CITY OF
Fremont

CONTRACT DOCUMENTS

FOR

WATER CONSERVATION & MEDIAN UPGRADES

MOWRY AVENUE

FOR CITY COUNCIL USE ONLY

CITY PROJECT NO. PWC 8889

PROJECT MANAGER
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(510) 494 - 4741

LICENSED LANDSCAPE ARCHITECT
ROGER E. RAVENSTAD
No. 3509
4/6/18
STATE OF CALIFORNIA

COMMUNITY SERVICES DEPARTMENT • LANDSCAPE ARCHITECTURE DIVISION
CITY OF FREMONT • ALAMEDA COUNTY, CALIFORNIA

CITY OF
Fremont

LANDSCAPE ARCHITECTURE DIVISION

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PAYMENT, PERFORMANCE AND WARRANTY BONDS

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PLANS (ATTACHED SEPARATELY)

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FOR

WATER CONSERVATION & MEDIAN UPGRADES

MOWRY AVENUE, FARWELL TO LOGAN

CITY PROJECT NO. PWC 8889

IN THE
CITY OF FREMONT, ALAMEDA COUNTY, CALIFORNIA

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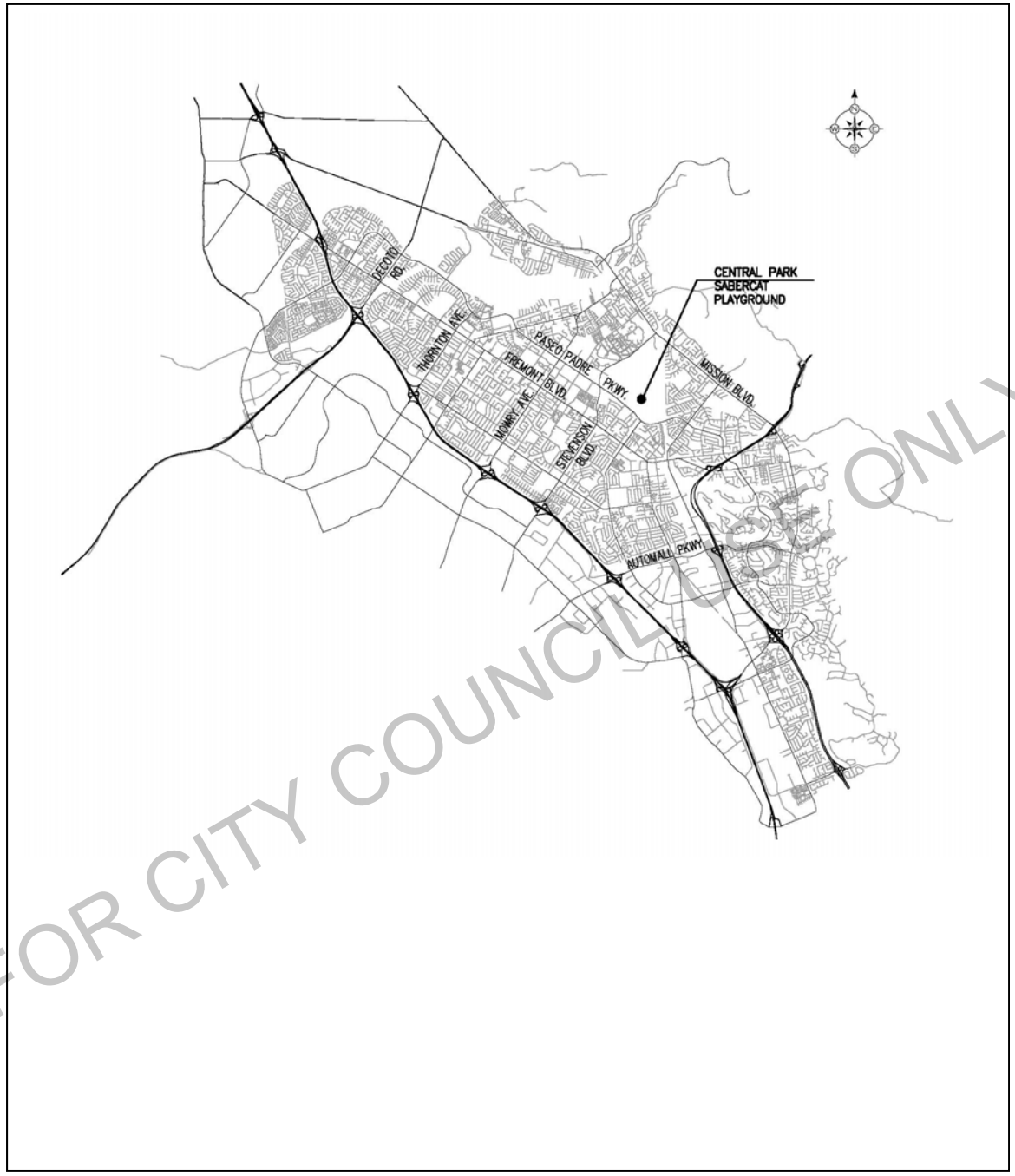

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PROJECT LOCATION MAP

City of Fremont

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Notice Inviting Bids

1. **Bid Acceptance.** The City of Fremont ("City") will accept sealed bids for its Water Conservation & Median Upgrades, Mowry Avenue , City Project PWC8889 ("Project"), on or before May 3rd, 2018, at 2:00p.m. ("Bid Deadline"), at its Purchasing Division, located at 3300 Capitol Avenue, Building B, Fremont, California 94538, at which date, time and place the bids will be opened publicly and the dollar amounts of each bid will be read aloud.

2. **Project Information.**
   2.1 Location and Description. The Project is located at Mowry Avenue, from Farwell Drive to Logan Drive, Fremont Ca. 94537, and is described as follows:

   The Water Conservation & Median Upgrades Project, Mowry Avenue entails remove and dispose of existing concrete paving and subgrade, remove trees, remove existing sod, clear and grub existing vegetation, import topsoil, amend existing soil, install permeable paver maintenance band, cobblestone paving on concrete pad, install trees and shrubs, install bubbler irrigation system, with irrigation controllers. Protect in place existing water meters, street signage, light poles and utility boxes.

   2.2 Time for Completion. The planned timeframe for commencement and completion of construction of the Project is **90 working days**

   2.3 Estimated Project Cost. The estimated construction cost, or construction cost range, for the Project is **$900,000.** This estimate serves only as a guideline to bidders of the scope of the Work and the Project. No bidder, including the successful bidder, is entitled to make any claim against City based on inaccuracy of the estimated cost or range of cost of the Work or the Project.

3. **License and Registration Requirements.**

   3.1 License. This Project requires a valid California contractor's license for the following classification(s): Class A or C27

   Contractors bidding as a joint venture must secure a joint venture license prior to award of the Contract for the Project.

   3.2 DIR Registration. City will not accept a Bid Proposal from, or enter into the Contract with, a bidder without proof that the bidder is registered with the California Department of Industrial Relations ("DIR") to perform public work under Labor Code Section 1725.5, subject to limited legal exceptions.

4. **Obtaining Contract Documents.** The plans, specifications, plan-holder's list, bid, and contract documents for the Project, and any addenda thereto ("Contract Documents") may be purchased from ARC Document Solutions Santa Clara ("ARC"), located at 821 Martin Avenue, Santa Clara, CA 95050; telephone: (408) 295-5770; email: santaclara@e-arc.com; or via Planwell at: www.e-arc.com/ca/santaclara. No partial sets will be issued and the cost of purchase is non-refundable. Call in advance to confirm availability. Reference City of Fremont Bid No. <ask sandy smith or Linda wright for this number >.
   Bidders are encouraged to recycle unused Contract Documents.

5. **Bid Proposal and Security.**

   5.1 Bid Proposal Form. Each bid must be submitted using the Bid Proposal form provided with the Contract Documents.

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5.2 Bid Security. The Bid Proposal must be accompanied by bid security of ten percent of the maximum bid amount, in the form of a cashier's or certified check made payable to City, or a bid bond executed by a surety licensed to do business in the State of California on the Bid Bond form included with the Contract Documents. The bid security must guarantee that, upon award of the bid, the successful bidder will execute the Contract and submit the payment and performance bonds, the insurance certificates, and the other documentation required by the Contract Documents, within ten days after City's issuance of the Notice of Award.

6. Prevailing Wage Requirements.

6.1 General. This Project is subject to the prevailing wage requirements applicable to the locality in which the Work is to be performed for each craft, classification or type of worker needed to perform the Work, including employer payments for health and welfare, pension, vacation, apprenticeship and similar purposes.

6.2 Rates. The prevailing rates are on file with the City Engineer and available online at http://www.dir.ca.gov/DLSR. Each Contractor and Subcontractor must pay no less than the specified rates to all workers employed to work on the Project. The schedule of per diem wages is based upon a working day of eight hours. The rate for holiday and overtime work must be at least time and one-half.

6.3 Compliance. The Contract will be subject to compliance monitoring and enforcement by the DIR, under Labor Code Section 1771.4.

7. Performance and Payment Bonds. The successful bidder will be required to provide performance and payment bonds, each for 100% of the Contract Price.

8. Substitution of Securities. Substitution of appropriate securities in lieu of retention amounts from progress payments is permitted under Public Contract Code Section 22300.

9. Subcontractor List. Each bidder must submit, with its Bid Proposal, the name, location of the place of business, California contractor license number, and DIR registration number, and portion of the Work (based on the Base Bid) for each Subcontractor that will perform work or service, or fabricate or install work, for the prime contractor in excess of one-half of 1% of the bid price, using the Subcontractor List form included with the Contract Documents.

10. Instructions to Bidders. Additional and more detailed information about the Project and City's bidding requirements is provided in the Instructions to Bidders. All bidders should carefully review the Instructions to Bidder before submitting a Bid Proposal for the Project.

11. Bidders' Conference. A conference will be held on April 25, 2018 at 10:00 a.m., at the following location: at the Glenview Drive-Mowry Avenue frontage Fremont Ca. 94537, for the purpose of acquainting all prospective bidders with the Contract Documents and the Worksite. The bidders' conference is not mandatory.

Purchasing Division: _____ Date: _____
Linda Wright
Purchasing

Publication Dates: 1) April 10, 2018 2) April 17, 2018

END OF NOTICE INVITING BIDS

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Instructions to Bidders

Each bid ("Bid Proposal") submitted to the City of Fremont ("City") for its Water Conservation & Median Upgrades, Mowry Avenue , City Project PWC8889 ("Project") must be submitted in accordance with the following instructions and requirements:

1. Bid Submission.

1.1 General. Each Bid Proposal must be signed, sealed and submitted to City, using the form provided in the Contract Documents, by or before the Bid Deadline set forth in the Notice Inviting Bids. City reserves the right to amend or postpone the Bid Deadline by subsequent addendum. Faxed or emailed Bid Proposals will not be accepted, unless otherwise specified. Late submissions will be returned unopened. Each bidder is solely responsible for all of its costs to prepare and submit its bid and by submitting a bid waives any right to recover those costs from City. The bid price(s) must include all costs to perform the Work as specified, including all indirect costs such as applicable taxes, insurance and field offices.

