units free of the ground and protected from mud or rain splashes. Cover units, secure covers firmly, and protect the units from dust, dirt or other staining material.

PART 2 - PRODUCTS

2.01 FURNISHINGS

A. Benches:
Manufacturer: DuMor, Inc (www.dumor.com)
Model #: 105 Series (2 total)
Description/color/finish: 8' length, Embedded mount, Cedar Color Recycled Plastic, with Heritage color metal bases.

B. Picnic Tables:
Manufacturer: DuMor, Inc (www.dumor.com)
Model #: 76-33PL (1 total), and 76-34PL (5 total)
Description/color/finish: Surface mount, Cedar Color Recycled Plastic, with Heritage color metal bases.

PART 3 - EXECUTION

3.01 GENERAL

A. Review and Adjustment: All site furnishings shall be located as shown on the Drawings. Review all site furnishing locations prior to proceeding with any installation. Adjustments shall be made as approved by the Engineer.

B. Embedment: It is the intent of the Drawings that all embedded site furnishings be installed in concrete paving areas prior to the concrete pour. Furnishings shall be completely protected during the concrete pour. Furnishings damaged due to the concrete pour shall be replaced at the discretion and to the satisfaction of the Engineer, and not repaired or cleaned.

C. Scheduling: The contractor shall be responsible for scheduling the receiving of equipment in conjunction with the concrete pour. Any block outs of concrete pour due to scheduling conflicts shall be approved by the Engineer and shall be included in this contract. Finish of any block out areas shall match adjacent paving.

3.02 INSTALLATION

A. Site Furnishings: Shall be installed per manufacturer's recommendations and as shown on the Drawings and as specified herein.

B. Comply with manufacturer's written installation instructions unless more stringent requirements are indicated. Complete field assembly of site furnishings where required.

C. Set all work true and square, plumb and level. Provide spacers under furniture to level as acceptable to Owner's Representative

3.03 CLEAN-UP

A. After completion of all operations, Contractor shall remove all trash, excess soil and other debris. All walks, walls, and pavement shall be swept and washed clean, leaving the entire area in a neat, orderly condition.

END OF SECTION

DEMOLITION - SECTION 311113

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

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

1.02 DESCRIPTION OF WORK

A. Extent: Furnish all labor, material, equipment, tools, and incidentals necessary for Demolition work as shown on the Drawings and as specified in this Section. The work includes:
   1. Saw-cutting and demolition of concrete walks and asphalt paving, including associated curbs, gutters, and aggregate base.
   2. Clearing and grubbing.

B. Related work includes but is not limited to:
   1. Tree Protection
   2. Earthwork and Grading

1.03 DEFINITIONS

A. Topsoil: See Specification Section Earthwork and Grading

1.04 SUBMITTALS

A. Indicate on the project schedule submittal, proposed time for demolition work in this Section, including shut-off time and capping of utility service.

1.05 QUALITY ASSURANCE

A. Reviews: Prior to any site clearing or demolition work, the Contractor shall prepare protection measures for review by the Engineer.

1.06 SITE CONDITIONS

A. Occupancy: Paving areas and structures to be removed or demolished will be vacated and discontinued in use prior to the start of work.

B. Explosives: Use of explosives for demolition work is not permitted.

C. Traffic: Conduct demolition operations and the removal of debris to ensure minimum interference with roads, streets, walks, and other adjacent occupied or used facilities. Do not close or obstruct streets, walks, or other occupied facilities without permission from Owner.

D. Protection: Ensure the safe passage of persons around the area of demolition. Conduct operations to prevent damage to adjacent buildings, structures, other facilities, and injury to persons. See Special Provisions for additional information regarding building access.

E. Construction Fence: Contractor is required to fence site and provide an adequate level of safety and protection at all times during construction

F. Protection of existing trees and vegetation – see Specification Section Tree Protection.

G. Damage: Promptly repair damages caused to adjacent facilities by demolition operations at no cost to Owner.

PART 2 - PRODUCTS

Not applicable.

PART 3 - EXECUTION

3.01 SITE CLEARING

A. General
   1. Contractor shall clear and grub areas only as necessary to construct improvements shown on the Drawings.

   2. Use only hand methods for grubbing inside the drip line of trees indicated to be preserved and protected, unless otherwise approved by the Engineer. This includes trees that may be outside and adjacent to the Limit of Work.

B. Clearing and Grubbing
   1. Remove vegetation, improvements, and obstructions protruding through the ground surface and/or interfering with installation of new construction. Removal includes stumps and roots.

   2. Carefully and cleanly cut roots and branches of trees indicated to be left standing, where such roots and branches obstruct new construction.

   3. Remove all organic matter in unpaved areas to be replanted, to a sufficient depth to remove such material. The depth of stripping will vary with the type and density of vegetation across the project site and with the time of year.

C. Stripping
   1. Strip topsoil from all unpaved areas to be improved with paving or structures. Remove heavy growths of grass from areas before stripping topsoil.

   2. Remove all vegetation matter from collected topsoil and stockpile topsoil for re-use unless otherwise instructed by the Engineer. Stockpiled topsoil shall not be used as structural fill.

3.02 DEMOLITION

A. Pollution Controls:
   1. Use water sprinkling, temporary enclosures, and other suitable methods to limit the amount of dust and dirt rising and scattering in the air to the lowest practical level.
   2. Comply with governing regulations pertaining to environmental protection. Do not use water when it may create hazardous or objectionable conditions such as flooding.
   3. Clean adjacent structures and improvements of dust, dirt, and debris caused by demolition operations, as directed by the Owner or governing authorities.

B. General: Remove above and below grade pavements, curbing and other conditions necessary to permit new construction and other work as indicated on the Drawings. Removal of underground pipe or conduit interfering with construction is included under this Section.

C. Damage: Return adjacent areas to condition existing prior to the start of the work.

D. Saw-cutting: All asphalt and concrete to interface with new planting or paving areas shall be saw-cut.

E. Salvaged Items: All items noted for salvage and not to be re-used on site shall be delivered to the Owner, unless directed otherwise by the Engineer.

3.03 CLEAN-UP

A. Disposal Waste materials are defined as all materials generated by demolition or excavation that are not identified for salvage or re-use by the Owner. Waste materials shall be disposed of legally off-site.

END OF SECTION

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TREE PROTECTION - SECTION 311311

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

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

1.02 DESCRIPTION OF WORK

A. Extent: Furnish all labor, material, equipment, tools, and incidentals necessary for the installation of Tree Protection measures as shown on the Drawings and as specified in this Section.
   1. The work includes pruning and replacements of trees and vegetation indicated to be protected on the Drawings that are affected by temporary or permanent construction.

B. Related work includes but is not limited to:
   1. Demolition
   2. Earthwork and Grading

1.03 DEFINITIONS

A. Vegetation: Shrubs, groundcovers, grass, and other plants.

B. Root Zone: The root zone diameter of a tree is determined to be that area located out a distance 15 times the trunk diameter in all directions or the drip line, whichever is greater, unless otherwise noted on the Drawings.

C. Protection Zone: Area surrounding individual trees, vegetation areas, and groups of trees and vegetation to be temporarily protected during construction with fencing, as shown on the Drawings. May be referred to as Tree Protection Zone, TPZ or Plant Protection Zone on the Drawings.
   1. Temporary protection shall extend till the edge of the Root Zone, unless otherwise noted and shall be fenced.
   2. At no time shall the fencing be located closer than 3-feet away from the approved foundation, retaining wall, or grade cut, whichever provides the greater distance from the tree trunk.

D. Topsoil: The top layer of existing soil in planting areas, containing minerals and organic materials including humus, and completely free of weeds, roots, rocks/clods over one cubic inch and other objectionable material. Depth of topsoil shall be taken to be 2-4 inches deep or as determined by the Engineer at the time of construction after clearing and grubbing.
   1. At turf areas topsoil starts below the grass root zone.
   2. At planting areas other than turf, topsoil starts below the mulch layer.

1.04 QUALITY ASSURANCE

A. Arborist Qualifications: Engage an ISA certified arborist to direct plant-protection measures in the vicinity of trees and vegetation indicated to remain and to prepare inspection reports. Submit qualification data indicating proof of certification / license of the Arborist.
   1. Cost of the arborist's services shall be borne by the Contractor.

C. Tree Pruning Schedule: Submit written schedule detailing scope and extent of pruning of trees to remain that interfere with or are affected by construction.
   1. Species and size of tree.
   2. Location on site plan. Include unique identifier for each.
   3. Reason for pruning.
   4. Description of pruning to be performed.

5. Description of maintenance following pruning.

D. Reviews: Prior to proceeding with any tree removal or pruning, the Contractor shall notify the Engineer 24 hours in advance for a review by the Owner.

E. Post-construction Certification: Submit from arborist, certifying that trees indicated to remain have been protected during construction according to recognized standards and that trees were promptly and properly treated and repaired when damaged.
   1. Submit from arborist, recommendations for care and protection of trees affected by construction during and after completing the Work.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Fencing: New or re-used chain-link, plywood, wood, or plastic, as approved by the Engineer, minimum 5' high. Fence material shall be mounted on 2" diameter galvanized iron poles, maximum spacing 10' between poles.

B. Warning Sign: Laminated card, rigid plastic or metal sheet, minimum 8.5"x11", with attachment holes, legibly printed with non-fading letters.
   1. Sign shall clearly state "WARNING – TREE & PLANT PROTECTION ZONE"

PART 3 – EXECUTION

3.01 PRE-CONSTRUCTION

A. Erosion and Sedimentation Control: Verify that temporary erosion- and sedimentation-control measures are in place. Verify that flows of water redirected from construction areas or generated by construction activity do not enter or cross Protection Zones.

B. Existing Conditions: Review trees and vegetation indicated to remain on site, and document preconstruction conditions that might be misconstrued as damage caused by construction activities.

C. Documentation: Prepare written report if necessary, endorsed by arborist, listing conditions detrimental to the protection of trees and vegetation.

D. Preconstruction Meeting: Review methods and procedures related to temporary plant protection including, but not limited to:
   1. Construction schedule. Verify availability of materials, personnel, and equipment needed to make progress and avoid delays.
   2. Enforcing requirements for protection zones.
   3. Arborist's responsibilities.
   4. Field quality control.

E. Install all protection fencing for tree and Protection Zones prior to any site preparation, demolition, or grading work.

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F. Identification: Trees to be preserved shall be marked with a spot of paint. The marking is required to notify City / designated Inspectors that the subject tree or tree(s) are to be fenced at all times during construction.

G. Verification: Verify in writing that all preconstruction conditions noted herein have been met and are in place. Submit verification to the Engineer for approval prior to any site preparation, demolition, or grading work.

3.02 PROTECTION ZONES

A. Protection Zones shall be maintained in a natural condition and not compacted. The following practices are prohibited within tree and Protection Zones:
   1. Storage of construction materials, debris, or excavated materials.
   2. Dumping of chemicals or garbage.
   3. Parking vehicles or equipment.
   4. Foot traffic.
   5. Erection of sheds or structures.
   6. Impoundment of water.
   7. Excavation or other digging unless otherwise indicated.
   8. Attachment of signs to or wrapping materials around trees or plants unless otherwise indicated.

B. Prohibit heat sources, flames, ignition sources, and smoking within or near Protection Zones and mulch.

C. Signage: Install warning signs in visibly prominent locations in a manner approved by the Engineer or Project Arborist - in enough quantity so as to be visible from all visible sides.

D. Fencing:
   1. Fencing shall be located at the edge of the Protection Zone, unless otherwise noted on the Drawings or as approved by the Engineer or Project Arborist.
   2. Fencing shall be rigidly supported and maintained during all construction periods until Final Inspection.
   3. Do not remove protection-zone fencing, even temporarily, to allow deliveries or equipment access through the Protection Zone.
   4. Temporary access is permitted subject to preapproval in writing by Project Arborist if a root buffer effective against soil compaction is constructed as directed by Project Arborist. Maintain root buffer so long as access is permitted.
   5. Removal of fencing shall be approved by Project Arborist, Engineer, Inspector, or City Forester.

3.03 EXCAVATION

A. All cut, fill and/or foundations shall be located a minimum of three (3) times the diameter of the tree away from the outside edge of the trunk of all trees scheduled for preservation. However, the minimum distance permitted shall be 6-feet away from the outside edge of the trunk for all trees of a trunk diameter less the 2-feet. The diameter of a tree shall be measured at 4-feet and 6-inches above the surrounding grade (diameter at breast height, (DBH). Where Drawings conflict with this, immediately contact the Engineer for direction.

B. Utility and Drainlines: Shall be located outside the root zone of all trees scheduled for preservation. In cases where alternative routes are not available, utility conduit, pipe, wire and drain lines shall be tunneled under major roots. Major roots are determined to be those that exceed two (2) inches in diameter. In no case shall utility lines be permitted within six (6) feet of the trunk. Immediately contact the Engineer if the Drawings conflict with this.

C. All approved construction work within the root zone of trees scheduled for preservation shall observe the following minimum tree protection:
   1. Hand trench at point or line of grade cuts closest to the trunk to expose major roots 2-inches in diameter or larger. In cases where rock or unusually dense soil prevents hand trenching, mechanical equipment may be approved by the Engineer, provided that work inside the drip-line is closely supervised by the Arborist to prevent tearing or other damage to major roots.

D. Redirect roots in backfill areas where possible. If encountering large, main lateral roots, expose roots beyond excavation limits as required to bend and redirect them without breaking. If encountered immediately adjacent to location of new construction and redirection is not practical, cut roots approximately 3-inches back from new construction and as required for root pruning.