1.2 Bid Envelope. The envelope containing the sealed Bid Proposal and all required forms and attachments must be clearly labeled and addressed as follows:

SEALED BID ENCLOSED, CITY OF FREMONT

BID PROPOSAL
Water Conservation & Median Upgrades, Mowry Avenue,
City Project No. PWC8889
Bid No. <18-035>

City of Fremont, Office of Purchasing (Finance Department)
3300 Capitol Avenue, Building B
Fremont, CA 94538
Attn: Linda Wright

The envelope must also be clearly labeled, as follows, with the bidder's name, address, contractor license number(s), and registration number with the California Department of Industrial Relations ("DIR") for bidding on public works contracts (Labor Code sections 1725.5 and 1771.1):

[Contractor company name]
[street address]
[city, state, zip code]
[California contractor license number(s)]
[DIR Registration No:_____]

1.3 DIR Registration. City will not accept a Bid Proposal from or enter into the Contract with a bidder without proof that the bidder is registered with the DIR to perform public work under Labor Code Section 1725.5, subject to limited legal exceptions. If City is unable to confirm that the bidder's DIR registration is current, City may disqualify the bidder and return its bid unopened. (Labor Code section 1725.5.) If the bid is sent by mail, the sealed envelope must be enclosed in a separate envelope.

1.4 Bid Submittals. Each bidder must use the forms provided by City in these Contract Documents for the bid submittal. All bid forms must be fully completed and signed

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as directed, along with the required attachments, and the sealed bid submittal must include the following:

(A) Bid Proposal
(B) Bid Schedule
(C) Subcontractor List
(D) Noncollusion Declaration
(E) Bid Security (Cashier's or Certified Check or Bid Bond)
(F) Bidder's Statement of Responsibility
(G) <List here any other required information or submittals if applicable>

2. Pre-Bid Investigation.

2.1 Contract Documents. Each bidder is solely responsible for diligent and thorough review of the Contract Documents (as defined in the General Conditions), examination of the Project site, and reasonable and prudent inquiry concerning known and potential site conditions prior to submitting a Bid Proposal. However, except for any areas that are open to the general public, bidders may not enter City's property or the Project site without prior coordination with and written authorization from City. Bidders are responsible for reporting any errors or omissions in the Contract Documents to City prior to submitting a Bid Proposal, subject to the limitations of Public Contract Code Section 1104. City expressly disclaims responsibility for assumptions a bidder might draw from the presence or absence of information provided by City.

2.2 Project Site. Soil and soil test data, water table elevations, and soil analyses for test holes are not available , and are as otherwise specified in the General Conditions. Any additional subsurface exploration at the Project site must be done at the bidder's expense, but only with prior written authorization from City. The bidder is responsible for determining and allowing for any differing soil or water table conditions during construction.

2.3 Utility Company Standards. The Project must be completed in a manner that satisfies the standards and requirements of the affected utility companies or agencies (collectively, "utility owners"). The successful bidder may be required by the utility owners to provide detailed plans prepared by a California registered civil engineer showing the necessary temporary support of the utilities during coordinated construction work. Bidders are directed to contact the utility owners about their requirements before submitting a Bid Proposal.

3. Questions and Requests for Information or Clarification. Questions, requests for information, and requests for clarification regarding the Project, the bid procedures, or any of the Contract Documents must be submitted to City in writing, addressed to the Project Manager for the Project, as follows:

Andrew Mayes, Landscape Architect II
39550 Liberty Street
Fremont, CA. 94538
amayes@fremont.gov
510-494-4741 (Ph.)

If a bidder finds any error, omission, inconsistency, or ambiguity in the Contract Documents, the bidder must make a written request for clarification before submitting the bid. Bidders must submit any inquiry under this Section by 5 p.m. at least 4 Working Days before the Bid Deadline. Questions received any later will not be addressed before the Bid Deadline.

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4. **Addenda.** Any addenda issued prior to the bid opening are part of the Contract Documents. Subject to the limitations of Public Contract Code section 4104.5, City reserves the right to issue addenda prior to bid time. City will make reasonable efforts to deliver addenda to known plan holders who have provided a delivery address for receipt of addenda. However, City makes no guarantee that all bidders will receive all addenda. Each bidder is responsible for ascertaining and ensuring it has received and reviewed all addenda prior to submitting its bid and must acknowledge receipt of all addenda in the Bid Proposal. Bidders should check with ARC (see Section 4 of Notice Inviting Bids) for any addenda or updates on the Project, at: http://www.e-arc.com/ca/santaclara.

5. **Brand Designations and "Or Equal" Substitutions.** Any specification designating a material, product, thing, or service by specific brand or trade name, and followed by the words "or equal," is intended only to indicate quality and type of item desired, and bidders may request use of any equal material, product, thing, or service. All data substantiating the proposed substitute as an equal item must be submitted with the written request for substitution. Pre-bid requests for substitution must be submitted to the Engineer at least seven Working Days before the Bid Deadline, so that all interested bidders may be notified of any approved alternative. Any other requests for substitution must comply with the General Conditions. If the Engineer denies the request for substitution, the material, product, thing or service specified in the Contract Documents must be furnished and installed. This provision does not apply to materials, products, things, or services that may lawfully be designated by a specific brand or trade name under Public Contract Code Section 3400(c) and Fremont Municipal Code Section 3.20.167(b).

6. **Bid Schedule.** Bidders are required to fully complete the Bid Schedule form accompanying the Bid Proposal form with unit prices as indicated, and to submit the completed Bid Schedule with their Bid Proposal.

6.1 Incorrect Totals. This provision is intended to resolve computational errors on the Bid Schedule form.

(A) Unit Price Subtotals. In the event a computational error for any bid item (base bid or alternate) results in an incorrect extended total for that item, the submitted base bid or bid alternate total will be adjusted to reflect the corrected amount (estimated quantity X unit cost).

(B) Unit Price Total. In the event of a discrepancy between the actual total of the itemized or unit prices shown on the Bid Schedule for the base bid, and the amount entered as the base bid on the Bid Proposal form, the actual total of the itemized or unit prices shown on the Bid Schedule for the base bid will be deemed the base bid price.

(C) Alternates. In the event of a discrepancy between the actual total of the itemized or unit prices shown on the Bid Schedule for any bid alternate, and the amount entered for the alternate on the Bid Proposal form, the actual total of the itemized prices shown on the Bid Schedule for that alternate will be deemed the alternate price.

(D) Withdrawal for Material Error. Nothing in this provision is intended to prevent a bidder from requesting to withdraw its bid for material error under Public Contract Code Section 5100 et seq.

6.2 Estimated Quantities. The quantities shown on the Bid Schedule are estimated and the actual quantities required to perform the Work may be greater or less than the estimated amount. The Contract Price will be adjusted to reflect the actual quantities required for the Work. However, items marked as "Final Pay" items will be compensated based solely on City's estimated quantities, and payment will not be adjusted based on actual quantities,

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even if the actual quantities differ from City's estimate on the Bid Schedule. Only changes in quantities due to design changes will be measured and paid separately pursuant to a Change Order.

7. **Bidders Interested in More Than One Bid.** No person, firm, or corporation may submit or be a party to more than one Bid Proposal unless alternate bids are specifically called for. However, a person, firm, or corporation that has submitted a subcontract proposal or quote to a bidder may submit subcontract proposals or quotes to other bidders, and may also submit a Bid Proposal as a prime contractor.

8. **Bid Proposal Form and Enclosures.** Each Bid Proposal must be completed in ink using the Bid Proposal form included in the Contract Documents. The Bid Proposal form should be fully completed without interlineations, alterations, or erasures. Any necessary corrections must be clear and legible, and must be initialed by the bidder's authorized representative. A Bid Proposal submitted with terms such as "negotiable," "will negotiate," or similar, will be considered non-responsive.

9. **Authorization and Execution.** Each Bid Proposal must be signed by the bidder's authorized representative. A Bid Proposal submitted by a partnership must be signed in the partnership name by a general partner with authority to bind the partnership. A Bid Proposal submitted by a corporation must be signed with the legal name of the corporation, followed by the signature and title of two officers of the corporation with full authority to bind the corporation to the terms of the Bid Proposal, under California Corporation Code section 313.

10. **Bid Security.** Each Bid Proposal must be accompanied by bid security of ten percent of the maximum bid amount (meaning the base bid plus all additive alternate prices, if any), in the form of a cashier's check or certified check made payable to City, or a bid bond using the form included in the Contract Documents and executed by a surety licensed to do business in the State of California. The bid security must guarantee that, if City issues the Notice of Award of the Contract to the bidder, then the bidder will provide to City all of the documents required under Section 14 below within ten calendar days thereof.

11. **Withdrawal of Bid Proposals.** A Bid Proposal for the Project will be considered a firm offer and may not be withdrawn for a period of 90 days after the bid opening without forfeiture of the bid security, except as authorized for material error under Public Contract Code Section 5100 et seq. or Fremont Municipal Code Section 3.20.200.

12. **Bid Protest.** Any bid protest must comply with City's protest procedures for public construction project contracts, set forth in Fremont Municipal Code Section 3.20.330. City will issue the Notice of Intent to Award the Contract by posting the notice on designated public bulletin boards and on its bid results webpage at: http://fremont.gov/index.aspx?NID=532. A bid protest must be submitted in writing to, and received by, City's Office of Purchasing, located at 3300 Capitol Avenue, Building B, Fremont, California 94538, before 5:00 p.m. on the fifth Working Day after the date of City's posting of the Notice of Intent to Award (the "Bid Protest Deadline"). The protesting bidder will bear the risk of any nondelivery of its bid protest before the Bid Protest Deadline, regardless of the method of delivery used. The bid protest must comply with the following requirements:

12.1 General. Only a bidder that has actually submitted a Bid Proposal is eligible to submit a bid protest against another bidder. Subcontractors are not eligible to submit bid protests. A bidder may not rely on the bid protest submitted by another bidder, but must timely pursue its own protest. For purposes of this Section 12, a "Working Day" means a

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day that City is open for normal business, and excludes weekends and holidays observed by City.

12.2 Protest Contents. The bid protest must contain a complete statement of the legal grounds for the protest, all the facts relevant to the protest, the form of relief requested, and the legal basis for such relief, as well as all supporting documentation. Material submitted after the Bid Protest Deadline will not be considered. The protest must refer to the specific portion(s) of the Contract Documents upon which the protest is based. The protest must include the name, address, email address, and telephone number of the protesting bidder and any person representing the protesting bidder. If City requests additional information, it must be provided to City within the time period City specifies.

12.3 Copy to Protested Bidder. A copy of the protest and all supporting documents must also be concurrently transmitted by fax or by email by the protesting bidder, by or before the Bid Protest Deadline, to the protested bidder and any other bidder who has a reasonable prospect of receiving an award depending upon the outcome of the protest.

12.4 Response to Protest. The protested bidder may submit a written response to the protest, provided the response is received by City before 5:00 p.m. within two Working Days after the Bid Protest Deadline or after actual receipt of the bid protest, whichever is sooner (the "Response Deadline"). The response must include all supporting documentation. Material submitted after the Response Deadline will not be considered. The response must include the name, address, email address, and telephone number of the person representing the protested bidder if different from the protested bidder.

12.5 Copy to Protesting Bidder. A copy of the response and all supporting documents must be concurrently transmitted by fax or by email by the protested bidder, by or before the Response Deadline, to the protesting bidder and any other bidder who has a reasonable prospect of receiving an award depending upon the outcome of the protest.

12.6 Exclusive Remedy. The procedure and time limits set forth in this section are mandatory and are the bidder's sole and exclusive remedy in the event of bid protest. A bidder's failure to comply with these procedures will constitute a waiver of any right to further pursue a bid protest, including filing a Government Code Claim or initiation of legal proceedings.

12.7 Right to Award. City reserves the right to award the Contract to the bidder it has determined to be the responsible bidder submitting the lowest responsive bid, and to issue a notice to proceed with the Work notwithstanding any pending or continuing challenge to its determination.

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13. Rejection of Bids. City reserves the right, acting in its sole discretion, to waive nonmaterial and inconsequential bid irregularities, to accept or reject any and all bids, to issue a new Notice Inviting Bids for the Project, or to abandon the Project entirely.

14. Award of Contract. City will award the Contract, if at all, by issuing a written Notice of Award within 90 days after the opening of bids, or as otherwise specified in the Special Conditions, to the responsible bidder that submitted the lowest responsive bid. The successful bidder must submit to City all of the following documents, within ten calendar days after City's issuance of the Notice of Award:

14.1 Two duly signed counterpart originals of the Contract provided by City with the Notice of Award, using the form included in the Contract Documents;

14.2 Documentation evidencing the authority of the individual(s) signing the Contract on behalf of the successful bidder;

14.3 Payment and performance bonds for the Project as specified in the Contract Documents and using the bond forms included in the Contract Documents, each for 100% of the Contract Price as awarded;

14.4 If required for this Project, a warranty bond as specified in the Contract Documents, using the warranty bond form provided for 20% of the Contract Price as awarded;

14.5 Insurance certificates and endorsements evidencing the successful bidder's insurance coverage, as required by the Contract Documents;

14.6 Documentation evidencing the successful bidder's payment of City business tax and registration tax for a business license, as required by the Contract Documents;

14.7 A copy of the successful bidder's California contractor's license(s), showing the classification(s) required by the Contract Documents; and

14.8 Identification of the successful bidder's on-site superintendent for the Project, as required by the Contract Documents.

15. Statement of Responsibility. Each sealed Bid Proposal must include the bidder's Statement of Responsibility using the form provided with the Contract Documents. The Statement of Responsibility must be completed and signed, including all required attachments, providing satisfactory evidence that shows the bidder's financial resources, the bidder's experience in the type of work being required by City, the bidder's organization available for the performance of the Contract, and any other required evidence of the bidder's qualifications to perform the Contract. City may consider such evidence before making its decision to award the proposed Contract. A bid that does not fully comply with this requirement may be rejected as nonresponsive. A bidder that submits a Statement of Responsibility which is subsequently determined to contain false or misleading information, or material omissions, may be disqualified as non-responsible.

16. License(s). The successful bidder and its Subcontractor(s) must possess the California contractor's license(s) in the classification(s) required by law to perform the Work. The successful bidder must also obtain a City business license within ten days following City's issuance of the Notice of Award. Each Subcontractor must also obtain a City business license before performing any Work.

17. Subcontractors. Any Subcontractor who is ineligible to perform work on a public works project under Labor Code Sections 1777.1 or 1777.7 is prohibited from performing work on the Project.

18. Subcontractor Work Limit. The prime Contractor must perform at least 15 % of the Work on the Project, calculated as a percentage of the base bid price on the Bid Proposal form, using Contractor's own forces. The remaining Work may be performed by qualified Subcontractors.

19. Pre-Construction Conference. City will schedule a mandatory pre-construction conference for the Project following City's issuance of the Notice of Award and Contract execution by the successful bidder. The successful bidder must attend and participate in the pre-construction conference, and provide all of the required information and documents for the conference as set forth in Section 2.2(E) of the General Conditions. City will issue a Notice to Proceed following the conference, identifying the commencement date for the Work and the Contract Time.

20. Warranty Bond. A warranty bond is required for this Project in the amount of 20% of the awarded Contract Price, and must be submitted with the payment and performance bonds as specified in Section 14.

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21. "For Reference Only." The following documents are provided "For Reference Only" as defined in Section 3.4 of the General Conditions:

END OF INSTRUCTIONS TO BIDDERS

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Bid Proposal

Central Park Sabercat Playground Safety Surfacing Replacement
City Project No. PWC8889

_____ ("Bidder") hereby submits this Bid Proposal to the City of Fremont ("City") for the above-referenced project ("Project"), in response to the Notice Inviting Bids and in accordance with the Contract Documents referenced therein.

1. **Base Bid.** Bidder proposes to perform and fully complete the Work for the Project as specified in the Contract Documents, within the time required for full completion of the Work, for the following price ("Base Bid"): $_____. Bidder will furnish all labor (including supervision), materials and equipment (whether or not permanent or actually incorporated into the Work), utilities for the Work (including water, sanitary facilities, electricity, fuel, light, heat, and telephone), tools, transportation, and services necessary to complete the Work for the amounts quoted in this Bid Proposal (including the costs of all applicable taxes, patent rights, royalties, licenses, and permits). **Any Work shown on the Plans or described in the Specifications without a specific bid item(s) in this Bid Proposal is hereby included within or made part of this Bid Proposal.**

2. **Addenda.** Bidder agrees that it has confirmed receipt of or access to, and reviewed, all addenda issued for this Bid. Bidder specifically acknowledges receipt of the following addenda:

Addendum:	Date Received:	Addendum:	Date Received:
#01	_____	#05	_____
#02	_____	#06	_____
#03	_____	#07	_____
#04	_____	#08	_____

3. **Bidder's Warranties.** By signing and submitting this Bid Proposal, Bidder warrants the following:

3.1 **Examination of Contract Documents.** Bidder has thoroughly examined the Contract Documents and represents that, to the best of Bidder's knowledge, there are no errors, omissions, or discrepancies in the Contract Documents, subject to the limitations of Public Contract Code Section 1104.

3.2 **Examination of Worksite and Local Conditions.** Bidder has visited and examined the Worksite and is familiar with the local conditions at the Project location, including the weather, road access, vehicle routes, and surface and subsurface conditions. Bidder is also familiar with the availability of labor, materials, equipment, and utilities for the Project and has attended any mandatory bidders' conference and any mandatory pre-bid Project site visit.

3.3 **Bidder is Qualified.** Bidder is fully qualified to perform the Work. Bidder has the expertise and financial capacity to perform all obligations required by the Contract Documents.

3.4 **Contract Time.** The time for completion of the Work for the Project as specified in the Notice Inviting Bids is reasonable and Bidder is ready and able to perform the Work within that timeframe.

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3.5 Legal Compliance. Bidder is aware of and will comply with all applicable legal requirements for the Project, including all federal, California, local and City laws and regulations.

(A) Trenching of Five Feet or More. For the excavation of any trench of a depth of five feet or more, this Bid Proposal includes as a bid item the cost of adequate sheeting, shoring, bracing, sloping or other equivalent provisions to be made, including the costs of design for a detailed plan, for protection of life and limb from the hazard of caving ground during the excavation. Any such provisions will conform to applicable safety orders in accordance with California Labor Code Sections 6705 and 6707.

3.6 Responsibility for Bid. Bidder has carefully reviewed this Bid Proposal and is solely responsible for any errors or omissions contained in the completed bid.

4. Award of Contract. By signing and submitting this Bid Proposal, Bidder agrees that if Bidder is awarded the Contract for the Project, Bidder will provide all of the following to City within ten calendar days following City's issuance of the Notice of Award:

4.1 Signed Contract. Two duly signed counterpart originals of the Contract provided by City with the Notice of Award, using the form included in the Project contract documents ("Contract Documents");

4.2 Signing Authority. Documentation evidencing the authority of the individual(s) signing the Contract on behalf of Bidder;

4.3 Payment, Performance and Warranty Bonds. A payment bond and a performance bond for the Project, each for 100% of the maximum Contract Price as awarded, and a warranty bond, if required, for 20% of the maximum Contract Price as awarded, each executed by sureties licensed to do business in the State of California and using the applicable bond form included with the Contract Documents;

4.4 Insurance. The insurance certificates and endorsements evidencing Bidder's insurance coverage as required by the Contract Documents;

4.5 Business Tax and Registration Tax. Documentation evidencing Bidder's and all listed Subcontractors' payment of City business tax and registration tax for a business license, as required by the Contract Documents;

4.6 Contractor's License. A copy of Bidder's California contractor's license, showing the classification(s) required by the Contract Documents; and

4.7 On-Site Superintendent. Identification of Bidder's on-site superintendent for the Project, as required by the Contract Documents.

5. Bid Security. As a guarantee that, if awarded the Contract, Bidder will perform its obligations under Section 4 above, Bidder is enclosing bid security in the amount of ten percent of its maximum bid amount (meaning the base bid plus all additive alternate prices, if any) in one of the following forms (check one):

____ A cashier's check or certified check payable to City and issued by _____ in the amount of $_____.

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____ A bid bond, using the Bid Bond form included with the Contract Documents, payable to City and executed by a surety licensed to do business in the State of California.

This Bid Proposal is hereby submitted on _____, 20__.

s/ _____	_____ Name and Title [print]
s/ _____ *[See section 9 of Instructions to Bidders]*	_____ Name and Title [print]
_____ Company Name	_____ License #, Expiration Date, and Classification
_____ Address	_____ DIR Registration #
_____ City, State, Zip	_____ Phone
_____ Contact Name	_____ Contact Email

END OF BID PROPOSAL

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Bid Schedule

This Bid Schedule must be completed in ink and included with the sealed Bid Proposal. Pricing must be provided for each Bid Item as indicated. The lump sum or unit cost for each item must be inclusive of all costs, whether direct or indirect, including profit and overhead. The sum of all amounts entered in the "Extended Total Amount" column must be identical to the Base Bid price entered in Section 1 of the Bid Proposal Form. In case of a math error or ambiguity, the unit cost listed for any bid item will prevail over the extended total amount listed for that bid item. The grand total of all of the extended total amounts listed will also prevail over the Total Base Bid listed below.