E. Do not allow exposed roots to dry out before placing permanent backfill. Provide temporary earth cover or pack with peat moss and wrap with burlap. Water and maintain in a moist condition. Temporarily support and protect roots from damage until they are permanently relocated and covered with soil.

3.04 PRUNING

A. All tree pruning and tree damage repair shall only be performed by a qualified tree care specialist, or certified tree worker. Verify all pruning with Project Arborist or Engineer prior to start of pruning work.

B. Trees shall be pruned to reduce hazards and develop a strong, safe framework of branches. Trees may also be pruned for 'crown cleaning' as defined by the International Society of Arboriculture Pruning Guidelines. Any pruning beyond these activities must be authorized by the Project Arborist in writing.

3.05 REPAIR & REPLACEMENT

A. General: Repair or replace trees and vegetation indicated to remain or be relocated that are damaged by construction operations, in a manner approved by Engineer.
   1. Perform repairs within 24 hours.
   2. Replace trees and vegetation that cannot be repaired and restored to full-growth pattern, as determined by Project Arborist.
   3. Replacement planting shall conform to Specification Section Landscape Planting, and soil amendments shall conform to Specification Section Soil Preparation.

B Soil Aeration: Where directed by Project Arborist or Engineer, aerate surface soil compacted during construction. Aerate 10 feet beyond drip line and no closer than 36 inches to tree trunk. Drill 2-inch diameter holes a minimum of 12 inches deep at 24 inches o.c. Backfill holes with an equal mix of augered soil and sand.

3.06 REGRADING

A. Lowering and raising grades: Where new finish grade is indicated below or above existing grade around trees, maintain existing grades within the Protection Zone, and slope grade beyond the Protection Zone, unless otherwise noted on the Drawings.

B. Lowering grade within Protection Zone: slope grade away from trees as recommended by Project Arborist unless otherwise noted on the Drawings.

C. Minor Fill within Protection Zone: Where existing grade is 2 inches or less below elevation of finish grade, fill with topsoil. Place topsoil in a single un-compacted layer and hand grade to required finish elevations.

3.08 CLEAN-UP

A. Remove waste materials and unsuitable and excess material from the Owner's property and dispose of legally.

END OF SECTION

EARTHWORK AND GRADING - SECTION 312213

PART I – GENERAL

1.01 RELATED DOCUMENTS

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

1.02 DESCRIPTION OF WORK

A. Extent: Furnish all labor, material, equipment, tools, and incidentals necessary for Earthwork and Grading as shown on the Drawings and as specified in this Section. The work includes but is not limited to:
   1. Rough grading and excavations
   2. Providing, processing, placement, and compaction of any fill materials necessary to meet the designed lines and grades.

B. Related work includes but is not limited to:
   1. Demolition
   2. Irrigation
   3. Soil Preparation

1.03 STANDARDS

A. Unless otherwise shown or specified, all materials and methods shall conform to the appropriate current sections of:
   1. The State of California Department of Transportation (CALTRANS) Standard Specifications, except for measurement and payment requirements.
   2. Applicable ASTM Specifications as they reasonably apply to this work.

1.04 DEFINITIONS

A. Relative Compaction: is defined as the in-place dry density of the compacted soil divided by the laboratory compacted maximum dry density as determined by the relevant ASTM specified herein, latest edition, expressed as a percentage.
   1. Relative compaction is determined according to ASTM D1557-78 (Modified Proctor Density) for all fill, bedding, sub-grade, and backfill work for but not limited to – fill areas other than planting, footings, foundations, pavements, and utility lines under these areas.
   2. Relative compaction is determined according to ASTM D698 (Standard Proctor Density) for fill and backfill in planting areas only, and utility lines under these areas.

B. Finish Grade: is defined as the finished top surface of the soil after all grading and soil preparation activities, and prior to installation of mulch.

1.05 QUALITY ASSURANCE

A. No combination of high and low tolerances that compromise pavement cross-section shall be permitted. Final grades after compaction and/or excavation shall conform to the grades shown on the Drawings, with a maximum tolerance of 0.05 foot, plus or minus.

B. Seasonal Limits: No fill material shall be placed, spread, or rolled during unfavorable weather conditions. When work is interrupted by heavy rains, fill operations shall not resume until field density tests indicate the moisture content and density of fill meet the specified requirements and approved by the Engineer.

C. Unusual Conditions: In the event that any unusual soil conditions are encountered during grading operations, the Engineer shall be immediately notified. Unsuitable material encountered below the natural grade shall be excavated and disposed of as directed by the Engineer and paid for as Extra Work. Unsuitable material is defined in Section 19-2.02 of the CALTRANS Standard Specifications.

1.06 REVIEWS

A. Contractor shall notify the Engineer at each stage of the operation indicated below and shall allow such reasonable time to observe excavation and trenching, and for testing and inspection as the Engineer may require. No work shall be done until authorization has been received from the Engineer.
   1. Site Preparation Review – Prior to any earthwork and grading.
   2. Preliminary Review-I - After all rough grading is complete and sub-grade is prepared.
   3. Each review shall be conducted only after all items pertaining to that review as noted above and in related Sections have been completed by the Contractor.

1.07 SPILLAGE AND DUST CONTROL

A. Spillage: The Contractor shall prevent spillage when hauling on or adjacent to any public street or highway. In the event that such occurs, the Contractor shall remove all spillage and sweep, wash, or otherwise clean such streets or highways as required by local City and County authorities and/or the State of California, and in compliance with applicable Best Management Practices (BMPs).

B. Dust: The Contractor shall take all precautions needed to prevent a dust nuisance to adjacent public and private properties and to prevent erosion and transportation of soil to downstream of adjacent properties due to their work under this contract. Any damage so caused shall be corrected or repaired by the Contractor at no cost to the Owner.

PART II - PRODUCTS

2.01 MATERIALS

A. Fill Material: Selected on-site excavated/sub-soil material is considered suitable fill material for embankment construction, subject to prior approval by the Engineer.

B. Inorganic on-site fill and sub-soil may be used as structural fill to achieve final grades, provided the fill contains no debris and is free of rocks or clods greater than 6-inches in maximum dimension, and no more than 15 percent by weight of rocks larger than 3-inches. Samples of any proposed imported fill shall be submitted to the Engineer for appropriate testing and approval no less than (5) five working days prior to the anticipated job site delivery. Fill material shall meet the following requirements:
   1. Have a sand equivalent greater than 20%
   2. Have not more than 15% passing the 200 sieve.
   3. Have an R-Value of not less than 50.

C. Sand: for bedding and backfill for underground utilities including irrigation mainline and 1-inch water service line shall conform to the sieve analysis below:

Sieve Size:	Percent Passing
#30 (600 um)	at least 75%
#100 (150 um)	less than or equal to 5%

D. Topsoil: The top layer of existing soil in planting areas, containing minerals and organic materials including humus. Depth of topsoil shall be taken to be 4-6 inches deep or as determined by the

Engineer at the time of construction after clearing and grubbing. See Specification Section Demolition.

1. Topsoil is a [ ] type.
2. At turf areas topsoil starts below the grass root zone.
3. At planting areas other than turf, topsoil starts below the mulch and organic matter layer.
4. Soil underneath paving and aggregate base areas shall not be considered as top soil.

E. Sub-soil: Shall be the remaining existing soil on the site after clearing & grubbing, after topsoil has been removed, and after all rocks over one cubic inch and all foreign debris and organic material have been removed.
   1. Soil under paving and aggregate base areas shall be considered as subsoil provided contamination testing as specified elsewhere in this section indicates that it is free of contaminants that are harmful to plant growth.

PART III - EXECUTION

3.01 GENERAL

A. Keep all excavations (including, pits, trenches, footings, etc.) entirely free from water. Protect excavations from rain or water from any source during construction. Use suitable pumping equipment or other means as required by the conditions. Continue pumping as necessary until the completion of the project. When operations are interrupted by unfavorable weather conditions, prepare areas by grading and compaction to avoid ponding and prevent surface drainage over fill slopes, in order to avoid erosion. Grading operations for erosion control shall be as approved by the Engineer. Once excavation and grading commence, no surface drainage shall be allowed to flow onto adjacent properties.

B. Contractor shall provide satisfactory pollution and dust abatement and control measures continuously during the course of the work.

C. The Contractor shall utilize reclaimed water, or dust palliatives, in compliance with the City's Water Conservation Ordinance.

3.02 TOPSOIL STOCKPILE & PROTECTION

A. Stripping: Strip the topsoil on the site after clearing and grubbing and stockpile it for future use in this project. Topsoil shall be installed in planting and turf areas as per finish grading directions in the Specification Section Soil Preparation. Stripping depth shall be as specified herein.

3.03 SITE PREPARATION, EXCAVATION & GRADING

A. Depressions, voids, or unsuitable material encountered shall be excavated to expose firm soil as directed by the Engineer. Backfill and compaction to design grade shall be approved by the Engineer. When earthwork or trenching conditions are determined by the Engineer to be unsuitable material, the work shall be performed as defined in Section 19-2.02 Unsuitable Material of the Standard Specifications.

B. Excavation work shall include sloping and rounding tops and ends of excavations.

3.04 FILL PLACEMENT AND COMPACTION

A. The fill shall be placed in maximum 8-inch lifts (compacted layers) and shall be compacted by mechanical means only. Fill shall be conditioned, at time of compaction, to 1% to 3% above the optimum moisture content of the soil, and each lift shall be compacted to at least 95% relative compaction per ASTM D1557.
   1. Field density tests shall be made by the Contractor to ensure proper compaction.

2. The placement and spreading of fill materials and its processing and compaction of fill materials by flooding, ponding, or jetting shall not be permitted without the prior approval of the Engineer.

3.05 SUB-GRADE PREPARATION

A. A minimum of 8-inches of the in-place sub-grade soil shall be scarified, moisture conditioned to 1%-3% above optimum value, and compacted to a relative compaction of at least 95% per ASTM D1557 under all paving, concrete slabs-on-grade, asphalt concrete pavements, and foundations/footings. This depth of densified soils is in addition to additional fill material required to bring the sub-grade to grade.

B. A minimum of 6-inch of sub-grade soil in all planting areas shall be compacted to maximum 85% relative compaction per ASTM D698.

C. All soft or wet sub-grade soil encountered during earthwork and grading should be stabilized prior to placement of fill and further construction. This may involve scarifying and air-drying of the soil, or excavation and replacement of the wet soil with dry soil. Obtain prior approval of proposed method of stabilization from the Engineer.

3.06 TOPSOIL PLACEMENT

A. See Specification Section Soil Preparation for topsoil installation.

3.07 FINISH GRADING

A. Contractor shall finish grade all areas, including those indicated to be planted on the Drawings, and shall remove all rocks and clods over one cubic inch. All areas shall be smooth and uniformly graded. All erosion damage during the construction period shall be repaired by the Contractor.

B. Unless otherwise shown on the Drawings, all soil finish grades shall be one-inch (1”) below finish surface of walks, pavements, and curbs.

3.08 UTILITY TRENCHES

A. General: Trenching for underground piping, electrical conduits, etc. shall be done by the trade installing the pipe or conduit.
   1. See Specification Section Tree Protection for trenching within tree protection areas.

B. Excavation: Trenches shall be excavated to the depth required for laying pipe or conduit plus required allowance for bedding material under the pipe. Over excavated areas shall be brought back to proper grade with compacted bedding material.
   1. Trenches shall be excavated wide enough to provide adequate working space to align and lay pipe or to construct the utility trench, make up and inspect joints, and allow placing and compaction of bedding material.
   2. The maximum trench width at the top of the pipe shall not exceed the pipe outside diameter plus 12- inches on each side of the pipe.

C. Bedding and Backfill: Bedding shall extend upwards from the bottom of the trench to the extent shown on the Drawings.
   1. Bedding for underground utilities including irrigation and solid drain lines shall consist of sub-soil or sand as defined herein.
   2. In planting areas excluding natural turf sports fields, sand bedding may be jetted or ponded into place and shall be compacted to equal that of the adjacent prepared sub-grade as specified herein. Mechanical compaction may be necessary to achieve this required density. If the bedding is jetted or ponded, the operation should be closely supervised and provisions should be made for the removal of excess water.

3. Maintain near surface soils as uniform as possible with existing upper stratum soils when backfilling in planting areas.
4. Backfill shall be compacted to equal that of the adjacent prepared sub-grade as specified herein.

3.09 EXCESS SOIL DISPOSAL

A. Excess excavation material shall be disposed of at an off-site location, disposal facility to be approved by the Engineer. The Contractor shall be responsible to pay for any analytical testing of the excess material that may be required by the disposal facility. These tests may include
   1. CAM-17 Testing Waste for Hazardous Metals
   2. BTEX (Benzene, Toluene, Ethylbenzene, Xylene) Test
   3. TPH (Total Petroleum Hydrocarbon) Test

END OF SECTION

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LANDSCAPE MAINTENANCE - SECTION 320190

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

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

1.02 DESCRIPTION OF WORK

A. Extent: Furnish all labor, material, equipment, tools, and incidentals necessary for Landscape Maintenance as specified in this Section during the landscape maintenance period, referred to herein as the Maintenance Period. The work includes establishing the plantings, providing pest and disease control, mowing, and maintaining the irrigation system and related construction elements during the Maintenance Period.

B. Related Work:
   1. Landscape Irrigation
   2. Landscape Planting

1.03 MAINTENANCE PERIOD

A. Time Limits: Maintenance Period shall commence from the date of approval of substantial completion and extend for 60 calendar days, or until final completion approval, whichever is later.