LS = Lump Sum	EA = Each	LF = Linear Foot	CY = Cubic Yard	F = Final Pay
SF = Square Feet	LB = Pounds	TON = Ton (2000 lbs)	AL = Allowance	S = Specialty Item

BID ITEM NO.	ITEM DESCRIPTION	EST. QTY.	UNIT	UNIT COST	EXTENDED TOTAL AMOUNT
1	Mobilization and Temporary facilities	**1**	**LS**	$	$
2	Traffic Control Plan	**1**	**LS**	$	$
3	General Demolition	**1**	**LS**	$	$
4	Remove Concrete Surfacing	**16,000**	**SF**	$	$
5	Rough Grading (F)	**1**	**LS**	$	$
6	Tree Removal	**7**	**EA**	$	$
7	Permeable Concrete Pavers --12" Maintenance Band	**4105**	**SF**	$	$
8	Median Cobble Paving	**6,620**	**SF**	$	$
9	Import Topsoil (6") (F)	**445**	**CY**	$	$
10	Soil Preparation & Amendment	**24,000**	**SF**	$	$
11	1.5 Inch Mainline Pipe	**3135**	**LF**	$	$
12	Lateral Pipe (F)	**8,370**	**LF**	$	$
13	6" Irrigation Sleeves	**200**	**LF**	$	$
14	Shrub Bubblers	**1,645**	**EA**	$	$
15	Tree Bubblers	**164**	**EA**	$	$
16	Remote Control Valve w/ Box & Wires	**24**	**EA**	$	$
17	Irrigation Controller – Calsense e3000 w/ box & wire	**2**	**EA**	$	$
18	Backflow Preventer w/ Enclosure	**2**	**EA**	$	$
19	Flow Sensor	**2**	**EA**	$	$
20	Gate Valve	**5**	**EA**	$	$
21	Master Valve	**2**	**EA**	$	$
22	Quick Coupling Valve	**4**	**EA**	$	$
23	24" Box Tree	**82**	**EA**	$	$
24	5 Gallon Shrub	**827**	**EA**	$	$

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BID ITEM NO.	ITEM DESCRIPTION	EST. QTY.	UNIT	UNIT COST	EXTENDED TOTAL AMOUNT
25	2 Gallon Shrub	**818**	**EA**	$	$
26	Ornamental Boulders (F)	**120**	**TON**	$	$
27	Bark Mulch (3") (F)	**225**	**CY**	$	$
28	90 Day Plant Establishment Period	**1**	**LS**	$	$
29	Supplemental	**1**	**EA**	$87,000	$87,000

TOTAL BASE BID: Items 1 through 29 inclusive: $_____

[Note: The amount entered as the "Total Base Bid" should be identical to the Base Bid amount entered in Section 1 of the Bid Proposal form.]

BIDDER NAME: _____

END OF BID SCHEDULE

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Subcontractor List

For each Subcontractor that will perform a portion of the Work in an amount in excess of one-half of 1% of the Bidder's total Contract Price,[1] the bidder must list a description of the Work, the name and email address of the Subcontractor, its California contractor license number, the location of its place of business, its DIR registration number, and the percentage of the total Work to be performed by that Subcontractor, as a portion of the base bid price.

Bidders: Please print legibly. Illegible forms may be rejected.

DESCRIPTION OF WORK	SUBCONTRACTOR NAME AND EMAIL ADDRESS	CALIFORNIA CONTRACTOR LICENSE NO.	LOCATION OF BUSINESS	DIR REG. NO.	PERCENT OF WORK

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END OF SUBCONTRACTOR LIST

[1] For street or highway construction this requirement applies to any subcontract of $10,000 or more.

Noncollusion Declaration

TO BE EXECUTED BY BIDDER AND SUBMITTED WITH BID

The undersigned declares:

I am the _____ [title] of _____ [business name], the party making the foregoing bid.

The bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation. The bid is genuine and not collusive or sham. The bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid. The bidder has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or to refrain from bidding. The bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder. All statements contained in the bid are true. The bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof, to effectuate a collusive or sham bid, and has not paid and will not pay, any person or entity for such purpose.

This declaration is intended to comply with California Public Contract Code Section 7106 and Title 23 U.S.C Section 112.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this declaration is executed on _____ [date], at _____ [city], _____ [state].

_____
Signature

_____
Name

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END OF NONCOLLUSION DECLARATION

Bid Bond

_____ ("Bidder") has submitted a bid, dated _____, 20_____ ("Bid"), to the City of Fremont ("City") for work on the <_____> Project ("Project"). Under this duly executed bid bond ("Bid Bond"), Bidder as Principal and _____, its surety ("Surety"), are bound to City as obligee in the penal sum of ten percent of the maximum amount of the Bid (the "Bond Sum"). Bidder and Surety bind themselves and their respective heirs, executors, administrators, successors and assigns, jointly and severally, as follows:

1. **General.** If Bidder is awarded the Contract for the Project, Bidder will enter into the Contract with City in accordance with the terms of the Bid.

2. **Submittals.** Within ten calendar days following issuance of the Notice of Award to Bidder, Bidder must submit the following to City:

2.1 **Signed Contract.** Two duly signed counterpart originals of the Contract provided by City with the Notice of Award, using the form included in the Project contract documents ("Contract Documents");

2.2 **Evidence of Signing Authority.** Documentation evidencing the authority of the individual(s) signing the Contract on behalf of Bidder.

2.3 **Payment, Performance and Warranty Bonds.** A payment bond and a performance bond for the Project, each for 100% of the maximum Contract Price as awarded, and a warranty bond, if required for 20% of the maximum Contract Price as awarded, each executed by a surety licensed to do business in the State of California and using the applicable bond forms included with the Contract Documents;

2.4 **Insurance.** The insurance certificates and endorsements evidencing Bidder's insurance coverage as required by the Contract Documents.

2.5 **Business Tax and Registration Tax.** Documentation evidencing Bidder's and all listed Subcontractors' payment of City business tax and registration tax for a business license, as required by the Contract Documents.

2.6 **Contractor's License.** A copy of Bidder's California contractor's license, showing the classification(s) required by the Contract Documents.

2.7 **On-Site Superintendent.** Identification of Bidder's on-site superintendent for the Project, as required by the Contract Documents.

3. **Enforcement.** If Bidder fails to execute the Contract and submit to City all of the required documentation as required under Section 2 above, Surety guarantees that Bidder forfeits the Bond Sum to City. Any notice to Surety may be given in the manner specified in the Contract and delivered or transmitted to Surety as follows:

Attn: _____
Address: _____
City/State/Zip: _____
Phone: _____
Fax: _____
Email: _____

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4. Duration; Waiver. If Bidder fulfills its obligations under Section 2 above, then this obligation will be null and void; otherwise it will remain in full force and effect for 90 days following award of the Contract or until this Bid Bond is returned to Bidder, whichever occurs first. Surety waives the provisions of Civil Code Sections 2819 and 2845.

This Bid Bond is entered into and effective on _____, 20_____.

SURETY: _____
Business name

s/ _____

_____
Name/Title

(Notary Acknowledgment with Notary Seal for Surety and Surety's Power of Attorney Must be Attached)

BIDDER: _____
Business name

s/ _____

_____
Name/Title

END OF BID BOND

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Bidder's Statement of Responsibility

<_____> PROJECT

The bidder must submit to City, with the Bid Proposal, a completed and signed Bidder's Statement of Responsibility. The bidder must use this form and include all required attachments and attaching clearly labeled additional sheets if needed. City may use the completed Statement of Responsibility to evaluate a bidder's qualifications for this Project. The Statement of Responsibility must be filled out completely, accurately, and legibly. Any errors, omissions, or misrepresentations in completion of the Statement of Responsibility may be grounds for rejection of the bid or termination of a Contract awarded pursuant to the bid.

Part 1: General Information

Bidder Business Name: _____ ("Bidder")

Check One: ___ Corporation
___ Partnership
___ Sole Proprietorship
___ Joint Venture of: _____
___ Other: _____

Address: _____

_____

Phone:_____

Owner of Company: _____

Contact Person:_____

Email: _____

Bidder's California Contractor's License Number(s):_____

Part 2: Bidder Experience

1. How many years has Bidder been performing work as a contractor under its present business name? ____ years

1.1 If any of Bidder's experience listed in this Statement of Responsibility refers to work performed under a different business name(s), list on a separate sheet of paper the other name(s) and describe the relationship to Bidder's current business.

2. Has Bidder completed projects similar in type and size to this Project as a general contractor?
_____ Yes _____ No

3. Has Bidder ever been disqualified on grounds that it is not responsible?
_____ Yes _____ No

If yes, provide additional information on a separate sheet of paper regarding the disqualification, including the name and address of the agency or owner of the subject project, the type and size

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of the project, the reasons that Bidder was disqualified as not responsible, and the month and year in which the disqualification occurred.

4. Has Bidder ever been terminated from a construction project, either as a general contractor or as a subcontractor?
_____ Yes _____ No

If yes, provide additional information on a separate sheet of paper regarding the termination, including the name and address of the agency or owner of the subject project, the type and size of the project, whether Bidder was under contract as a general contractor or a subcontractor, the reasons that Bidder was terminated, and the month and year in which the termination occurred.

5. Provide information about Bidder's current projects performed as general contractor as follows:

5.1 How many construction projects is Bidder currently under contract to perform that are still in progress? _____

5.2 What is the total dollar amount of the current construction contracts listed in Subsection 5.1? $_____

5.3 What is Bidder's total bonding capacity? $_____

5.4 How many construction contracts listed in Subsection 5.1 are:

(A) In an amount of 50% or less of Bidder's total bid amount for the Project? _____

(B) In an amount between 50% and 100% of Bidder's total bid amount for the Project? _____

(C) In an amount between 100% and 150% of Bidder's total bid amount for the Project? _____

(D) In an amount over 150% of Bidder's total bid amount for the Project? _____

6. Provide information about Bidder's past projects performed as general contractor as follows:

6.1 <Insert Number> most recently completed public works projects within the last <Insert Number> years;

6.2 Three largest completed projects within the last three years; and

6.3 Any project which is similar to this Project.

7. Use separate sheets of paper to provide all of the following information for <u>each</u> project identified in response to Sections 5 and 6:

7.1 Project name
7.2 Location
7.3 Owner
7.4 Owner contact (name and current phone number)
7.5 Architect or engineer name
7.6 Architect or engineer contact (name and current phone number)
7.7 Project manager (name and current phone number)
7.8 Description of project and scope of work performed
7.9 Initial contract value (at time of bid award)

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7.10 Final cost of construction (including change orders) (provide estimated cost if project is still in progress)
7.11 Original scheduled completion date
7.12 Time extensions granted (number of days)
7.13 Actual date of completion (provide estimated date if project is still in progress)
7.14 Number and amount of stop notices or mechanic's liens filed
7.15 Amount of liquidated damages assessed against Bidder
7.16 Nature and resolution of any claim, lawsuit, and/or arbitration between Bidder and the owner.

Part 3: Claim History

1. Provide information about Bidder's claims history as follows:

1.1 Has any claim been made against Bidder in the past five years which has resulted in arbitration or litigation?_____

1.2 Has Bidder made a claim(s) against any city or other client in the past five years which has resulted in arbitration or litigation?_____

1.3 If the answer was yes to Subsections 1.1 or 1.2 , describe each claim(s) using the format below:

Project name _____
Claim amount _____
Other party entity name _____
Other party contact (name and current phone number)_____
Description of the claim(s), using separate sheets of paper

Part 4: Surety History

1. Provide information about Bidder's surety history as follows:

1.1 Has Bidder ever failed to satisfactorily complete a construction contract? _____

1.2 Has a surety completed any portion of a Bidder construction contract within the last five years? _____

1.3 If the answer was yes to Subsections 1.1 or 1.2, provide explanation(s) using the format below:

Project name _____
Surety name _____
Surety contact (name and current phone number)_____
Date surety took over the project_____
Explanation(s), using separate sheets of paper

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Part 5: Verification

In signing this document, I, the undersigned, declare that I am duly authorized to sign and submit this Bidder's Statement of Responsibility on behalf of the named Bidder, and that all responses and information set forth in this Bidder's Statement of Responsibility and the accompanying pages and attachments are, to the best of my knowledge, true, accurate and complete as of the date of submission. **I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.**

Signature: _____ Date: _____

By: _____
Name and Title

On Behalf of (Legal Name of Bidder):_____

END OF BIDDER'S STATEMENT OF RESPONSIBILITY

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Contract

This public works contract ("Contract") is entered into by and between the City of Fremont ("City") and _____ ("Contractor"), for work ("Work") on the <_____> Project ("Project").

The parties agree as follows:

1. **Award of Contract**. In response to the Notice Inviting Bids, Contractor has submitted a Bid Proposal to perform Work on the Project. On _____, 20___, City authorized award of this Contract to Contractor for the amount of Contractor's bid.

   Project Description. – The project consists of the demolition of concrete and asphalt paving behind existing curbs, tree removal, clearing and grubbing of existing landscape plantings, preserve and protect existing signage and street lights, preserve and protect existing water meters, gate valves and backflow prevention devices, and installation of cobblestone pads on concrete pavement, a 12" permeable pavers maintenance band, installation of trees, planting, and irrigation, including two new controllers, coordination with outside agencies, and any other items or details required by the project plans and special provisions.

2. **Contract Documents**. The Contract Documents incorporated into this Contract include and are comprised of all of the following:

   2.1 Notice Inviting Bids;
   2.2 Instructions to Bidders;
   2.3 Addenda, if any;
   2.4 Bid Proposal and attachments thereto;
   2.5 Contract and Change Orders;
   2.6 Payment and Performance Bonds, and (if required) Warranty Bond;
   2.7 General Conditions;
   2.8 Special Conditions;
   2.9 Project Drawings and Specifications;
   2.10 Notice of Award;
   2.11 Notice to Proceed; and
   2.12 The following:
   _____
   _____. <List additional documents here, if any, including the document date if there are multiple versions. If there are no additional documents, write "No other documents" in the space above. Do not include informational documents included "For Reference Only" pursuant to Section 3.4 of the General Conditions.>

3. **Contractor's Obligations.** Contractor agrees to perform all of the Work required for the Project, as specified in the Contract Documents. Contractor must provide, furnish, and supply all things necessary and incidental for the timely performance and completion of the Work, including all necessary labor, materials, equipment, transportation, and utilities, unless otherwise specified in the Contract Documents. Contractor must use its best efforts to complete the Work in a professional and expeditious manner and to meet or exceed the performance standards required by the Contract Documents.

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4. **Payment.** As full and complete compensation for Contractor's timely performance and completion of the Work in strict accordance with the terms and conditions of the Contract Documents, City will pay Contractor $_____ ("Contract Price"), in accordance with the payment provisions in the General Conditions. The Contract Price is fully inclusive of all direct and indirect costs for performing the Work in full compliance with the Contract Documents, including, but not limited to, the items specified in Section 1 of the Bid Proposal, compliance with all General Conditions and Special Conditions requirements, all Work encompassed by the Plans and Specifications, and all taxes, overhead, and profit.

5. **Time for Completion.** Contractor will fully complete the Work for the Project within <insert number> < insert "calendar days" or "Working Days" > from the commencement date given in the Notice to Proceed ("Contract Time"). Contractor must commence the Work no later than ten calendar days after the commencement date stated in the Notice to Proceed. By signing below, Contractor expressly waives any claim for delayed early completion.

6. **Liquidated Damages.** If Contractor fails to complete the Work within the Contract Time, City will assess liquidated damages in the amount of **$500** for each day of unexcused delay in completion, and the Contract Price will be reduced accordingly.

7. **Labor Code Compliance.**

   7.1 **General.** This Contract is subject to all applicable requirements of Chapter 1 of Part 7 of Division 2 of the Labor Code, including requirements pertaining to wages, working hours and workers' compensation insurance.

   7.2 **Prevailing Wages.** This Project is subject to the prevailing wage requirements applicable to the locality in which the Work is to be performed for each craft, classification or type of worker needed to perform the Work, including employer payments for health and welfare, pension, vacation, apprenticeship and similar purposes. Copies of these prevailing rates are available online at http://www.dir.ca.gov/DLSR.

   7.3 **DIR Registration.** City will not enter into the Contract with a bidder without proof that the bidder and its Subcontractors are registered with the California Department of Industrial Relations to perform public work under Labor Code Section 1725.5, subject to limited legal exceptions.

8. **Workers' Compensation Certification.** Under Labor Code Section 1861, by signing this Contract, Contractor certifies as follows: "I am aware of the provisions of Labor Code Section 3700 which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the Work on this Contract."

9. **Conflicts of Interest.** Contractor, its employees, Subcontractors and agents, may not have, maintain or acquire a direct or indirect conflict of interest in relation to this Contract, or in the performance of this Contract, that violates any City ordinance or policy or violates any California law, including under Government Code Section 1090 et seq. and under the Political Reform Act as set forth in Government Code Section 81000 et seq. and its accompanying regulations. Any violation of this Section constitutes a material breach of the Contract.

10. **Independent Contractor.** Contractor is an independent contractor under this Contract and will have control of the Work and the manner in which it is performed. Contractor and its

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Subcontractors are not employees of City and are not entitled to participate in any health, retirement, or any other employee benefits from City.

11. **Notice.** Any notice, billing, or payment required by the Contract Documents must be made in writing, and sent to the other party by personal delivery, U.S. Mail, a reliable overnight delivery service, facsimile, or by email. Notice is deemed effective upon delivery unless otherwise specified. Notice for each party must be given as follows:

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City:

Name: City of Fremont
Address:_ 3300 Capitol Avenue
City/State/Zip: Fremont, California 94538
Phone: <_____>
Attn: <_____>
Email: <_____>
Copy to: <_____>

Contractor:

Name:_____
Address:_____
City/State/Zip:_____
Phone:_____
Attn:_____
Email:_____
Copy to:_____

12. General Provisions.

12.1 Assignment and Successors. Contractor may not assign its rights or obligations under this Contract, in part or in whole, without City's written consent. This Contract is binding on Contractor's successors and permitted assigns.

12.2 Third Party Beneficiaries. There are no intended third party beneficiaries to this Contract except as expressly provided in the General Conditions or Special Conditions.

12.3 Governing Law and Venue. This Contract will be governed by California law and venue will be in the Superior Court of Alameda County, and no other place.

12.4 Amendment. No amendment or modification of this Contract will be binding unless it is in a writing duly authorized and signed by the parties to this Contract.

12.5 Integration; Severability. This Contract and the Contract Documents incorporated herein, including authorized amendments or Change Orders thereto, constitute the final, complete, and exclusive terms of the agreement between City and Contractor. If any provision of the Contract Documents, or portion of a provision, is determined to be illegal, invalid, or unenforceable, the remaining provisions of the Contract Documents will remain in full force and effect.

12.6 Authorization. Each individual signing below warrants that he or she is authorized to do so by the party that he or she represents, and that this Contract is legally binding on that party. If Contractor is a corporation, signatures from two officers of the corporation are required pursuant to California Corporation Code Section 313.

[Signatures are on the following page.]

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The parties agree to this Contract as witnessed by the signatures below:

CITY OF FREMONT:

s/_____

_____
Name/Title

Date: _____

Approved as to form:

s/_____

_____
Name/Title

Date: _____

CONTRACTOR: _____
Business Name

s/_____

Seal:

_____
Name/Title

Date: _____

s/_____

_____
Name/Title

Date: _____

_____
Contractor's California License Number(s) and Expiration Date(s)

END OF CONTRACT

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Payment Bond

The City of Fremont ("City") and _____ ("Contractor") have entered into a contract, dated _____, 20___ ("Contract") for work on the <_____> Project ("Project"). The Contract is incorporated by reference into this Payment Bond ("Bond").

1. **General.** Under this Bond, Contractor as principal and _____, its surety ("Surety"), are bound to City as obligee in an amount not less than $_____, under California Civil Code Sections 9550, et seq.

2. **Surety's Obligation.** If Contractor or any of its Subcontractors fails to pay any of the persons named in California Civil Code Section 9100 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 and its Subcontractors, under California Unemployment Insurance Code Section 13020, with respect to the work and labor, then Surety will pay for the same.

3. **Beneficiaries.** This Bond inures to the benefit of any of the persons named in California Civil Code Section 9100, so as to give a right of action to those persons or their assigns in any suit brought upon this Bond. Contractor must promptly provide a copy of this Bond upon request by any person with legal rights under this Bond.

4. **Duration.** If Contractor promptly makes payment of all sums for all labor, materials, and equipment furnished for use in the performance of the Work required by the Contract, in conformance with the time requirements set forth in the Contract and as required by California law, Surety's obligations under this Bond will be null and void. Otherwise, Surety's obligations will remain in full force and effect.

5. **Waivers.** Surety waives any requirement to be notified of alterations to the Contract or extensions of time for performance of the Work under the Contract. Surety waives the provisions of Civil Code Sections 2819 and 2845. City waives requirement of a new bond for any supplemental contract under Civil Code Section 9550. Any notice to Surety may be given in the manner specified in the Contract and delivered or transmitted to Surety as follows:

   Attn: _____
   Address: _____
   City/State/Zip: _____
   Phone: _____
   Fax: _____
   Email: _____

6. **Law and Venue.** This Bond will be governed by California law, and any dispute pursuant to this Bond will be venued in the Superior Court of Alameda County, and no other place. Surety will be responsible for City's attorneys' fees and costs in any action to enforce the provisions of this Bond.