1.04 REVIEWS

A. Substantial Completion Review: Contractor shall specifically request this review at least (5) five days in advance of the proposed start of the Maintenance Period. The Architect will review for a final checklist of minor items to be completed. Once the items are completed by the Contractor and approved by the Architect, the Maintenance Period shall commence. Items to be checked during this review include but are not limited to:
   1. All planted areas including turf and naturalized areas if applicable.
   2. Valve box inspection and overall operation of the irrigation system.

C. Final Review: Contractor shall specifically request this review at least (5) five days in advance of the end of the Maintenance Period. Failure to request this notice shall automatically extend the date of completion. The Maintenance Period will continue until final completion is approved by the Engineer. Items to be checked during this review include but are not limited to:
   1. All planted areas including turf and naturalized areas if applicable, including all punch-list items identified at Substantial Completion Review.
   2. All irrigation punch-list items identified at Substantial Completion Review.

1.05 MAINTENANCE PERIOD SUBMITTALS

A. Fertilizer: Submit written certificate showing rates, materials, and date of fertilizer application, to the Owner within five (5) days of each application.

B. Pesticides / herbicides: If pesticides / herbicides are used, submit written certificate showing rates, materials, and date to the Owner within five (5) days of each application.

1.06 MAINTENANCE BINDER ADDITIONAL DOCUMENTS

A. Submit <u>prior to the Final Review,</u> the following additional documents for the Maintenance Binder.
   1. Counter-signed documents shall include the following items, countersigned by the Owner:

a. Fertilizer applications, including initial application.
b. Pesticide and herbicide applications, including initial application.
c. In-service meeting discussion / decisions.

2. Copies of the following documents:
   a. Amended soils test report.

B. Controller Schedule: 8.5x11 size type-written and laminated irrigation schedule for established (mature) landscape at end of Maintenance Period for reference purposes inside the controller. Schedule shall note run-times and frequency for each station.
   1. Attach irrigation schedule to laminated valve stationing plan – see Specification Section Landscape Irrigation.

C. The Final Review shall not take place until the additional submittals and documents have been reviewed and approved by the Engineer.

PART 2 - MATERIALS

2.01 FERTILIZER

A. For maintenance fertilization shall be as specified in Specification Section Landscape Planting.

2.02 WATER

A. During the course of construction and maintenance, water for landscape shall be paid for by the Owner. Submit watering schedule with dates, times and frequency at start of the Maintenance Period.

2.03 CHEMICALS

A. Insecticides, fungicides, pre and post-emergent herbicides as recommended by licensed Pest Control Operator and approved by the Owner.

PART 3 - EXECUTION

3.01 GENERAL

A. Contractor's Responsibility: Work installed under this Contract damaged by vandalism, vehicular damage and/or theft during the installation of the work and up to the Substantial Completion approval, shall be repaired or replaced by the Contractor without costs to the Owner.

B. Owner's Responsibility: Throughout the Maintenance Period, these damages and similar factors such as excessive litter, abuse and defacement shall be the Owner's responsibility to repair or replace and shall not be a part of this Contract. No planting shall be guaranteed beyond the Maintenance Period, except as to conformance to specified species and variety, and as specified in Specification Section Landscape Planting.

3.02 BASIC REQUIREMENTS

A. Irrigation and Erosion: All planting areas shall be kept at optimum moisture for plant growth. Planting not adequately served by the automatic irrigation system shall be hand watered. Settlement of soil and plants and soil erosion shall be repaired and areas replanted. Dying or deficient plants shall be replaced as they become apparent.

B. Cultivating and Clean-Up: Planting areas shall be kept neat and free from debris at all times and shall be cultivated at not more than ten (10) day intervals.

C. Weed control: All planting areas shall be kept weed-free at all times during the Maintenance Period. All pest and disease control shall be the Contractor's responsibility.

D. Insect, Pest, and Disease Control: Insects, pests, rodents and diseases shall be controlled by the use of insecticides and fungicides, as applied by a licensed pest control operator with the prior approval of the Owner.

E. Fertilizer: Application for all planting areas, including turf, shall be as specified in Specification Section Landscape Planting.

G. Pruning: Prune new trees and shrubs with the direction of the Engineer. Do not remove lower branches from multi-trunk or low branching trees unless directed.

H. Replacement Materials: Immediately replace any dead or damaged plant materials. Turf areas not fully established and healthy shall be repaired or replaced as directed by the Engineer. Replacements shall be made to the specifications as required to match adjacent plantings at no cost to the Owner.

I. Irrigation: Schedule and monitor controller stations as necessary to minimize water consumption while still providing adequate water for the plant material.
   1. Adjust and clean all heads, emitters, valves, filters, regulators and other equipment as necessary to maintain the system.

J. Watering: For small plant material (under 1 gallon size) under drip irrigation, supplemental hand water as required during maintenance period until root structures develop enough for drip irrigation to be effective.

3.03 CONDITION OF PLANTING AT END OF MAINTENANCE PERIOD

A. All mulched planting areas shall be free of all weeds (broadleaf and grass weeds). Plantings that do not conform to specifications shall be replaced and brought to a satisfactory condition before final acceptance of the work.

B. Remove all nursery tree stakes and associated tying materials prior to Final Review.

C. Rake out watering basins from all plants under a permanent irrigation system and re-spread the mulch prior to Final Review, keeping mulch away from the plant stem.

3.04 IN-SERVICE MEETING

A. Contractor shall request, prior to Final Review, an in-service meeting with the Owner's maintenance staff to identify any landscape maintenance issues and verify mowing schedules, and irrigation station sequence / run-times (controller schedule).
   1. The Contractor shall document any discussions / decisions at the in-service meeting and provide this to the Owner. Include a copy in the Maintenance Binder.
   2. The Final Review shall not take place until the in-service meeting is completed, and final approval is contingent on the in-service meeting taking place to the satisfaction of the Owner.

END OF SECTION

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ASPHALT CONCRETE PAVING - SECTION 321216

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

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

1.02 DESCRIPTION OF WORK

A. Extent: Furnish all labor, material, equipment, tools, and incidentals necessary for the installation of Asphalt Concrete Paving, including aggregate base as shown on the Drawings and as specified in this Section.

B. Related work includes but is not limited to:
   1. Earthwork and Grading

1.03 STANDARDS

A. Applicable ASTM International Standards (latest revisions) as they apply to this work and related test methods, including:
   1. D522 Test Methods for Mandrel Bend Test of Attached Organic Coatings
   2. D711 Test Method for No-Pick-Up Time of Traffic Paint
   3. D2369 Test Method for Volatile Content of Coatings

B. Unless otherwise shown or specified all materials and methods shall conform to the appropriate current sections of the State of California, Department of Transportation Standard Specifications as they reasonably apply to this work, except for measurement and payment requirements.
   1. PTWB-01 for Specification for Paint, Rapid Dry Waterborne Traffic Line, White, Yellow and Black
   2. PTH-02ALKYD Specification for Thermoplastic Traffic Striping Material, Alkyd Resin Binder, White and Lead-Free Yellow

1.04 SUBMITTALS

A. Submit sieve data on asphalt and base materials.

B. Submit manufacturer's information on all products related to the asphalt paving specified herein. Include proof of compliance with applicable local or regional air pollution or air quality management district VOC requirements.

1.05 QUALITY ASSURANCE

A. Tolerances: For sub-grade, sub-base and finished grade, tolerances, shall be as specified by the Standard Specifications except that Contractor shall deliver the full aggregate base and asphaltic concrete thickness shown. No combination of high and low tolerances that comprise the cross-section will be permitted.

B. Testing & Inspection: Contractor shall notify the Engineer at the completion of the various stages of the operation as indicated below and shall allow such reasonable time for testing and inspection as the Engineer may require. No work shall be done on the next following stage until authorization to proceed has been received from the Engineer.
   1. After all rough grading is complete and sub-grade has been prepared to receive aggregate base and/or sub-base.
   2. After each course of aggregate base or sub-base has been placed and compacted and is ready for following course.

3. After final placement and compaction of aggregate base or sub-base and sub-grade has been prepared to receive asphalt prime, or other following operation.
4. When paving equipment is at the site and paving operation is ready to start.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Packing, Shipping, Handling, and Unloading: Deliver material in sealed containers with labels legible and intact.

B. Storage and Protection: Follow manufacturer's recommendations.

PART 2 - PRODUCTS

2.01 ASPHALT AND BASE MATERIALS

A. Aggregate Base: Standard Specifications, Section 26, Class-2, 3/4" maximum.

AGGREGATE GRADING REQUIREMENTS

Sieve Sizes	Percentage Passing			
	1 1/2" Maximum		3/4" Maximum	
	Operating Range	Contract Compliance	Operating Range	Contract Compliance
2"	100	100		
1 1/2"	90-100	87-100		
1"			100	100
3/4"	50-85	45-90	90-100	87-100
No. 4	25-45	20-50	35-60	30-65
No. 30	10-25	6-29	10-30	5-35
No. 200	2-9	0-12	2-9	0-12

QUALITY REQUIREMENTS

Test	Operating Range	Contract Compliance
Resistance (R-value)		78 Min.
Sand Equivalent	25 Min.	22 Min.
Durability Index		35 Min.

B. Asphaltic Emulsion for Paint Binder: Standard Specifications, Section 94, SS1.

C. Asphalt: Standard Specifications, Section 92, Viscosity Grade AR 4000.

D. Aggregates: Grading requirements as given below:
   1. Pathways: Standard Specifications, Section 39, 1/2" maximum, medium grade.

1/2 inch Maximum, Medium

Sieve Sizes	Limits of Proposed Gradation	Operating Range	Contract Compliance
3/4"		100	100
1/2"		95-100	89-100
3/8"		80-95	75-100
No. 4	59-66	X±5	X±8
No. 8	43-49	X±5	X±8
No. 30	22-27	X±5	X±8
No. 200		3-8	0-11

2.02 HEADER BOARD

A. Header board hall be redwood, merchantable heart, conforming to "Standard Specifications for Grading of California Redwood Lumber," as published by the Redwood Inspection Service.
   1. See Plans for installation and sizes.
   2. Stakes shall be 2"x 4" redwood, 18” long minimum.
   3. Fasteners shall be hot dipped galvanized.

PART 3 - EXECUTION

3.01 GENERAL

A. Verify that the sub-base is properly compacted and at suitable grade for receiving aggregate base. Clear area to be paved of all debris and organic material. Re-compact and re-grade as necessary to place aggregate base.

B. Before beginning base and paving work and during construction, take all steps necessary for protection of existing improvements. As the asphalt concrete is being placed, extreme care shall be taken not to discolor or damage curbs, fences, walls, or other surfaces. If damage occurs, repair same, and if repair cannot be made to the satisfaction of the Engineer, remove and replace the section. Dispose of all excavated material legally off-site.

3.02 SITE PREPARATION

A. Place and compact aggregate base where shown to a depth as noted on the plans as specified for Class 2 aggregate base in Standard Specifications, Section 26.1. Verify grades to allow for finish paving.

B. Clear aggregate base surface of all loose or unsuitable material.

3.03 HEADER BOARD INSTALLATION

A. Header board shall have straight-line joints less than three feet long; curved-line joints being laminated in a staggered pattern with ends no closer than eighteen inches.
   1. Stakes shall be not further than five feet on center at all ends, splices and joints.
   2. All joints shall be spliced with 2 x 4 x 24" with top of splice plate 3/4" below top of header.
   3. All stakes shall be trimmed to 3/4" below top of header.
   4. Stakes shall be located at all ends, joints, and splices. All nails shall be clinched over.

3.04 ASPHALTIC CONCRETE INSTALLATION

A. Apply paint binder in accord with Standard Specifications, Section 39.4. Paint binder shall be diluted with equal parts of water and applied to all vertical surfaces for existing pavement, curbs, gutters, catch basins, manhole frames, and construction joints in the surfacing, existing bases and pavements to be surfaced, and other surfaces designated by the Engineer. Asphaltic paint binder shall be provided in sufficient quantity to produce a thin, uniform black, glossy coat of asphalt satisfactory to the Engineer. Pools in unevenly distributed areas shall be redistributed by means of hand brooms. Verify exact rate of application with the Engineer.

B. Asphalt concrete shall be spread and compacted uniformly to a closed, smooth surface and a layer of uniform density, in accord with Standard Specifications, Section 39.6, in thicknesses noted on plans.

C. Finish grades shall be as shown, smooth and without sharp breaks, and shall allow the pavement to drain. Upon completion of the paving, flood the area as directed by the Engineer. The Contractor shall be required to reconstruct any low areas as directed.

END OF SECTION

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PRECAST CONCRETE UNIT PAVING - SECTION 321413

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

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

1.02 DESCRIPTION OF WORK

A. Extent: Furnish all labor, material, equipment, tools, and incidentals necessary for the installation of Concrete Pavers as shown on the Drawings and as specified in this Section.
   1. For sand-set pavers, the work includes installation of edge restraints and setting beds. 'Sand-set' refers to crushed stone setting bed in the case of permeable/porous paver installation.

B. Related work includes but is not limited to:
   1. Earthwork and Grading

1.03 STANDARDS

A. Applicable ASTM International Standards (latest revisions) as they apply to this work and related test methods, including:
   1. C33 / C33M Specification for Concrete Aggregates
   2. C136 Test Method for Sieve Analysis of Fine and Coarse Aggregates
   3. C140 Test Methods for Sampling and Testing Concrete Masonry Units and Related Units
   4. C150 / C150M Specification for Portland Cement
   5. C260 Specification for Air-Entraining Admixtures for Concrete
   6. C494/C494M Specification for Chemical Admixtures for Concrete
   7. C618 Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete
   8. C979 Specification for Pigments for Integrally Colored Concrete
   9. D1557 Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort
   10. D2940 Specification for Graded Aggregate Material for Bases

B. Interlocking Concrete Pavement Institute (ICPI) Tech Spec No.5 – Cleaning, Sealing and Joint Sand Stabilization of Interlocking Concrete Pavement, available at www.icpi.org .