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7. Effective Date; Execution. This Bond is entered into and is effective on _____, 20__. Three identical counterparts of this Bond, each of which is deemed an original for all purposes, are hereby executed and submitted.

SURETY: _____
Business Name

s/ _____

_____
Name/Title

(Notary Acknowledgment with Notary Seal for Surety and Surety's Power of Attorney Must be Attached)

CONTRACTOR: _____
Business Name

s/ _____

_____
Name/Title

s/ _____

_____
Name/Title

APPROVED BY CITY:

s/ _____

_____
Name/Title

END OF PAYMENT BOND

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Performance Bond

The City of Fremont ("City") and _____ ("Contractor") have entered into a contract, dated _____, 20____ ("Contract") for work on the <_____> Project ("Project"). The Contract is incorporated by reference into this Performance Bond ("Bond").

1. **General.** Under this Bond, Contractor as Principal and _____, its surety ("Surety"), are bound to City as obligee for an amount not less than $_____. By executing this Bond, Contractor and Surety bind themselves and their respective heirs, executors, administrators, successors and assigns, jointly and severally, to the provisions of this Bond.

2. **Surety's Obligations; Waiver.** If Contractor fully performs its obligations under the Contract, including its warranty obligations under the Contract, Surety's obligations under this Bond will become null and void upon recordation of the notice of completion, provided Contractor has timely provided a warranty bond as required under the Contract. Otherwise Surety's obligations will remain in full force and effect until expiration of the one year warranty period under the Contract. Surety waives any requirement to be notified of and further consents to any alterations to the Contract made under the applicable provisions of the Contract Documents, including changes to the scope of Work or extensions of time for performance of Work under the Contract. Surety waives the provisions of Civil Code Sections 2819 and 2845.

3. **Application of Contract Balance.** Upon making a demand on this Bond, City will make the Contract Balance available to Surety for completion of the Work under the Contract. For purposes of this provision, the Contract Balance is defined as the total amount payable by City to Contractor as the Contract Price minus amounts already paid to Contractor, and minus any liquidated damages, credits, or backcharges to which City is entitled under the terms of the Contract.

4. **Contractor Default.** Upon written notification from City that Contractor is in default under section 13.3 of the Contract General Conditions, time being of the essence, Surety must act within the time specified in that section 13.3to remedy the default through one of the following courses of action:

   4.1 Arrange for completion of the Work under the Contract by Contractor, with City's consent, but only if Contractor is in default solely due to its financial inability to complete the Work;

   4.2 Arrange for completion of the Work under the Contract by a qualified contractor acceptable to City, and secured by performance and payment bonds issued by an admitted surety as required by the Contract Documents, at Surety's expense; or

   4.3 Waive its right to complete the Work under the Contract and reimburse City the amount of City's costs to have the remaining Work completed.

5. **Surety Default.** If Surety defaults on its obligations under the Bond, City will be entitled to recover all costs it incurs due to Surety's default, including legal, design professional, or delay costs.

6. **Notice.** Any notice to Surety may be given in the manner specified in the Contract and delivered or transmitted to Surety as follows:

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Attn: _____
Address: _____
City/State/Zip: _____
Phone: _____
Fax: _____
Email: _____

7. **Law and Venue.** This Bond will be governed by California law, and any dispute pursuant to this Bond will be venued in the Superior Court of Alameda County, and no other place. Surety will be responsible for City's attorneys' fees and costs in any action to enforce the provisions of this Bond.

8. **Effective Date; Execution.** This Bond is entered into and effective on _____, 20___. Three identical counterparts of this Bond, each of which is deemed an original for all purposes, are hereby executed and submitted.

SURETY:_____
Business Name

s/ _____

_____
Name/Title

(Notary Acknowledgment with Notary Seal for Surety and Surety's Power of Attorney Must be Attached)

CONTRACTOR: _____
Business Name

s/ _____

_____
Name/Title

s/ _____

_____
Name/Title

APPROVED BY CITY:

s/ _____

_____
Name/Title

END OF PERFORMANCE BOND

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Warranty Bond

The City of Fremont ("City") and _____ ("Contractor") have entered into a contract, dated _____, 20___ ("Contract") for work on the <_____> Project ("Project"). The Contract is incorporated by reference into this Warranty Bond ("Bond").

1. **General.** Under this Bond, Contractor as principal and _____, its surety ("Surety"), are bound to City as obligee in the maximum amount of 20% of the final Contract Price or as otherwise specified in the Contract Documents.

2. **Warranty Period.** The Contract requires Contractor to guarantee its work and that of its Subcontractors on the Project, against defects in materials or workmanship which are discovered during the one year period commencing with recordation of the notice of completion (the "Warranty Period"), and to promptly make repairs or reimburse the City for repairs as further specified in Article 11 of the Contract General Conditions.

3. **Surety's Obligations.** If Contractor faithfully carries out and performs its guarantee under the Contract, and, on due notice from City, repairs and make good at its sole expense any and all defects in materials and workmanship in the Project which are discovered during the Warranty Period, or if Contractor promptly reimburses City for all loss and damage that City sustains because of Contractor's failure to makes such repairs in accordance with the Contract requirements, then Surety's obligations under this Bond will be null and void. Otherwise, Surety's obligations will remain in full force and effect.

4. **Waiver.** Surety waives the provisions of Civil Code Sections 2819 and 2845.

5. **Notice.** Any notice to Surety may be given in the manner specified in the Contract and delivered or transmitted to Surety as follows:

   Attn: _____
   Address: _____
   City/State/Zip: _____
   Phone: _____
   Fax: _____
   Email: _____

6. **Law and Venue.** This Bond will be governed by California law, and any dispute pursuant to this Bond will be venued in the Superior Court of Alameda County, and no other place. Surety will be responsible for City's attorneys' fees and costs in any action to enforce the provisions of this Bond.

7. **Effective Date; Execution.** This Bond is entered into and is effective on _____, 20_____. Three identical counterparts of this Bond, each of which is deemed an original for all purposes, are hereby executed and submitted.

[Signatures are on the following page.]

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SURETY:_____
Business Name

s/ _____

_____
Name/Title

(Notary Acknowledgment with Notary Seal for Surety and Surety's Power of Attorney Must be Attached)

CONTRACTOR: _____
Business Name

s/ _____

_____
Name/Title

s/ _____

_____
Name/Title

APPROVED BY CITY:

s/ _____

_____
Name/Title

END OF WARRANTY BOND

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General Conditions

Article 1 - Definitions

Definitions. The following definitions apply to all of the Contract Documents unless otherwise indicated. Defined terms and titles of documents are capitalized in the Contract Documents, with the exception of the words “day,” “furnish,” “including,” “install,” “work day” or “working day.”

Allowance means an amount included in the Bid Proposal for Work that may or may not be included in the Project, depending on conditions that will not become known until after bids are opened. If the Contract Price includes an Allowance and the cost of performing the Work covered by that Allowance is greater or less than the Allowance, the Contract Price will be increased or decreased accordingly.

Article, as used in these General Conditions, means a numbered Article of the General Conditions, unless otherwise indicated by the context.

Change Order means a written document duly approved and executed by City, which changes the scope of Work, the Contract Price, or the Contract Time.

City means the City of Fremont, acting through its City Council, officers, employees, City Engineer, and any other authorized representatives.

City Engineer means the City Engineer for City and his or her authorized delegee(s) designated to oversee and manage the Project on City’s behalf.

City Standard Specifications means the current version of City’s Standard Specifications in effect at the time bids were submitted.

Claim means a separate demand by Contractor for a change in the Contract Time or Contract Price, that has previously been submitted to City in accordance with the requirements of the Contract Documents, and which has been rejected by City, in whole or in part; or a written demand by Contractor objecting to the amount of Final Payment.

Contract means the signed agreement between City and Contractor.

Contract Documents means, collectively, all of the documents listed as such in Section 2 of the Contract, including the Notice Inviting Bids; the Instructions to Bidders; addenda, if any; the Bid Proposal, and attachments thereto; the Contract; the notice of award and notice to proceed; the payment, performance and warranty bonds; the General Conditions; the Special Conditions; the Project Drawings and Specifications; any Change Orders; and any other documents expressly made part of the Contract Documents.

Contract Price means the total compensation to be paid to Contractor for performance of the Work, as set forth in the Contract and as amended by Change Order or adjusted for an Allowance. The Contract Price is not subject to adjustment due to inflation or due to the increased cost of labor, material, or equipment following submission of the Bid Proposal.

Contract Time means the number of calendar days for performance of the Work, as set forth in the Contract and as amended by Change Order.

Contractor means the individual, partnership, corporation, or joint-venture that has signed the Contract with City to perform the Work.

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Day means a calendar day unless otherwise specified.

Design Professional means the licensed individual(s) or firm(s) retained by City to provide architectural, landscape architectural, or engineering services for the Project. If no Design Professional has been retained for this Project, any reference to Design Professional is deemed to refer to the Engineer.

Drawings means the City-provided plans and graphical depictions of the Project requirements, and does not include Shop Drawings.

Engineer means the City Engineer for City and his or her authorized delegees.

Extra Work means new or unforeseen work added to the Project, as determined by the Engineer in his or her sole discretion, that: (A) is not covered by Contract unit prices; (B) is not part of or incidental to the scope of the Work; (C) is substantially different from the Work as described in the Contract Documents at bid time; or (D) results from a substantially changed Project condition.

Field Order means written instructions from the City Engineer that require or authorize minor changes in the Work that do not affect the Contract Price or Contract Time.

Final Completion means Contractor has fully completed all of the Work required by the Contract Documents, including all punch list items, any required commissioning, and has provided all required submittals, including the warranty bond, instructions and manuals, and as-built drawings to City's satisfaction.

Final Payment means payment to Contractor of the unpaid Contract Price, including release of undisputed retention, less amounts withheld pursuant to the Contract Documents, including liquidated damages, up to 125% of the amount of any unreleased stop notice, amounts subject to setoff, up to 150% of any unresolved third-party claim for which Contractor is required to indemnify City, and up to 150% of any amount in dispute as authorized by Public Contract Code Section 7107.

Furnish means to purchase and deliver to the Worksite designated for installation.

Hazardous Materials means any substance or material identified now or in the future as hazardous under any federal, state, or local law or regulation, or any other substance or material that may be considered hazardous or otherwise subject to statutory or regulatory requirements governing handling, disposal, or cleanup.

Including, whether or not capitalized, means "including, but not limited to," unless the context requires otherwise.

Inspector means the individual(s) or firm(s) retained by City to inspect the workmanship, materials, and manner of construction of the Project and its components to ensure compliance with the Contract Documents and all applicable codes, regulations, and permits.

Install means to fix in place for materials, and to fix in place and connect for equipment.

Plans has the same meaning as Drawings.