C. Sand-set Paving: install pavers in accordance with established flexible paving design procedures.

D. Relative compaction: is defined as the in-place dry density of the compacted soil divided by the laboratory compacted maximum dry density determined in accordance with ASTM D1557, expressed as a percentage.

1.04 SUBMITTALS

A. Documentation: Submit the following within fourteen (14) days after Notice to Proceed.
   1. Product literature and warranty for each type of precast concrete paver. Warranty shall cover precast concrete paving units against defects in material and workmanship for a period of 5 years.

B. Samples: Submit the following within fourteen (14) days after Notice to Proceed. Samples shall be the basis of all rejection or approval of the material.
   1. One full-size sample of each type of precast concrete paving unit representative of quality and tolerances.

2. Color-chip samples of each type of precast concrete paving unit representative of color ranges and textures available from the manufacturer.
3. One quart sample of bedding sand with sieve analysis.
4. One quart sample of joint gravel / sand / crushed stone with sieve analysis.
5. One quart sample of gravel.

1.05 QUALITY ASSURANCE

A. Warranty: shall cover precast concrete paving units against defects in material and workmanship for a period of 5 years.

B. Source Limitations:
   1. Obtain each type of paver and joint material from a single source with resources to provide materials and products of consistent quality in appearance and physical properties.

C. Physical properties:
   1. Precast concrete pavers shall have a minimum compressive strength of 5,000 psi at 28 days.
   2. Average Water Absorption (ASTM C 140): 5% with no unit greater than 7%.

1.07 DELIVERY, STORAGE & HANDLING

A. Delivery & Handling: Deliver materials in manufacturer's original, unopened, undamaged container packaging with identification tags intact in each paver bundle. Unload pavers in such manner that no damage occurs to the product or existing construction.

B. Storage & Protection Store materials such that they are kept free from mud, dirt, and other foreign materials.

PART 2 - PRODUCTS

2.01 PAVER ASSEMBLIES

A. Paver assemblies shall consist of the following materials / products, on stabilized subgrade, as specified elsewhere in this Specification Section, and shown on the Drawings:

B. Pedestrian Paving on sand bed:
   1. Aggregate base
   2. Sand Setting Bed - ASTM C33
   3. Pedestrian Grade Paver
   4. Paver Sealer
   5. Joint Sand – ASTM 144 / ASTM C33

2.02 PAVER MATERIALS

A. Materials used to manufacture pavers shall conform to the following:
   1. Portland Cement: ASTM C150, Type-III, high early strength.
   2. Aggregate: ASTM C33. Washed, graded sand and rock; no expanded shale or light weight aggregates.
   3. Color: ASTM C979. Integral color admixture by Davis Colors, or equal, as required to achieve color as selected.

B. Finishes: Walking surfaces of precast concrete paving units shall be slip-resistant.

2.02 CONCRETE PAVERS

A. Pavers shall be Calstone interlocking concrete pavers, 6x12, Mission Block, grey/charcoal color, with a stack bond pattern, or approved equal.

B. Sealing: Pavers shall be delivered with factory applied sealer coat.

2.03 BASE MATERIALS

A. Aggregate Base: Class-2, three fourths inch (3/4”) maximum, gradation in accordance with Standard Specifications, Section 26.

2.04 SETTING BED & JOINT MATERIALS

A. Bedding Material: shall conform to the sieve analysis / gradation per ASTM C33. Clean washed sand and free of deleterious substances.

ASTM C33 Gradation	
Sieve Size	Percent Passing
3/8” (9.5mm)	100%
#4 (4.75mm)	95-100%
#8 (2.36mm)	85-100%
#16 (1.18mm)	50-85%
#30 (600 um)	25-60%
#50 (300 um)	10-30%
#100 (150 um)	2-10%
#200 (75 um)	0-1%

B. Joint Material: for pedestrian paving, shall conform to the sieve analysis / gradation per ASTM C144. For vehicular paving shall conform to the sieve analysis / gradation per ASTM C33. Clean washed material and free of deleterious substances.
   1. Contractor may substitute ASTM C144 with ASTM C33 material for paving with larger joints on prior written approval from the Architect. Sieve material to remove larger particles and apply extra material and sweeping as required to ensure that the joints are completely full.

ASTM C144 Gradation		
Sieve Size	Natural Sand Percent Passing	Manufactured Sand Percent Passing
#4 (4.75mm)	100%	100%
#8 (2.36mm)	95-100%	95-100%
#16 (1.18mm)	70-100%	70-100%
#30 (600 um)	40-75%	40-75%
#50 (300 um)	10-35%	20-40%
#100 (150 um)	2-15%	10-25%
#200 (75 um)	0-5%	0-10%

2.04 OTHER MATERIALS

A. Stain & Efflorescence Removers: As specified in ICPI Tech Spec No.5.

B. Geotextile fabric: shall be woven, minimum 6.0 oz/sq.yd, high-tenacity polypropylene yarn, inert to biological degradation and resistant to naturally encountered chemicals, alkalis, and acids.
   1. Mirafi 600X by TenCate Geosynthetics, www.tencate.com
   2. RG315W Woven Geotextile by Reed & Graham Geosynthetics

3. Approved Equal

2.05 EDGE RESTRAINT

A. Vinyl Edging: vinyl landscape edging, 2.75" EdgePro Paver Restraint by Dimex Inc, Marietta OH, (800) 334-3776, or approved equal.
   1. Edge restraint shall include heavy duty steel stakes as supplied by the manufacturer.

PART 3 – EXECUTION

3.01 JOB CONDITIONS

A. Sub-grade: See Specification Section Earthwork and Grading for sub-grade preparation and compaction requirements. Verify that sub-grade preparation, compacted density and elevations conform to the Specifications.

B. Aggregate Base: Place and compact aggregate base as specified in the Standard Specifications, Section 26, to at least 95% relative compaction in accordance with ASTM D1557, and to a depth as noted on the Drawings. Verify grades to allow for finish paving. Clear aggregate base surface of all loose or unsuitable material.

C. Base: Verify that base materials, thickness, compaction, surface tolerances, and elevations conform to the Specifications. Verify base is dry, uniform, even and ready to support sand, precast concrete paving units, and imposed loads.

D. Geotextile fabric: For sand-set pavers, excessive deflection in the base under loading may require the installation of a geotextile fabric as determined by the Architect based on field observation. Verify that geotextile fabric, if applicable, has been placed according to specifications.

E. Edge restraints: Verify installation and elevations of edge restraints / curbs around perimeter of area to be paved. Notify Architect if entire perimeter is not contained.

F. Coordination: Fit paving work into other work. Scribe and cope as required for accurate fit.

3.02 INSTALLATION – GENERAL

A. Installation: Pavers shall be clean and free of foreign materials before installation.

B. Lay paving as shown on the Drawings with setting bed and joints as shown. Follow paver manufacturer's guidelines for typical joint widths for pavers, unless otherwise noted on the Drawings.

C. Pavers shall start from a corner or straight edge and proceed forward. Paving work shall be plumb, level, and true to line and grade; shall be installed to properly coincide and align with adjacent work and elevations String lines should be used to hold pattern lines true.

D. All paving shall be laid to provide positive drainage. There shall be no abrupt changes in slope.

E. Fill gaps at the edges of paved areas with cut pavers. Use a double bladed breaker or a masonry saw to cut pavers. Lay pavers to avoid cut pieces smaller than 1/3 the size of a paver.

F. The final surface elevation of pavers shall not deviate more than 3/8 in. under a 10 ft long straightedge.

G. The surface elevation of pavers shall be 1/8 to 1/4 inch above adjacent drainage inlets, concrete collars or channels.

3.03 INSTALLATION – SAND SET PAVERS

A. Install the geotextile fabric where shown on the compacted earth base per manufacturer's recommendations.

B. Install the edge restraints per manufacturer's recommendations prior to installing the setting bed.

C. Setting bed: Thickness shall be nominal 1-inch (maximum 1-1/4-inch) and uniform to insure an even surface. Use a low-amplitude, high-frequency plate vibrator to compact the sand/crushed stone bed. Ensure that the setting bed remains undisturbed prior to setting the pavers. Maintain sand moisture content at constant level.

E. Set pavers at an elevation to allow for vibration compaction to final finished surface. All edges must be retained to secure the perimeter pavers and the sand-laying course.

F. Pavers shall be installed hand-tight and level on the undisturbed setting bed.

G. Compaction: Use a low-amplitude, high-frequency plate vibrator to compact the pavers into the setting bed. In case of sand as setting bed material, vibrate the sand into the joints between the pavers and do not use joint sand during this process.
   1. Ensure paver surface is clean prior to compaction.
   2. Protect the pavers from scratching or cracking during compaction.
   3. Smaller pavers may need to be compacted with a rubber mallet instead of a plate vibrator.

H. Vibrate pavers prior to sweeping sand to fill joints. Upon first pass of vibrator, fill joints with sand. Vibrate pavers after filling with sand in opposite direction of first pass.
   1. Sweep excess sand into the joints and/or dispose of from the surface area.
   2. Ensure all joints are full before final clean-up.

3.04 EDGE RESTRAINT

A. General: Alignment and grade of edge restraints shall be staked and limited to accurately reflect the plan layout prior to commencing work. After approval by the Architect, edge restraints shall be assembled to form well crafted and securely constructed lines.

B. Backfill all edge restraints prior to paving operations. Protect and repair all damaged edge restraints prior to final acceptance

3.05 CLEANING

A. Clean exposed surfaces of precast concrete paving units. Use cleaning products and method as specified in ICPI Tech Spec No.5. The completed paver installation shall be washed down ad cleaned to provide a clean finished surface.

B. Factory Sealed Pavers: Do not apply sealer in the field.

3.07 CLEAN-UP

A. After completion of all operations, Contractor shall remove all trash, excess soil and other debris. All walks, walls, and pavement shall be swept and washed clean, leaving the entire area in a neat, orderly condition.

B. All planting soil contaminated by paver materials shall be removed and replaced with top soil to the approval of the Architect.

END OF SECTION

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SITE CONCRETE - SECTION 321900

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

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

1.02 DESCRIPTION OF WORK

A. Extent: Furnish all labor, material, equipment, tools, and incidentals necessary for the installation of plain Site Concrete as shown on the Drawings and as specified in this Section.
   1. The work includes installation of aggregate base.

B. Related work includes but is not limited to:
   1. Earthwork and Grading
   2. Site Furnishings

1.03 STANDARDS & DEFINITIONS

A. Unless otherwise shown or specified, all materials and methods shall conform to the appropriate current sections of:
   1. The State of California Department of Transportation (CALTRANS) Standard Specifications, latest edition, except for measurement and payment requirements.
   2. Concrete work and materials shall be in accordance with relevant American Concrete Institute specifications, latest editions, including:
      a. ACI 301 Specifications for Structural Concrete
      b. ACI 318 Building Code Requirements for Structural Concrete
   3. Walking surface finishes shall comply with the accessibility provisions of the 2013 California Building Code (CBC): Part 2 of California Code of Regulations, Title 24

B. Applicable ASTM International Standards (latest revisions) as they apply to this work and related test methods, including:
   1. A185 Specification for Steel Welded Wire Reinforcement, Plain, for Concrete
   2. A615 Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement
   3. A775 Specification for Epoxy-Coated Steel Reinforcing Bars
   4. C33 Specification for Concrete Aggregates
   5. C39 Test Method for Compressive Strength of Cylindrical Concrete Specimens
   6. C94 Specification for Ready-Mixed Concrete
   7. C136 Test Method for Sieve Analysis of Fine and Coarse Aggregates
   8. C143 Test Method for Slump of Hydraulic-Cement Concrete
   9. C150 Specification for Portland Cement
   10. C157 Standard Test Method for Length Change of Hardened Hydraulic-Cement Mortar and Concrete
   11. C171 Specification for Sheet Materials for Curing Concrete
   12. C173 Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method
   13. C260 Specification for Air-Entraining Admixtures for Concrete
   14. C309 Specification for Liquid Membrane-Forming Compounds for Curing Concrete
   15. C311 Test Methods for Sampling and Testing Fly Ash or Natural Pozzolans for Use in Portland-Cement Concrete
   16. C330 Specification for Lightweight Aggregates for Structural Concrete
   17. C494 Specification for Chemical Admixtures for Concrete
   18. C618 Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete
   19. C920 Specification for Elastomeric Joint Sealants
   20. C979 Specification for Pigments for Integrally Colored Concrete

21. C989 Specification for Slag Cement for Use in Concrete and Mortars
22. C1240 Specification for Silica Fume Used in Cementitious Mixtures
23. C1602 Specification for Mixing Water Used in the Production of Hydraulic Cement Concrete
24. C1603 Test Method for Measurement of Solids in Water
25. D1557 Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort
26. D1751 Specification for Preformed Expansion Joint Filler for Concrete Paving

C. Relative compaction: is defined as the in-place dry density of the compacted soil divided by the laboratory compacted maximum dry density determined in accordance with ASTM D1557, expressed as a percentage.

1.04 SUBMITTALS

A. General: Submit the following within fourteen (14) days after Notice to Proceed.

B. Product data: All steel reinforcement, sealants, cure, expansion joint filler.

C. Aggregate base: Sieve analysis for aggregate base.

D. Concrete Mix**:** Proposed mix design of each class of concrete specified with proportions of materials.
   1. Mix design shall also state the following:
      a. Compressive strength in PSI at 28 days.
      b. Slump
      c. Water-cement ratio
      d. Color, if applicable
   2. Sieve data / certification for coarse and fine aggregate
   3. Test report / certification for cement and fly ash. Admixture data. Water test report for ready mix concrete.

1.05 QUALITY ASSURANCE

A. Layout Review: Stake and layout all paving areas for review by the Engineer prior to excavation.

B. Inspection: Notify the Engineer 24 hours prior to placement of any concrete to inspect sub-grade, forms, and reinforcement.

C. Tolerances: Tolerances for sub-grade, sub-base and finished grade shall be as specified by the Standard Specifications except that Contractor shall install the aggregate base and concrete to the minimum thickness shown. No combination of high and low tolerances will be permitted.

1.06 TESTS

A. Testing and analysis of concrete will be performed under provisions of Section 6-3 of the Standard Specifications.

B. Testing firm may take cylinders and perform slump, compression strength, and air entrainment tests in accordance with ASTM C143, C39 and C173.

PART 2 - PRODUCTS

2.01 BASE, FORMWORK, AND REINFORCEMENT

A. Aggregate Base: Standard Specifications, Section 26, Class-2, 3/4" maximum.

AGGREGATE GRADING REQUIREMENTS

Sieve Sizes	Percentage Passing			
	$1^1/_2$" Maximum		$^3/_4$" Maximum	
	Operating Range	Contract Compliance	Operating Range	Contract Compliance
2"	100	100		
$1^1/_2$"	90-100	87-100		
1"			100	100
$^3/_4$"	50-85	45-90	90-100	87-100
No. 4	25-45	20-50	35-60	30-65
No. 30	10-25	6-29	10-30	5-35
No. 200	2-9	0-12	2-9	0-12

QUALITY REQUIREMENTS

Test	Operating Range	Contract Compliance
Resistance (R-value)		78 Min.
Sand Equivalent	25 Min.	22 Min.
Durability Index		35 Min.

Aggregate Base: Class-2, manufactured from 100% recycled materials, and conforming to CALTRANS Section 26, latest edition.

B. Formwork: Steel or wood, of size and strength to resist movement during concrete placement and to retain straight, true, and to proper elevation, horizontal and vertical alignment until removed. Use forms that are straight and free of distortion and defects. Use flexible spring steel forms or laminated boards to form radius bends as required.
   1. Form ties and similar accessories shall be such that all metal will be at least 1 inch from surface when forms are stripped.

C. Reinforcement Bars and Dowels: Deformed steel bars, ASTM A615, Grade 60 for bars #5 and larger; Grade 40 for bars #4 and smaller, unless otherwise shown. All reinforcement shall be clean and free of paint and loose rust scale.

D. Welded Wire Mesh: Welded plain cold-drawn steel wire fabric, ASTM A185 by Davis Wire Corporation or approved equal. Furnished in flat sheets, not rolls.

2.02 CONCRETE

A. Portland Cement: Type-II cement shall conform to the requirements of ASTM C150.

B. Coarse aggregate: shall conform to ASTM C33, and Standard Specifications Section 90. Gravel, crushed gravel, crushed rock, or combinations thereof, free from organic matter and other deleterious substances, from an approved source.

C. Fine Aggregate: shall conform to ASTM C33, and Standard Specifications Section 90. Natural sand or a combination of not less than 50% natural and manufactured sand, free from deleterious coatings, roots, bark, sticks, rags, and other extraneous material. All fine aggregate shall be thoroughly and uniformly washed.

D. Water: used in the concrete mix shall conform to ASTM C94. Water shall be clear and free from injurious amounts of oil, salts, acid, alkali, organic matter, or other deleterious substances. For ready-mix concrete water density shall be monitored with an automated device conforming to ASTM C1603.

E. Chemical Admixtures:
   1. Air Entrainment: Air entrainment agents shall conform to ASTM C260. Use five percent (5%) air entrainment: Manufactured by W.R. Grace, Sika, BASF or approved equal.
   2. Water Reducer: shall conform to ASTM C494, Type A, Type D. Manufactured by W.R. Grace, Sika, BASF or approved equal.
   3. Shrinkage Reducer: shall conform to ASTM C494, Type S. Capable of reducing drying shrinkage up to 80% at 28 days per ASTM C157, Eclipse 4500 by Grace Construction, MasterLIFE SRA20 by BASF, or approved equal.
   4. Calcium chloride: Not permitted.
   5. Chemical admixtures shall be at the Contractor's discretion at the time of the pours.

F. Cure: Water-based, California EPA VOC-limits compliant, clear membrane curing compound shall conform to ASTM C309, Type 1, Classes A & B. 1100-Clear by W.R. Meadows or approved equal.
   1. White liquid membrane curing compound shall not be used.

J. Color & Finish: As shown on the Drawings.

2.03 CONCRETE MIX DESIGN

A. General: Concrete mix shall comply with applicable industry standards for concrete materials, admixtures, bonding materials, curing and other except as noted.

B. Strength: Concrete shall be designated by class based on 28-day compressive strengths when tested in accordance with ASTM C39 and shall be:
   1. Class-2 (590 lbs of cementitious material per cubic yard) for curbs, footings, and paving. Mix shall achieve a minimum compressive strength of 3000 PSI at 28-days. Slump shall be not more than four inches (4").

C. Slag; Incorporation of slag into the concrete mix is at the discretion of the Contractor. If slag is to be used in the mix, substitute up to 40% of Portland cement with slag for all classes of concrete, final proportions to be determined by the concrete supplier.
   1. Concrete mixtures with slag must be properly designed for the application, and finishing procedures must be appropriately applied.

D. Fly Ash: Incorporation of fly ash into the concrete mix is at the discretion of the Contractor. If fly-ash is to be used in the mix, substitute up to 25% of Portland cement with fly ash for all classes of concrete, final proportions to be determined by the concrete supplier.
   1. Concrete mixtures with fly ash must be properly designed for the application, and finishing procedures must be appropriately applied.
   2. For mix designs utilizing 25% or more fly ash, proportioning shall be based on field experience or trial mixtures or both, per ACI 318, Section 5.3.

2.04 CONTROL JOINTS

A. Expansion joint filler: 3/8" thick asphalt impregnated fiberboard, shall conform to ASTM D1751. Manufactured by W.R. Meadows or approved equal.

PART 3 – EXECUTION

3.01 JOB CONDITIONS

A. Weather Conditions: Construct concrete surface course only when atmospheric temperature is above 40 degrees F., when the underlying base is dry, and when weather is not rainy.

B. Grade Control: Establish and maintain the required lines and grades, including cross-slope during construction operations.

C. Protection: Take all steps necessary not to discolor or damage existing improvements. If damage occurs, repair immediately and if repair cannot be made to the satisfaction of the Engineer, remove and replace at no expense to the Owner.

3.02 BASE PREPARATION

A. Sub-grade: See Specification Section Earthwork and Grading for sub-grade preparation and compaction requirements. Verify that sub-grade preparation, compacted density and elevations conform to the Specifications.

B. Place and compact aggregate base as specified in the Standard Specifications, Section 26, to at least 95% relative compaction in accordance with ASTM D1557, and to a depth as noted on the Drawings. Verify grades to allow for finish paving.

C. Clear aggregate base surface of all loose or unsuitable material.

3.03 INSTALLATION

A. Form Construction: Set forms to the required grades and lines, rigidly braced and secured.
   1 Install sufficient quantity of forms to allow continuous progress of work and so that forms can remain in place at least 24 hours after concrete placement.
   2. Remove forms without damage to the placed concrete.

B. Reinforcement: Reinforcement shall be per the Drawings, secured in place. No concrete shall be poured prior to the Engineer's inspection.

D. Placement: Moisten sub-grade as required to provide a uniform, dampened condition at the time concrete is placed. Place concrete using methods which prevent segregation of the mix, with as little re-handling as possible. Consolidate concrete along the face of forms and adjacent to transverse assemblies, reinforcement, or side forms. Use care to prevent dislocation of reinforcing, dowels, and joint devices. Deposit and spread concrete in a continuous operation between transverse joints. If interrupted for more than 1/2 hour, place a construction/cold joint.

E. Control Joints: Construct control joints true-to-line with face perpendicular to surface of the concrete, unless otherwise shown. Construct transverse joints at right angles to the centerline, unless otherwise noted. See Control Joint Types specified herein for specific guidelines.
   1. All joints shall be set accurately to grade and straight in alignment as shown on the Drawings. Alignment shall not vary more than 1/8" in 10' length.

F. Finishing: After striking-off and consolidating concrete, smooth the surface by screeding and floating. Use hand methods only where mechanical floating is not possible. Distribute concrete as required to remove surface irregularities, and re-float repaired areas to provide a continuous, smooth finish. Work edges of slabs, gutters, back top edge of curb, and formed joints with an

edging tool, and round to 1/2" radius, unless otherwise shown. Eliminate any tool marks on concrete surface.

1. After floating, test concrete surface for trueness - maximum 1/8" variation in 10' length in any direction.
2. After completion of floating and when excess moisture or surface sheet has disappeared, complete surface finishing, as specified herein.
3. During finishing, cement shall not be applied to the dry concrete surface.

G. Curing: Protect and cure finished concrete, complying with applicable requirements of the Standard Specifications.
   1. All concrete shall be cured for at least 7 days after placing.

3.04 CONTROL JOINTS

A. Expansion Joints: shall be as constructed as shown on the Drawings.
   1. Dowels: grease both ends.
   2. Joint fillers: shall be in one-piece lengths for the full width being placed wherever possible. Where more than one length is required, lace or clip joint filler sections together. Form top edge of filler to conform to top profile of concrete.
   3. Paving – locate expansion joints:
      a. Where shown on the Drawings; if not shown then at maximum 60' O.C. in any direction.
      b. At all walls, steps, ramps, and other site structures.
      c. At building faces.
   4. Curbs – locate expansion joints:
      a. aligned with expansion joints in monolithic paving
      b. at 60' O.C. when adjacent to modular paving
      c. at all corners, start/end of radiuses, and connections to flush curbing

B. Construction (Cold) Joints: shall be constructed as shown on the Drawings.
   1. At old and new concrete pours. Drill the existing concrete to accept dowels and embed. Grease both ends of dowel, or epoxy end in existing concrete and grease end in new concrete.
   2. At previous day's pour and fresh pour: Grease both ends of dowel.
   3. When curb and/or gutter and pedestrian paving are poured separately, provide #3 dowels, 8" length 24" O.C.

C. Weakened Plane Joints: shall be constructed as shown on the Drawings.
   1. Pedestrian paving - locate joints as shown on the Drawings; if not shown then at a maximum spacing of 20' O.C. in any direction. Joints shall be tooled.
   3. Curbs - construct joints across the top and visible face:
      a. aligned with weakened plane joints in monolithic paving.
      b. at a maximum of 20' O.C. when adjacent to modular paving.

3.05 CONCRETE FINISHING

A. General: Concrete finishes shall be as specified on the Drawings. Walking surfaces including curbs shall be slip-resistant and comply with CBC, latest edition.

B. Broom finish - draw a stiff fine-hair broom across concrete surface, perpendicular to line of traffic. Repeat operation if required to provide a fine line texture. Texture must be true and straight across entire width of concrete slab.

C. Form Finish: Grout-cleaned or smooth rubbed finishes are not permitted. Bug holes are permitted only as specified in ACI 301-10 SF-3.0, larger defects to be repaired with mortar using the same materials as the concrete mix.

3.06 REPAIR AND CLEAN-UP

A. Repair: Defective work such as under-strength concrete, concrete out of line, level or plumb, or showing objectionable cracks, honeycomb, rock pockets, voids, spalling, exposed reinforcing, etc., shall be repaired or removed and replaced as directed by and to the satisfaction of the Engineer. All cleaning, patching, and repairs shall be subject to the Engineer's approval and acceptance.

B. Protection: Protect concrete from damage until acceptance of work.

C. Contractor shall clean up and remove from the site all spillage, over-pour, discarded forming materials, rejected work or materials, and any other refuse or debris resulting from the work. Sweep concrete and wash free of stains, discolorations, dirt and other foreign materials just prior to final inspection.

D. Disposal: Surplus material and debris remaining upon completion of the work shall be segregated as to type, and transported from the job site and disposed of in a legal manner.

END OF SECTION

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LANDSCAPE IRRIGATION - SECTION 328400

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

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

1.02 DESCRIPTION OF WORK

A. Extent: Furnish all labor, material, equipment, tools, and incidentals necessary for the installation of a complete and operational automatic Landscape Irrigation system as shown on the Drawings and as specified in this Section. The work includes:
   1. Trenching, excavation, backfill including base and backfill materials.
   2. Electrical and wiring work associated with the system.
   3. Maintenance of the system during the maintenance period.
   4. Connection to existing mains and controller(s).

B. Related work includes but is not limited to:
   1. Earthwork and Grading
   2. Landscape Planting
   3. Landscape Maintenance

1.03 STANDARDS

A. Unless otherwise shown or specified, all materials and methods shall conform to the applicable current sections of:
   1. National Sanitation Foundation (NSF) Standard 61 Drinking Water System Components
   2. California Code of Regulations (CCR) Title 24 Part 5 California Plumbing Code (CPC)
   3. California Code of Regulations (CCR) Title 24 Part 3 California Electrical Code (CEC)
   4. State of California, Department of Transportation (CALTRANS) Standard Specifications (DTSS), except for measurement and payment requirements.