Project means the public works project referenced in the Contract.

Project Manager means the individual designated by City to oversee and manage the Project on City's behalf and may include his or her authorized delegee(s) when the Project Manager is

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unavailable. If no Project Manager has been designated for this Project, any reference to Project Manager is deemed to refer to the Engineer.

Request for Information or RFI means Contractor's written request for information submitted to City, in the manner and format specified by City, about the Contract Documents, the Work or the Project.

Section as used in these General Conditions, means a numbered Section of the General Conditions, unless otherwise indicated by the context, such as statutory references.

Shop Drawings means drawings, plan details or other graphical depictions prepared by or on behalf of Contractor, and subject to City approval, which are intended to provide details for fabrication, installation, and the like, of items required by or shown in the Drawings and Specifications.

Specifications means the technical, text specifications describing the Project requirements, which are prepared for and incorporated into this Project by or on behalf of City, and does not include the Contract, General Conditions or Special Conditions.

Subcontractor means an individual, partnership, corporation, or joint-venture retained by Contractor directly or indirectly through a subcontract to perform a specific portion of the Work. The term Subcontractor applies to subcontractors, suppliers, fabricators, and equipment lessors of all tiers, unless otherwise indicated by the context.

Technical Specifications means Specifications.

Work means all of the construction and services necessary or incidental to completing the Project in conformance with the requirements of the Contract Documents.

Work Day or Working Day, whether or not capitalized, means a weekday which is not a holiday observed by City.

Worksite means the place or places where the Work is performed.

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Article 2 - Roles and Responsibilities

2.1 City.

(A) ***Engineer.*** The Engineer, acting within the authority conferred by the City Council, has primary responsibility for administration of the Project on behalf of City, including authority to provide directions to the Design Professional and to Contractor, in the form of Field Orders or otherwise, to ensure proper and timely completion of the Project.

(B) ***Design Professional.*** The Design Professional is responsible for the overall design of the Project and, to the extent authorized by City, may act on City's behalf to ensure performance of the Work in compliance with the Contract Documents. The Design Professional's decision(s) regarding interpretation of the Drawings or Specifications is final and conclusive.

2.2 Contractor.

(A) ***General.*** Contractor must provide all labor, materials, equipment and services necessary to perform and timely complete the Work in strict accordance with the Contract Documents, and in an economic and efficient manner in the best interests of City.

(B) ***Responsibility for the Work and Risk of Loss.*** Contractor is responsible for supervising and directing all aspects of the Work to facilitate the efficient and timely completion of the Work. Contractor is solely responsible for and required to exercise full control over the Work, including the construction means, methods, techniques, sequences, procedures, and coordination of all portions of the Work with that of all other contractors and Subcontractors, except to the extent that the Contract Documents provide other specific instructions. From the date of commencement of the Work until either the date on which City formally accepts the Project or the effective date of termination of the Contract, whichever is later, Contractor bears all risks of injury or damage to the Work and the materials and equipment delivered to the Work site, by any cause including fire, earthquake, wind, weather, vandalism or theft.

(C) ***Project Administration.*** Contractor must provide sufficient and competent administration, staff, and skilled workforce necessary to perform and timely complete the Work in accordance with the Contract Documents. Before starting the Work, Contractor must designate in writing and provide complete contact information, including telephone numbers and email address, for the officer or employee in Contractor's organization who is to serve as Contractor's primary representative for the Project, and who has authority to act on Contractor's behalf. A Subcontractor may not serve as Contractor's primary representative.

(D) ***On-Site Superintendent.*** Contractor must, at all times during performance of the Work, also provide a qualified and competent full-time superintendent acceptable to City, and assistants as necessary, who must be physically present at the Project site while any aspect of the Work is being performed. The on-site superintendent must be authorized to act on Contractor's behalf concerning the Project, with the authority to sign, send, and receive all notices contemplated or required by the Contract Documents and to direct the Work. City's approval of the superintendent is required before the Work commences. If City is not satisfied with the superintendent's performance, City may request a qualified replacement of the superintendent. Failure to comply may result in temporary suspension of the Work, at Contractor's sole expense and with no extension of Contract Time, until the approved superintendent is physically present to supervise the Work. Contractor must provide written notice to City, as soon as practicable, before replacing the superintendent.

(E) ***Pre-Construction Conference.*** City will designate a date and time for the mandatory pre-construction conference with Contractor following Contract execution. Project administration procedures and coordination between City and Contractor will be discussed. Contractor must submit a draft version of the baseline schedule required under Section 5.2, below, at least ten days before the scheduled date for the pre-construction conference, unless a shorter period is specified by the City. The draft baseline schedule must specify the time or number of days allocated for completion of each major item, rather than the specific dates. If the City provides comments on the draft baseline schedule before the pre-construction conference, Contractor must prepare responses to the City's comments for review at the pre-construction conference. At the pre-construction conference Contractor must also present City with the information or documents listed below for City's review and acceptance before the Work commences. Failure to timely comply with any of these pre-construction submittal requirements may operate to delay issuance of the Notice to Proceed and commencement of the Work. Contractor is solely responsible for any resulting delay damages caused by its failure to comply with this provision.

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(1) Qualifications of the proposed on-site superintendent for the Project and his or her 24-hour complete contact information, including email address and telephone numbers during regular hours and after hours;

(2) List of all other key Project personnel and their complete contact information, including email addresses and telephone numbers during regular hours and after hours;

(3) Staging plans that identify the sequence of the Work, including any phases and alternative sequences or phases, with the goal of minimizing the impacts on residents, businesses and other operations in the Project vicinity;

(4) If required, traffic control plans associated with the staging plans that are signed and stamped by a licensed traffic engineer;

(5) Responses to City comments on the draft baseline schedule for the Work, and if required in the Special Conditions, proof of order and estimated delivery dates for any long lead time items;

(6) Breakdown of lump sum bid items, and cost distribution schedule of prices (schedule of values), to be used for determining the value of Work completed for future progress payments to Contractor;

(7) Schedule with a list of Contractor's Project submittals that require City review, and list of the proposed material suppliers;

(8) Plan for coordination with affected utility owner(s) and compliance with any related permit requirements;

(9) Videotape and photographs recording the conditions throughout the Project site before any Work begins, showing the existing improvements and current condition of the curbs, gutters, sidewalks, signs, landscaping, streetlights, structures near the Project such as building faces, canopies, shades and fences, and any other features within the Project area limits;

(10) Contractor's safety program and identification of Contractor's safety officer for the Project;

(11) Copies of the required documentation for each Subcontractor, including a copy of the contract between Contractor and each Subcontractor and the Subcontractor's California contractor's license and identification of its authorized representative for the Project;

(12) If requested by City, Contractor's cash flow projections; and

(13) Any other documents or information specified in the Special Conditions or Notice of Award.

(F) ***Standards; Compliance.*** Contractor must, at all times, ensure that the Work is performed in a good, workmanlike manner following best practices and in full compliance with the Contract Documents and all applicable laws, regulations, codes, standards, and permits, including City's municipal code, rules, and regulations, and any orders of the administrative or judicial bodies with jurisdiction over the Work.

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(G) ***Progress Meetings.*** Contractor, and the Subcontractors requested by City, must attend regular Project progress meetings with City that City will schedule;

(H) ***Responsible Party.*** Contractor is solely responsible to City for the acts or omissions of any Subcontractor(s), or any other party or parties performing portions of the Work or providing equipment, materials or services for or on behalf of Contractor or the Subcontractors. City may, at any time, reasonably request in writing that Contractor remove from the Project, at no cost to City, any employee or Subcontractor of Contractor who has proven during the course of the Work to be incompetent, intemperate or disorderly, or who has failed or refused to perform the Work as required under the Contract Documents.

(I) ***Correction of Defects.*** Contractor must promptly correct, at Contractor's sole expense, any Work that is determined by City to be deficient or defective in workmanship, materials, or equipment. Workmanship, materials or equipment that do not conform to the requirements under the Drawings, Specifications and every other Contract Document, as determined by City, will be considered defective and subject to rejection. Contractor must also promptly correct, at Contractor's sole expense, any Work performed beyond the lines and grades shown on the Plans or established by City, and any Extra Work performed without City's prior written approval.

(J) ***Contractor's Records.*** Contractor must maintain all of its records relating to the Project in any form, including paper documents, photos, videos and electronic records. Project records subject to this provision include: records relating to preparation of Contractor's bid; Project cost and accounting records; Project employment records; a record copy of the Contract Documents, including the Project Plans and Specifications, Addenda, Change Orders, RFIs and RFI responses, Field Orders, and approved Shop Drawings; contracts with Contractor's suppliers and Subcontractors for the Project; and all notes, daily logs and memoranda relating to the Work.

(1) Contractor's cost and accounting records must include all supporting documentation, including original purchase orders, receipts, invoices, and payroll records, evidencing its direct costs to perform the Work, including, but not limited to, costs for labor, materials and equipment. Each cost record should include, at a minimum, a description of the expenditure with references to the applicable requirements of the Contract Documents, the amount actually paid, the date of payment, and whether the expenditure is part of the original Contract Price, related to an executed Change Order, or otherwise categorized by Contractor as Extra Work. Contractor's failure to comply with this provision as to any claimed cost operates as a waiver of any rights to recover the claimed cost.

(2) Contractor must continue to maintain its Project records in an organized manner, according to generally accepted accounting principles, for a period of four years after City's acceptance of the Project or following Contract termination, whichever occurs first. Subject to prior notice to Contractor, City is entitled to inspect or audit any of Contractor's records relating to the Project or to investigate Contractor's plant or equipment during Contractor's normal business hours. Contractor must also provide copies of the Project records to City upon request.

(K) ***Copies of Contract Documents Onsite.*** Contractor and its Subcontractors must keep copies, at the Project site, of the Work-related documents, including the Contract, Drawings, Plans, Specifications, Addenda, Contract amendments, Change Orders, RFIs and RFI responses, Field Orders, approved Shop Drawings, and any related written

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interpretations. The Contract Documents, as-built drawings, and all Worksite copies must be available to City for reference at all times.

2.3 Subcontractors.

(A) ***General.*** All Work which is not performed by Contractor with its own forces must be performed by Subcontractors. City reserves the right to approve or reject any and all Subcontractors proposed to perform the Work. Each Subcontractor must obtain a City business license before performing any Work. Each Subcontractor must also pay City business tax and registration tax for a business license, under Fremont Municipal Code Chapter 5.05, before performing any Work.

(B) ***Contractual Obligations.*** Contractor must include a provision in each of its subcontracts that incorporates by reference, and requires the Subcontractor to be bound to and comply with, the provisions of the Contract Documents as they apply to the Subcontractor's portion(s) of the Work, and to likewise bind their own subcontractors or suppliers. Such provisions to be incorporated by reference specifically include, but are not limited to, the following obligations of Contractor under the Contract Documents: indemnification of City; City business tax and registration tax compliance; insurance coverage; and compliance with nondiscrimination and all other applicable laws. Nothing in these Contract Documents creates a contractual relationship between a Subcontractor and City, but City is deemed to be a third-party beneficiary of the contract between Contractor and each Subcontractor.