B. ASTM International Standards (latest revisions) as they apply to this work and related test methods, including:
   1. D1784 Specification for Rigid Polyvinyl Chloride (PVC) Compounds and Chlorinated Polyvinyl Chloride (CPVC) Compounds
   2. D1785 Specification for Polyvinyl Chloride Plastic Pipe, Schedules 40, 80, and 120
   3. D2241 Specification for Polyvinyl Chloride Pressure-Rated Pipe (SDR)
   4. D2287 Specification for Non-rigid Vinyl Chloride Polymer, Copolymer Molding, &Extrusion Compounds
   5. D2464 Specification for Threaded Polyvinyl Chloride Plastic Pipe Fittings, Schedule 80
   6. D2466 Specification for Polyvinyl Chloride Plastic Pipe Fittings, Schedule 40
   7. D2467 Specification for Polyvinyl Chloride Plastic Pipe Fittings, Schedule 80
   8. D2564 Specification for Solvent Cements for Polyvinyl Chloride Plastic Piping Systems
   9. D2609 Specification for Plastic Insert Fittings for Polyethylene Plastic Pipe
   10. D2672 Specification for Joints for IPS PVC Pipe Using Solvent Cement
   11. D2737 Specification for Polyethylene (PE) Plastic Tubing
   12. D2855 Standard Practice for Making Solvent-Cemented Joints with Polyvinyl Chloride Pipe and Fittings
   13. D3350 Specification for Polyethylene Plastics Pipe and Fittings Materials
   14. F656 Specification for Primers for Use in Solvent Cement Joints of Poly (Vinyl Chloride) (PVC) Plastic Pipe and Fittings
   15. F690 Standard Practice for Underground Installation of Thermoplastic Pressure Piping Irrigation Systems:

C. All materials and methods shall conform to the applicable standards of the following organizations:
   1. American Society of Irrigation Consultants (ASIC) Design Guidelines for Earth Grounding Electronic Equipment in Irrigation Systems
   2. American Society of Mechanical Engineers (ASME) Standards
   2. American Water Works Association (AWWA) Standards
   3. American Welding Society (AWS) Specifications
   4. Copper Development Association: Copper Tube Handbook.
   5. Manufacturers Standardization Society (MSS) Standards
   6. National Electrical Manufacturers Association (NEMA) Standards
   7. Underwriters Laboratories (UL) Standards

1.04 REVIEWS

A. Contractor shall specifically request at least (2) two days in advance the following reviews prior to progressing with the work:
   1. Intermediate Review - Irrigation coverage and installation.
   2. Substantial Completion Review - valve box inspection, and overall operation of the irrigation system.
   3. Final Review (at the completion of Maintenance Period) - all punch-list items identified at Substantial Completion Review.
   4. See Specification Sections Earthwork and Grading, Soil Preparation, Landscape Planting, and Landscape Maintenance for other items to be inspected during these reviews.
   5. Each review shall be conducted only after all items pertaining to that review as noted above and in related Sections have been completed by the Contractor.

1.05 QUALITY ASSURANCE

A. All materials shall be new and of the best quality available unless otherwise specified. Manufacturer shall be clearly marked on all material, containers, or certificates of contents for inspection.

B. Submittals: Within fourteen (14) days after Notice to Proceed submit:
   1. Product data on all specified irrigation equipment, including any proposed substitutions.

C. Maintenance Binder: As specified herein.

D. Guarantee: Contractor shall guarantee irrigation system for one year from date of acceptance.

E. Unusual Conditions: In the event that any unusual soil conditions are encountered during irrigation trenching operations, the Engineer shall be immediately notified. Unsuitable material encountered below the natural grade shall be excavated and disposed of as directed by the Engineer and paid for as Extra Work. Unsuitable material is defined in Section 19-2.02 of the CALTRANS Standard Specifications.

F. Hazardous Materials: In the event existing asbestos pipe is encountered and needs to be modified and/or removed, Contractor shall comply with the requirements of Federal (OSHA) regulations, and California Code of Regulations Title 8 (Cal/OSHA).

1.06 DELIVERY, STORAGE AND HANDLING

A. General: Exercise care in loading, unloading, storage, and handling of pipe, fittings, and irrigation equipment.

B. Any pipe / fittings that have been cracked, dented, or otherwise damaged shall be removed from the site. If installed, pipe / fittings shall be replaced with undamaged piping / fittings to the satisfaction of the Engineer at no additional cost to the Owner.

1.07 UTILITIES

A. Contractor shall verify location of all on site utilities prior to trenching. Notify Engineer by telephone and in writing of any conflicts prior to installation. Restoration of damaged utilities shall be made at the Contractor's expense to the satisfaction of the Engineer.

1.08 CODES

A. Irrigation system shall be installed and tested in accordance with local codes and manufacturer's specifications.

PART 2 - PRODUCTS

2.01 PLASTIC PIPE AND FITTINGS

A. Unless otherwise noted:
   1. Lateral line pipes shall be Schedule-40 PVC, solvent weld joints.
   2. Mainline pipes up to 2” diameter shall be Schedule-40 PVC, solvent weld joints.
   3. Mainline pipes 2-1/2" – 4” diameter shall be Class 315 PVC, solvent weld joints.
   4. Mainline pipes larger than 4” diameter shall be Class 200-PVC Rubber Ring Joint.
   5. Lateral line pipe fittings shall be Schedule 40 PVC solvent weld. All threaded fittings for lateral pipe shall be Schedule 40 PVC heavy wall.
   6. Mainline pipe fittings shall be Schedule 40 PVC.
   7. All mainline threaded fittings shall match the pipe type.
   8. All risers and nipples shall be Schedule 80 PVC, molded thread. Machine threaded nipples shall not be allowed.
   9. Plastic threaded fittings shall use Permatex Form-A-Gasket No.2 Sealant or approved equal.
   10. PVC cement shall be industrial grade, low VOC emission, high strength solvent weld cement, meeting ASTM D2564, IPS Corporation 711 or approved equal.
   11. Primer shall be industrial grade, low VOC emission primer, meeting ASTM F656, IPS Corporation P-70 or approved equal.
   12. Cans of solvents and primers shall have labels intact and stamped with the date of manufacture. Cans dated over 1-year old shall not be used. Thinning of solvents and primers shall not be allowed.

2.04 DRIP IRRIGATION

A. Approved manufacturers of drip irrigation products:
   1. Agrifim by NDS, Fresno CA, (800) 688-8108 www.ndspro.com
   2. Netafim, Fresno CA (888)638-2346 www.netafimusa.com
   3. Rainbird, Azusa CA (800)458-3005 www.rainbird.com
   4. Toro, Riverside CA (877)345-8676 www.toro.com

B. Supply system:
   1. Valve Assembly: solenoid valve, filter, and pressure regulator shall be as specified on the Drawings.
   2. Laterals, supply / exhaust headers shall be specified under Plastic Pipe and Fittings in this Specification, size per the Drawings.

C. General Drip Accessories:
   1. Fittings shall be as provided by the drip irrigation pipe manufacturer or approved equal.
   2. Stakes / staples shall be as provided by the drip irrigation pipe manufacturer or approved equal.
   3. Flush port / valve by manufacturer or approved equal where shown on the Drawings.
   4. In-line spring-type check valve by manufacturer or approved equal on all sloped areas.

D. TYPE-1 (Point-source)*:*
   1. Supply: polyethylene pipe ASTM D2737 as shown on the Drawings. 3/4" tubing shall be minimum 0.055" (1.4mm) wall thickness. Color shall be black unless otherwise noted.
   2. Distribution: polyethylene tube ASTM D2737 as shown on the Drawings. 1/4" tubing shall be minimum 0.04" (1mm) wall thickness. Color shall be black unless otherwise noted.
   3. Emitters shall be as shown on the Drawings.

F. Sub-Surface Drip Accessories:
   1. Air-relief valve by manufacturer or approved equal where shown on the Drawings.
   2. Pressure gauge by manufacturer or approved equal where shown on the Drawings.

2.04 SLEEVING

A. All main and lateral lines located beneath paving shall be sleeved with Schedule 40 PVC pipe unless otherwise noted.
   1. For pipes, sleeves shall be 4" dia. or twice the aggregate diameter of all pipes contained within the sleeve, whichever is greater.

2.05 VALVE BOXES

A. Valve boxes: Pre-cast plastic with bolt-down covers, by NDS, Carson Industries LLC, or approved equal, free of all cracks, chips or structural defects. Size as required by equipment plus adequate clearance to operate valves unless otherwise noted.
   1. Boxes subject to vehicular traffic in paved areas shall be concrete and have traffic lid covers.
   2. Boxes in turf areas shall have ribbed / reinforced lids capable of withstanding the loads of ride-on lawn mowers.
   3. All valve box lids shall be labeled with the valve station number using a weather resistant method. Plastic valve box lids may be labeled with the valve station number using a branding tool / branding iron.
   4. Plastic valve boxes in turf areas shall be black color unless otherwise noted.
   5. Plastic valve boxes in planting / mulch areas shall be black color unless otherwise noted.

B. Valve identification tags: as manufactured by Christy Enterprises, Anaheim CA, (800)258-4583, or approved equal.
   1. A Valve ID tag, with the valve station # clearly marked with weatherproof method, shall be attached to the inside of each remote control valve, and attached by means of a weatherproof tie.

2.06 IRRIGATION EQUIPMENT

A. General: Irrigation equipment shall be as shown on the Drawings, or approved equal.

PART 3 - EXECUTION

3.01 GENERAL

A. Acceptance of Work: Site grading shall be completed and/or accommodated to specified tolerances before trenching. The contractor shall be responsible for verifying the existing conditions on site and the removal and or reinstallation required making the grades.

B. Schematic: System features are shown schematically for graphic clarity. Install all piping and valves in common trenches where feasible and inside planting areas.

C. Coordination: Coordinate trenching as required with trenching contractor as well as with any other trades affected by irrigation installation. Coordinate installation of pipe and other irrigation equipment with other existing and proposed utilities and planting locations.

D. Grading: Contractor shall be responsible for installing all irrigation features to their finished elevation and at depths indicated.

E. Finish Grade: Unless otherwise noted, all heads shall be set at, and perpendicular to, finish grade.

F. Record Drawings of As-Built Conditions: Contractor shall regularly update a print of the system and any changes made to the system throughout the project.
   1. Features below ground shall be indicated with at least two measurements from surface features such as pavements, fences and buildings.
   2. Indicate actual control and ball valve and quick coupler locations in a similar manner. Indicate locations for valve boxes for intermediate control wire splices.
   3. All final changes shall be recorded on a reproducible plan before trenches are backfilled. The as-built plan shall be completed and submitted to the Engineer before final payment shall be made for work installed.

3.02 INSTALLATION – TRENCHING & PIPE

A. Point of Connection: shall be below grade.

B. Excavation: Trenches for mainline, sleeves, and laterals shall be excavated to the depth required for laying pipe or conduit, plus depth of bedding if required as noted below.
   1. Depth – pipes 4” dia. and less - level bottom of trenches for a smooth flat grade, and excavate bell holes where necessary to ensure that pipe rests for entire length on solid ground. Should rock or other unsuitable material be encountered, excavate to 6" below bottom of pipe and replace with well tamped and compacted approved backfill material or sand before laying pipe.
   2. Depth – pipes greater than 4” dia. – depth of pipe and bedding as shown on the Drawings, or 6” below bottom of pipe whichever is greater.
   3. Width - trenches shall be excavated wide enough to provide adequate working space to align and lay pipe or to construct the trench, make up and inspect joints, and allow placing and compaction of bedding material. The maximum trench width at the top of the pipe shall not exceed the pipe outside diameter plus 12- inches on each side of the pipe.
   4. Maintain excavations free of water while installing pipe and until backfilled.
   5. See Specification Section Demolition or Tree Protection for trenching within tree protection areas.

C. Bedding; Bedding shall extend upwards from the bottom of the trench to the extent shown on the Drawings.
   1. Bedding for pipes shall consist of compacted approved sub-soil or sand as defined herein.
   2. In planting areas <u>excluding natural turf sports fields</u>, sand bedding may be jetted or ponded into place and shall be compacted to equal that of the adjacent prepared sub-grade as specified herein. Mechanical compaction may be necessary to achieve this required density. If the bedding is jetted or ponded, the operation should be closely supervised and provisions should be made for the removal of excess water.

D. Backfill: Cover no joints until system has been pressure tested and approved by the Engineer.
   1. Backfill material shall consist of selected on-site excavated/sub-soil material, imported sandy soils, subject to prior approval by the Engineer. Backfill with potentially damaging rocks and debris shall not be permitted.
   2. When piping has been installed, tested, inspected, and approved, backfill excavations in layers not exceeding 8". Moisten and machine tamp as required.

3. In planting areas, the top 6" of the trenches shall contain on-site near surface soils and shall be compacted to maximum 85% relative compaction per ASTM D698. For trenches in existing planting areas maintain near surface soils as uniform as possible with existing upper stratum soils.
4. In paving areas, the fill shall be placed in maximum 8-inch lifts (compacted layers) and shall be compacted by mechanical means only. Fill shall be conditioned, at time of compaction, to 1% to 3% above the optimum moisture content of the soil, and each lift shall be compacted to at least 90% relative compaction per ASTM D1557.
5. For trenches in existing areas, restore the ground or paving to original condition.
6. After backfilling, remove from the premises all surplus earth resulting from this work and dispose of same, to the satisfaction of the Engineer.

E. Pipe: pipes shown parallel on the Plan may be installed in a common trench. Where required, snake pipe from side to side when trench exceeds 30 feet in length.
   1. Where pipes are shown parallel to or adjacent to shrub or ground cover areas, they shall be installed in these areas.
   2. Where pipes are shown parallel to or adjacent to lawn areas versus pavement, they shall be installed in the lawn area. All changes in depth of pipe shall be accomplished using 45 degree fittings.

F. Check Valve: On sloped sites, install in-line check-valves in sloped main / lateral / supply lines as required to prevent low sprinkler head / drip emitter / tree bubbler drainage. This may be omitted only on those circuits where all sprinkler heads or tree bubblers have built-in check valves.

G. Sleeves: Contractor shall adequately size sleeves for all wiring and irrigation lines to be placed (with ends clearly marked above grade) under driveways and walks prior to their construction.
   1. Install sleeves minimum 24” under paving.
   2. Sleeves shall continue a minimum of 1 foot into planting areas.
   3. All wiring shall be in a separate sleeve.
   4. Install removable non-decaying plugs, expanding insulation foam or equal, at ends of sleeves and conduits to prevent entrance of earth.

H. Fabrication: All manifolds shall be neat, orderly, and constructed for ease in maintenance operations. Install manifolds to allow valve boxes to be parallel to each other and to adjacent walls, walks, and curbs. Cuts and joints shall be free of burrs, smooth and minimum in quantity.

J. Flushing of System: After installation of pipe lines and sprinkler risers, but before installation of sprinkler heads and/or drip irrigation emitters, thoroughly flush the system to remove any foreign material in the pipes.
   1. For flushing mainline and sprinkler portions of the system utilize full water main pressure.
   2. For flushing downstream of drip irrigation valves via flush ports use drip system design pressure.
   3. After flushing, backfill and settle soil. Rake smooth to match surrounding grade.
   4. Flushing shall include flushing out the existing mainline by operating one of the existing quick couplers down stream of the new valve installation, prior to operating any portion of the system again.

3.**03** INSTALLATION – EQUIPMENT

A. General: Install irrigation equipment as shown on the Drawings

B. Valve Boxes: Install valve boxes so that the top of box is ½” above finish grade in turf areas and 1-½” above finish grade in mulch areas. Install valve box assembly in ground cover / shrub and not in hard paved areas. Install in lawn area only if groundcover does not exist adjacent to lawn.
   1. Each valve shall have a valve-identification tag, the corresponding valve box cover shall be branded with the valve identification number.

3.04 CONTROL WIRE

A. General: Install control wire in pipe trenches wherever practical. All wire shall be installed below or level with the bottom of adjacent pipes. Where pipes are not available, control wire shall be installed inside conduits as specified in this section.
   1. Bundle wire and tape to pipe every 10 feet. Conduits or sleeve required shall be sized based on control wires as specified herein.
   2. All wiring above finish grade shall be enclosed in steel conduit.
   3. Color of control wire shall be different than common wire.
   4. One solenoid valve per station unless otherwise indicated on the Drawings or with prior approval of the Engineer.
   5. All wiring shall be tested for continuity, open circuits and unintentional grounding prior to connecting.

B. Splices: shall be sealed with direct bury connectors as specified in this section.
   1. All wire splices shall be installed in a valve box, locations as approved by the Engineer. Install traffic rated boxes in vehicular areas.

B. Additional wire:
   1. Control wire for unused stations shall be pulled as noted on the Drawings.
   2. Control wire and common shall be pulled to each stub-out as shown on the Drawings. Minimum one control wire and common if not indicated on the Drawings.
   3. For 2-wire systems decoder wire shall be pulled to each stub-out as shown on the Drawings
   4. Provide 24" excess wiring in each valve box / pull box and in the nearest project valve box at 100-ft intervals on wire runs of greater than 100-ft. Neatly coil in valve box or pull box.

DRIP IRRIGATION – GENERAL

A. Install all drip line and equipment as indicated on drawings. Follow equipment Manufacturers Instructions.

B. Bury all supply and distribution pipes to the depths shown on the Drawings.

C. Install drip irrigation manufacturers or metal wire staples

D. Staples: Install manufacturer's staples on drip line as follows:
   1. 3' on center in sand, 4' on center in loam, 5' on center in clay
   2. Two (2) staples on each change of direction (tee, elbow, or cross).

3.05 DRIP IRRIGATION TYPE-1 (POINT-SOURCE) INSTALLATION

A. Snake the supply and distribution pipes through the planting to allow for expansion and movement. Do not kink the pipes, use right angle connectors in tight corners.

B. Locate emitters / low-flow bubblers at top of mulch. Adjust or cut length of distribution pipes as necessary. Verify that locations of and flow from emitters / low-flow bubblers is optimum for each root ball watering.

C. On sloped areas, install supply pipes parallel to the slope wherever possible. Emitters / low-flow bubblers shall be placed on the uphill side of the plant.

3.06 VALVE STATIONING

A. Contractor shall clearly label and sequence stations according to the assigned valve identification numbers shown on the Drawings. In case valve sequencing needs to be changed for ease in maintenance operations, verify changes in advance with the Engineer. Final valve stationing shall be marked clearly on the as-built Drawings.
   2. For modifications/additions to existing irrigation systems, obtain clear copies of the Irrigation Drawings or existing Valve Stationing Plans and mark-up as required to reflect changes and color code to indicate valve zones. Submit modified plan to the Engineer for approval prior to laminating and replacing inside the controller.

3.08 HARDWARE

A. See Specification Section Landscape Maintenance for items to be handed over to the Owner at the in-service meeting.

3.09 MAINTENANCE BINDER

A. Submit <u>at the time of Substantial Completion Review</u>, a Maintenance Binder with the following documents:
   1. Sheet containing:
      a. Contractor's name, address, and phone number.
      b. Controller assembly manufacturer's name, address, and phone number – if applicable
      c. Controller manufacturer's service address, and phone number
   2. Copies of the following documents:
      a. Valve-stationing Plan
      b. Existing soils test report – see Specification Section Soil Preparation.
   3. Warranties and Certificates. Warranty documents or accompanying letters on company letterhead shall note project name and location and effective start date for warranties.

B. The Maintenance Period shall not commence until the Maintenance Binder has been reviewed and approved by the Engineer.

3.10 CLEAN-UP

A. Keep project area clean on a daily basis, removing debris from the site.

END OF SECTION

SOIL PREPARATION - SECTION 329113

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

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

1.02 DESCRIPTION OF WORK

A. Extent: Furnish all labor, material, equipment, tools, and incidentals necessary for Soil Preparation of planting areas as shown on the Drawings and as specified in this Section. The work includes installation of soil amendments, finish grading and plant pit backfill.

B. Related work includes but is not limited to:
   1. Demolition
   2. Earthwork and Grading
   3. Landscape Planting

1.03 DEFINITIONS

A. Finish Grade: is defined as the finished top surface of the soil after all grading and soil preparation activities, and prior to installation of mulch.

1.04 SUBMITTALS

A. Test Samples: Contractor shall provide samples, as specified herein, to an agricultural soils testing laboratory approved by the Engineer, referred to herein as the Testing Lab, unless delivered to the site in original, unopened containers, each bearing the manufacturer guaranteed analysis.
   1. Testing Lab - Soil & Plant Laboratory, Inc., 1101 South Winchester Blvd., Suite G173, San Jose, CA 95128, (408) 727-0330or prior approved equal.
   2. Use of an alternate soil testing lab without prior approval shall be cause for rejection of the submitted analysis.
   3. No material shall be delivered to the site until the Engineer approves the material.
   4. The same Testing Lab shall be used for all tests specified herein.
   5. Contractor shall pay for all testing fees from the Testing Lab for all tests specified herein.

B. Product Certificates: Certification stating quantity, type, and composition, weight and origin for all amendments and chemicals shall be delivered to the Engineer within fourteen (14) days of the Notice to Proceed and before the material is delivered to the site.

C. Testing – Existing Soil: Prior to finish grading operations or at least four weeks before proposed planting operations, Contractor shall take a sample each of the topsoil and sub-soil, from 0”-12" deep, in three separate locations across the site after rough grading, as directed by the Engineer. Topsoil stockpiled from the same site is to be considered as one of the locations. Samples shall be mixed from the three locations to provide a composite sample, representative of the entire site, combined volume of samples not less than 2 quarts. Soil samples shall be forwarded to the Testing Lab by the Contractor for testing and recommendations as to exact fertilizers and soil amendments to be used in planting, A05 analysis or approved equal.
   1. Amendment and fertilizer recommendations by the Testing Lab shall be specific to the proposed amendments to be used. Generic recommendations will require the Contractor to re-obtain specific recommendations from the Testing Lab.
   2. Soils report shall include an estimated infiltration rate for the tested soils.

D. Testing – Amendments: Contractor shall provide, along with a sample, latest analysis of amendments / bulk organic materials by the Testing Lab for verification of conformance to this specification, and specific recommendations as to exact quantities to be used in planting.
   1. Analysis shall conform to physical and chemical properties specified herein.
   2. Analysis shall not be more than three months old at the time of submitting sample.
   3. Analysis shall assume tilling of the amendments into the soil as described elsewhere in this Specification
   4. Analysis shall be approved by the Engineer / Architect prior to use on the project.

E. Testing – Imported Topsoil: Contractor shall provide, along with sample, latest analysis of soil proposed to be imported by the Testing Lab for testing as to exact fertilizers and soil amendments to be used in planting.

   1. Submit certificate or sample of any proposed bulk organic materials simultaneously for testing with soil samples for optimum amendment recommendations.
   2. Analysis shall not be more than three months old at the time of submitting sample.
   3. Should the final soil mixture be a combination of existing soil and imported topsoil, Contractor shall provide additional lab recommendations on method of mixing and exact fertilizers and soil amendments to be used in planting for the mixture.

F. Submit delivery tags for all amendments and fertilizers delivered to the Site for the Project.

1.05 REVIEWS

A. Contractor shall specifically request at least (2) two days in advance the following review prior to progressing with the work:
   1. Intermediate Review – completion of site grading, amendment depths, finish grade.
   2. See Specification Sections Landscape Irrigation and Landscape Planting for other items to be inspected during this review.
   3. The review shall be conducted only after all items pertaining to the review as noted above and in related Sections have been completed by the Contractor.

1.06 PROTECTION

A. Protect concrete from any sulfate-based amendments that may be specified from soils analysis to avoid staining. Concrete damaged from amendment placement shall be replaced at the Contractor's expense.

PART 2 – PRODUCTS

2.01 IMPORTED TOPSOIL

A. Imported Topsoil: Topsoil blends shall consist of rich sandy loam with organic materials with out mushroom compost. Reference blend shall be the Screened Topsoil Mix as supplied by Pacific Coast Soils Landscape Supplies, (831) 724-8032, www.pacificcoastsoils.com, or approved equal.

2.03 FERTILIZER

A. Soil amendment fertilizer shall be commercial fertilizer, 16-6-8 (N-P-K) uniform pellet. For bidding purposes only, exact fertilizer type and quantity to be determined by Testing Lab analysis.

B. Plant fertilizer shall be commercial fertilizer packets / tablets, two-year controlled-release 20-10-05 (N-P-K).

2.04 SOIL AMENDMENTS

A. Nitrogen Stabilized Organic Amendment: shall be mineralized and nitrogen stabilized bark or sawdust humus, with wetting agent and properly pulverized and shall have a minimum of 270 lbs. per cubic yard of amendment. Submit sample analysis for approval.

B. Gypsum: Agricultural Grade

2.05 CHEMICALS

A. The following brand names of various chemicals to be used in this Section are provided for ease of specifying; equals or brands with similar chemicals that will match or improve performance may be used at the Contractor's discretion. Contractor shall verify use of any chemicals with Owner prior to application:
   1. Pre-emergent herbicides - (granular form only) Treflan, Ronstar, or prior approved equal.

PART 3 - EXECUTION

3.01 GENERAL

A. Limits and Grades: Prior to commencing soil preparation operations, Contractor shall request a review by the Engineer to verify grading work completed to date and verify specified limits of soil preparation work to commence.

B. Contractor shall complete the site grading necessary to smoothly integrate newly graded areas with the existing grades.

3.02 TOPSOIL PLACEMENT

A. Imported topsoil shall be installed and completed as necessary to produce final finish grade requirement, minimum depth **6" (six inches).**
   1. Existing landscape areas including areas to be graded or that have been disturbed by construction that are to be planted as shown on the Drawings require topsoil across the entire planting areas. Amended excavated subsoil cannot be used as topsoil for these areas. Does not apply to existing lawn area.

B. Sub-grade shall be cross-ripped or cultivated to a depth of 10 inches. Water shall be added and ripping or cultivation shall be continued until the entire 10 inch depth is loose and friable. Place two inches of topsoil uniformly over sub-grade and thoroughly cultivate before placing remaining topsoil. Place topsoil and bring to a smooth, even grade. Soil shall be thoroughly water settled and high/low areas re-graded in accordance with paragraph "Finish Grading" this Section.

C. Stockpiled Topsoil: See Specification Section Earthwork and Grading

3.03 AMENDMENT PLACEMENT

A. The requirements below are for bidding purposes only, adjustments to the bidding formula shall be determined by the Testing Lab analysis.

B. All planting areas including naturalized areas shall be thoroughly cross-ripped to a minimum 10 inch depth. Upon completion of cross-ripping the amendments shall be applied, as follows:

Amount/1000 Square Feet	
6 cubic yards	Nitrogen Stabilized Organic Amendment
12 lbs.	Commercial Fertilizer
50 lbs	Gypsum

C. The materials shall then be uniformly spread and incorporated to obtain a homogeneously blended soil, six inches in depth.

D. Plant pits: Soil which has been amended in the above manner shall be used as the backfill mix around the sides of the root balls. See Specification Section Landscape Planting for plant pit requirements.

3.04 FINISH GRADING

A. Contractor shall finish grade all areas, including those indicated to be planted on the Drawings, and shall remove all rocks and clods over one cubic inch. All areas shall be smooth and uniformly graded. All erosion damage during the construction period shall be repaired by the Contractor.

B. Unless otherwise shown on the Drawings, all soil finish grades shall be one-inch (1”) below finish surface of walks, pavements, and curbs.

3.05 CHEMICALS

A. Herbicides and pesticides: Contractor shall verify compatibility, dosage and other application procedures with the manufacturer. All chemicals shall be applied by a pest control operator licensed in the State of California.

B. Planting areas: Treat all ground cover and non-naturalized areas for weed control with pre-emergent herbicide, as recommended by the manufacturer. See Specification Section Landscape Maintenance for related work.

3.06 PLANT FERTILIZER

A. All container stock shall receive additional fertilizer, in the form of commercial fertilizer packets / tablets at the rate of:

Container size	**Fertilizer Packets / Tablets**
4-inch pot	one (1)
1-gallon plant	two (2)
5-gallon plant	four (4)
15-gallon plant	ten (10)
24" box	fifteen (15)

1. Space the packets / tablets evenly around the ball halfway up backfill touching side of root ball.
2. The additional fertilizer requirement is independent of the Testing Lab analysis.

END OF SECTION

LANDSCAPE PLANTING - SECTION 329303

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

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

1.02 DESCRIPTION OF WORK

A. Extent: Furnish all labor, material, equipment, tools, and incidentals necessary for the provision and installation of plant materials as shown on the Drawings and as specified in this Section.

B. Related work includes but is not limited to:
   1. Soil Preparation
   2. Landscape Irrigation
   3. Landscape Maintenance

1.03 QUALITY ASSURANCE

A. Quality: Minimum quality of all plant material shall unless otherwise indicated conform to:
   1. ANSI Z60.1-2004 American Standard for Nursery Stock, Sponsored by the American Nursery and Landscape Association (ANLA)
   2. Prevailing published specifications of the California Association of Nurserymen.
   3. Additional standards as indicated on the Drawings and as specified herein.

B. Applicable ASTM International Standards (latest revisions) as they apply to this work and related test methods, including:
   1. D412 Test Methods for Vulcanized Rubber and Thermoplastic Elastomers—Tension
   2. C602 Specification for Agricultural Liming Materials
   3. D5268 Specification for Topsoil Used for Landscaping Purposes

1.04 SUBMITTALS

A. General: Within fourteen (14) days after Notice to Proceed submit the following:
   1. Documentation certifying quantity and species of plant material ordered, the nursery supplier(s), *any* plant material not available at that time, or proposed substitutions to be reviewed.
   2. Product data on all associated planting products specified herein.
   3. 4-ounce sample of mulch.

1.05 REVIEWS

A. Contractor shall specifically request at least (2) two days in advance the following review prior to progressing with the work:
   1. Intermediate Review – plant material approval and layout/locations. See Specification Sections Landscape Irrigation and Soil Preparation for other items to be inspected during this review.

B. Contractor shall specifically request at least (5) five days in advance the following reviews prior to progressing with the work:
   1. Substantial Completion Review (to initiate Maintenance Period) – all planting areas including turf and naturalized grass if applicable. See Specification Section Landscape Maintenance.
   2. Final Review (at the completion of Maintenance Period) - all planting areas including turf and naturalized grass if applicable, including all punch-list items identified at Substantial Completion Review. See Specification Section Landscape Maintenance.

C. Each review shall be conducted only after all items pertaining to that review as noted above and in related Sections have been completed by the Contractor.

PART 2 - PRODUCTS

2.01 GENERAL

A. Nomenclature and Labels: Plant botanical names conform to "Standardized Plant Names," second edition, and secondly, "A Checklist of Woody Ornamental Plants of California, " Manual 32, University of California. All plants of each clone, species, and cultivar shall be delivered to the site labeled with their full botanical name. Every plant species shall be labeled with no less than one label for every ten plants of a species.

B. Quantities: The quantities shown on the plant list and in labels are for the Engineer's use and are not to be construed as the complete and accurate limits of the Contract. Contractor shall furnish and install all plants shown schematically on the Drawings.

C. Root Systems: All container-grown stock shall be grown in its container for at least six months prior to its planting. Contractor shall allow one percent of the quantity of plants for removal and inspection. Any plant material, within two years following the final acceptance of the project, determined by the Engineer to be defective, restricted, declining or otherwise deficient due to abnormal root growth, shall be replaced by the Contractor, to the equal condition of the adjacent plants, at the time of replacement.

D. Health: Foliage, roots and stems of all plants shall be of vigorous health and normal habit of growth for its species. All plants shall be free of all disease, insect stages, burns or disfiguring characteristics.

E. Untrue Species: All plant material, within two years following the final acceptance of the Project, determined by the Owner to be untrue to the species, clone, and/or variety specified, shall be replaced by the Contractor, to the equal condition of adjacent plants at the time of replacement.

2.02 TREES

A. All trees shall have straight trunks of uniform taper, larger at the bottom. Trunks shall be free of damaged bark, with all minor abrasions and cuts showing healing tissue. Sucker basal growth and lateral growth shall be removed and treated to eliminate re-sprouting. Normal lower side branching shall remain. Trees unable to stand upright without support shall be rejected.

2.03 FERTILIZER

A. 20-10-15 (N-P-K) Commercial Fertilizer, uniform pellet.
   1. The requirements above are for bidding purposes only, exact fertilizer types per Testing Lab analysis.

2.04 MULCH

A. Mulch: shall be shredded redwood or fir bark as approved by the Engineer. Recycled wood products will not be permitted.
   1. Pre-approved product: 80% redwood & 20% fir bark Mulch by Lyngso Garden Materials, Inc. Redwood City CA
   2. Approved Equal.

OR

B. Mulch: shall be chipped wood product such as cedar or redwood chips greater than 1/2 inch and less than 2 inch in length, and no more than 1/2 inch thick, and shall contain less than 1% foreign matter including soil, weeds, seeds, etc. by dry weight. Recycled wood products will not be permitted.
   1. Pre-approved product: Golden Nuggets Chipped Redwood Mulch by Sun Gro Horticulture.
   2. Approved Equal.

2.05 TURF SOD

A. Sod shall be grown from high quality seed in soil treated with appropriate State and Federal agency approved pesticides, fungicides, and herbicides and regularly inspected by the State in accordance with "State of California Regulations for Nursery Inspection ".
   1. Sod shall have a well-developed root structure sufficiently mature so that it will hold together when held by one end of the roll.
   2. Yellowing, brown, diseased, dried, or pest infested sod shall be rejected.
   3. Soil thickness of the sod shall be 1/4 inch to 5/8 inch thick excluding top growth and thatch.
   4. Size of rolls or slabs shall be consistent to the supplier's standard length and width and is not to vary by more than 2% in either dimension.
   5. Sod shall be grown in fields with a soil containing a minimum of 83% sand. Clay or clay loam soils shall not be acceptable.
   6. See submittal requirements for sod soil as specified herein.

B. Sod shall be a 90% dwarf fescue and 10% bluegrass mix. Approved suppliers:
   2. Bolero Plus Sod, by Delta Bluegrass Company, Stockton, CA (800)637-8873, www.deltabluegrass.com
   3. Approved equal.

2.06 TREE STAKES AND GUYING

A. Wood Pole Staking
   1. Stakes: Peeled and pressure-treated (EPA approved chemical not containing arsenic) lodgepole pine tree stakes, by Bourbon Valley Co, Sullivan & Mann Lumber Co., or approved equal, and sized as follows:
      a. 2" dia x 8' long for trees less than 8' height
      b. 3" dia. x 10' long for trees between 8'-10' height.
      c. Poles shall be smooth, clean, and new.
   2. Ties: Flat rubber / vinyl ties with U.V. inhibitors, meeting ASTM D-412, minimum 1" wide & 24" minimum length, by Gro Strait Products, Walnut Creek, CA / V.I.T Products, Escondido CA, or approved equal.
      a. Use roofing nails of adequate length to firmly attach ties to stake.

2.11 ROOT BARRIERS

A. Tree root barrier shall be locking panel type, fabricated from a high density and high impact extruded ABS, Polyetheylene, or Polyproylene and ultraviolet inhibitors, with minimum 50% post-consumer recycled plastic, with a mean thickness of at least 0.08". Plastic shall have 1/2 - 3/4 inch high raised vertical ribs on the inner surface spaced not more than 6-8 inches apart. Length and layout of root barrier to be per the Drawings. Root barrier shall be one of the products below, or approved equal:

B. Approved Suppliers:
   1. Vespro, Inc., San Rafael, CA (800)554-0914
   2. CP-Series by Century Products, Anaheim CA (714)632-7083
   3. Universal Barrier (UB) Series by Deep Root Partners, L.P. San Francisco, CA, (800)458-7668

4. Depth of root barrier shall be 18”.

PART 3 - EXECUTION

3.01 GENERAL

A. Plant Material Approvals: Before planting operations commence, all plant material shall be reviewed by the Engineer. Defective plants shall be removed from the site and acceptable material substituted in its place. The review does not accept defective plants which may be installed.

B. Layout: Only those plants to be planted in any single day should be laid out. Locations of all plants shall be reviewed prior to planting. Plants installed without this review may be transplanted/relocated as directed by the Engineer.

C. Protection of Plants: Contractor shall maintain all plant material in a healthy growing condition prior to and during planting operation. Contractor shall be responsible for vandalism, theft, and damage to plant material until commencement of the maintenance period.

D. Pruning: Contractor shall do no pruning without specific authorization of the Engineer. Plants pruned without authorization shall be replaced by the Contractor if necessary.

3.02 PLANT PITS

A. Rootball shall rest only on undisturbed soil, or in the case of fill areas, on compacted, un-amended sub-grade. See Specification Section Soil Preparation for backfill mix requirements. Plant rootball and pits shall have their sides and bottoms loosened and otherwise broken to prevent glazing or compaction.
   1. Plant pit sizes shall be as shown on the Drawings.
   2. Plant pits in paved areas shall extend to the edge of the planter opening in all directions unless otherwise noted on the Drawings.

3.03 TREE AND SHRUB INSTALLATION

A. Watering basins: Construct basins as required to water plants during establishment period. Basin bottoms shall drain away from plant stems. See Specification Section Landscape Maintenance for removal of basins.

B. Wood Pole Staking: All trees shall be staked unless otherwise noted on the Drawings. Install stakes as per the Details.
   1. Stakes shall be driven securely into existing soil on the windward side of the tree. A minimum of two figure-eight, rubber tree ties shall be required.
   2. If using rubber ties without wire, nail rubber ties to the back of stakes in areas of severe wind conditions

3.04 CHEMICALS

A. Pesticide: Contractor shall verify compatibility, dosage and other application procedures with the manufacturer. All pesticides shall be applied by a pest control operator licensed in the State of California.

B. Include copies of documentation of pesticide applications, countersigned by the Owner, in the Maintenance Binder – see Specification Section Landscape Maintenance.

3.05 FERTILIZER

A. Apply Commercial Fertilizer at 5 pounds per 1,000 square feet to all planting areas including turf, 30 days after planting. Re-application shall be scheduled at 45 day intervals until completion of Landscape Maintenance.
   1. The requirements above are for bidding purposes only, exact application rates per Testing Lab analysis.

B. Include copies of documentation of fertilizer applications, countersigned by the Owner, in the Maintenance Binder – see Specification Section Landscape Maintenance.

3.06 MULCH

A. Install mulch to a minimum depth of 2-inches – see the Drawings for areas to be covered. See finish grading in Specification Section Soil Preparation.

3.07 SOD INSTALLATION

A. The installation specifications below shall prevail over the sod grower's installation specifications, unless otherwise noted.

B. Grading / Soil Preparation: Finish grade to smooth, even surface, allowing for sod thickness at pavement and other structures to leave the sod flush to the finish grade of adjacent surfaces. The soil surface shall be sufficiently firm to resist impressions over 1/4 inch deep, and shall be lightly rolled until meeting this firmness. The top six to eight inches of soil shall be watered until this zone has an optimum moisture content for root growth.

C. Fertilization: Follow Existing Soils Report recommendations for amendments and fertilization.

D. Installation: Sod shall be laid in rows with staggered ends neatly and tightly butted on all edges. Harvesting netting shall be removed upon installation. Sod shall be protected from wind and sun exposure during storage, with a maximum storage period of twenty-four hours. No overlap, gaps, ripples, or other uneven placement will be accepted. Contractor shall lightly roll sod after installation to insure optimum contact with the soil. Trimming and cutting around structures shall be completed with sharp tools and carefully fitted so the final appearance is a solid, continuous turf.

E. Establishment Watering / Mowing: Follow sod grower's specifications.

F. Rolling: The field sod shall be allowed to grow for a minimum of two weeks before rolling. Roll both in length and width.

3.08 ROOT BARRIER

A. Install root barrier panels around trees planted within 5' of foundations, walls, curbs, and paving. Install per manufacturer's instructions, and as shown on the Drawings. Irrigation lines shall not penetrate root barrier.
   1. At tree planters in paved areas root barrier shall be at the edge of the planter unless otherwise noted on the Drawings.
   2. The top of the root barrier shall be ½-inch above the soil surface.

3.10 MAINTENANCE

A. See Specification Section Landscape Maintenance

3.11 CLEAN UP

A. After completion of all operations, Contractor shall remove all trash, excess soil and other debris. All walks, walls, and pavement shall be swept and washed clean. Leave the entire area in a neat, orderly condition.

END OF SECTION