(C) ***Termination.*** If the Contract is terminated, each Subcontractor's agreement must be assigned by Contractor to City, subject to the prior rights of any surety, provided that City accepts the assignment by written notification, and assumes all rights and obligations of Contractor pursuant to each such subcontract agreement.

(D) ***Substitution of Subcontractor.*** If Contractor requests substitution of a listed Subcontractor under Public Contract Code Section 4107, Contractor is solely responsible for all costs City incurs in responding to the request, including legal fees and costs to conduct a hearing.

2.4 Coordination of Work.

(A) ***Concurrent Work.*** City reserves the right to perform or to have performed other work on or adjacent to the Project site while the Work is being performed. Contractor is responsible for coordinating its Work with other work being performed on or adjacent to the Project site, including by any utility companies or agencies, and must avoid hindering, delaying, or interfering with the work of other contractors and subcontractors. To the full extent permitted by law, Contractor must hold harmless and indemnify City against any and all claims arising from or related to Contractor's avoidable, negligent, or willful hindrance of, delay to, or interference with the work of any utility company or agency or another contractor or subcontractor.

(B) ***Defects.*** Before proceeding with any portion of the Work affected by the construction or operations of others, Contractor must give the Project Manager prompt written notification of any defects Contractor discovers which will prevent the proper execution of the Work. Failure to give notice of any such known defects will be deemed acknowledgement by Contractor that the work of others is not defective and will not prevent the proper execution of the Work.

2.5 Submittals. Unless otherwise specified, Contractor must submit the following to the Project Manager for review: all schedules, Shop Drawings, samples, product data and

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similar submittals required by the Contract Documents, and any other submittals requested by the Project Manager. Unless otherwise specified, all submittals, including Requests for Information, are subject to the provisions of this Section.

(A) ***General.*** Contractor is responsible for ensuring that its submittals are accurate and conform to the Contract Documents.

(B) ***Time and Manner of Submission.*** Contractor must ensure that its submittals are prepared and delivered in a manner consistent with the current approved schedule for the Work and within the applicable time specified elsewhere in the Contract Documents, or if no time is specified, in such time and sequence so as not to delay the performance of the Work or completion of the Project. For planning purposes, Contractor should assume at least 14 days for City review of each submittal or batch of submittals, and a longer time period for complex submittals or for large batches of submittals.

(C) ***Required Contents.*** Each submittal must be numbered in sequential order and include the Project name and contract number, Contractor's name and address, the name and address of any Subcontractor or supplier involved with the submittal, the date, and references to applicable Specification section(s) and/or drawing and detail number(s).

(D) ***Required Corrections.*** If City notes exceptions and requires corrections for any submittal, Contractor must promptly make and submit the required corrections to City in full conformance with the requirements of this Section.

(E) ***Effect of Review and Acknowledgement by City.*** City's review and acknowledgement of a submittal that results in no exceptions taken by City will not relieve Contractor from complying with the requirements of the Contract Documents. Contractor is responsible for any errors in any submittal, and review and acknowledgement of a submittal by City with no exceptions taken is not an assumption of risk or liability by City.

(F) ***Enforcement.*** Any Work performed or material used without prior review of a required submittal will be performed at Contractor's risk, and Contractor may be required to bear the costs incident thereto, including the cost of removing and replacing such Work, repairs to other affected portions of the Work, and the cost of additional time or services required of City, including costs for the Design Professional, Project Manager, or Inspector.

(G) ***Excessive RFIs.*** A Request for Information will be considered excessive or unnecessary if City determines that the explanation or response to the Request for Information is clearly and unambiguously discernable in the Contract Documents or in any Field Order that City has issued. City's costs to review and respond to excessive or unnecessary Requests for Information may be deducted from payments otherwise due to Contractor.

(H) ***Additional Requirements for Submittals.*** Any additional requirements for submittals may be included in the Special Conditions or Specifications.

2.6 **Shop Drawings.** When Shop Drawings are required by the Specifications or requested by the Engineer, they must be prepared according to best practices at Contractor's expense. The Shop Drawings must be of a size and scale to show all necessary details. Unless otherwise specified by City, three copies must be provided to the Engineer for review at least 30 days before the Work will be performed. If City notes exceptions or requires changes, three copies of the corrected Shop Drawings must be resubmitted to the Engineer for review. For all Project components requiring Shop Drawings, Contractor

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will not furnish materials or perform any Work until the Shop Drawings for those components are reviewed by City. Contractor is responsible for any errors and omissions in the Shop Drawings, shop fits and field corrections, any deviations from the Contract Documents, and for the results obtained by the use of Shop Drawings. Review of Shop Drawings by the Engineer does not relieve Contractor of such responsibility.

Article 3 - Contract Documents

3.1 Interpretation of Contract Documents.

(A) ***Drawings and Specifications.*** The Drawings and Specifications included in the Contract Documents are complementary. If Work is shown on one but not on the other, Contractor must perform the Work as though fully described on both, consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results. The Drawings and Specifications are deemed to include and require everything necessary and reasonably incidental to completion of the Work, whether or not particularly mentioned or shown. Contractor must perform all work and services and supply all things reasonably related to and inferable from the Contract Documents. In the event of a conflict between the Drawings and Specifications, the Specifications will control.

(B) ***Duty to Notify and Seek Direction.*** If Contractor becomes aware of a changed condition in the Project, or of any ambiguity, conflict, inconsistency, discrepancy, omission, or error in the Contract Documents, including under the Drawings or Specifications, Contractor must immediately submit a Request for Information to the Engineer and wait for a response from City before proceeding further with the related Work. The Request for Information must notify City of the issue and request clarification, interpretation or direction. The Engineer's clarification, interpretation or direction will be final and binding on Contractor. If Contractor proceeds with the related Work before obtaining City's response, Contractor will be responsible for any resulting costs, including the cost of correcting any incorrect or defective Work that results. City will not extend the Contract Time due to Contractor's failure to submit a timely Request for Information to the Engineer.

(C) ***Figures and Dimensions.*** Figures control over scaled dimensions.

(D) ***Technical or Trade Terms.*** Any terms that have well-known technical or trade meanings will be interpreted in accordance with those meanings, unless otherwise specifically defined in the Contract Documents.

(E) ***Measurements.*** Contractor must verify all relevant measurements at the Worksite before ordering any material or performing any Work, and will be responsible for the correctness of those measurements.

3.2 Order of Precedence. Information included in one Contract Document but not in another will not be considered a conflict or inconsistency. Unless otherwise specified in the Special Conditions, in case of any conflict or inconsistency among the Contract Documents, the following order of precedence will apply, beginning from highest to lowest:

(A) Change Orders;
(B) Addenda;
(C) Contract;
(D) Notice to Proceed;
(E) Notice of Award;

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(F) Special Conditions;
(G) General Conditions;
(H) Payment, Performance and (if required) Warranty Bonds;
(I) Specifications;
(J) Drawings;
(K) Contractor's Bid Proposal and attachments;
(L) Notice Inviting Bids;
(M) Instructions to Bidders;
(N) City Standard Specifications;
(O) City Standard Details; and
(P) Any other documents prepared by and on behalf of a third party that were not prepared specifically for this Project.

3.3 Caltrans Standard Specifications. Any reference in the Contract Documents to or incorporation of the Standard Specifications of the State of California, Department of Transportation ("Caltrans"), including "Standard Specifications," "Caltrans Specifications," "State Specifications," or "CSS," means the most current edition of Caltrans' Standard Specifications, unless otherwise specified ("Standard Specifications"), including the most current amendments as of the date that Contractor's bid was submitted for this Project. The following provisions apply to use of or reference to the Standard Specifications:

(A) ***Limitations.*** None of the "General Provisions" of the Standard Specifications, i.e., Sections 1 through 9, applies to these Contract Documents with the exception of any specific provisions, if any, which are expressly stated to apply to these Contract Documents.

(B) ***Conflicts or Inconsistencies.*** If there is a conflict or inconsistency between any provision in the Standard Specifications and a provision of these Contract Documents, as determined by City, the provision in the Contract Documents will govern.

(C) ***Meanings.*** Terms used in the Caltrans Standard Specifications or Special Provisions are to be interpreted as follows:

(1) Any reference to the "Engineer" is deemed to mean the City Engineer.

(2) Any reference to the "Special Provisions" is deemed to mean the Special Conditions, unless the Caltrans Special Provisions, or any portions thereof, are expressly included in the Contract Documents under Section 2 of the Contract.

(3) Any reference to the "Department" or "State" is deemed to mean City.

3.4 For Reference Only. Contractor is responsible for the careful review of any document, study, or report provided by City or incorporated into or appended to the Contract Documents solely for informational purposes and identified as "For Reference Only." Nothing in any document, study, or report so appended and identified is intended to supplement, alter, or void any provision of the Contract Documents. Contractor is advised that City or its representatives may be guided by information or recommendations included in such reference documents, particularly when making determinations as to the acceptability of proposed materials, methods, or changes in the Work. Any record drawings or similar final or accepted drawings or maps that are not part of the Contract Documents are deemed to be For Reference Only. The provisions of the Contract Documents are not modified by any perceived or actual conflict with provisions in any document that is For Reference Only.

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3.5 **Plans and Specifications.** Any arrangement or division of the Plans and Specifications into sections is for convenience and is not intended to limit the Work required by separate trades. A conclusion presented in the Plans or Specifications is only a recommendation. Actual locations and depths must be determined by Contractor's field investigation. Contractor may request access to underlying or background information in City's possession that is necessary for Contractor to form its own conclusions. Subject to the limitations of Public Contract Code Section 1104, it is Contractor's responsibility to ascertain the existence of any conditions affecting the cost of the Work.

3.6 **Current Versions.** Unless otherwise specified by City, any reference to the City Standard Specifications, Standard Plans and Standard Details, technical specifications, or any City or California codes or regulations means the latest specification, code or regulation in effect at the time that bids were due.

Article 4 - Bonds, Indemnity, and Insurance

4.1 **Payment and Performance Bonds.** Within ten days following issuance of the notice of award, Contractor is required to provide a payment bond and a performance bond, each in the penal sum of not less than 100% of the Contract Price, using the bond forms included with the Contract Documents.

(A) ***Surety.*** Each bond must be issued by a surety admitted in California. If an issuing surety cancels the bond or becomes insolvent, within seven days following written notice from City, Contractor must substitute a surety acceptable to City. If Contractor fails to substitute an acceptable surety within the specified time, City may, at its sole discretion, withhold payment from Contractor until the surety is replaced to City's satisfaction, or terminate the Contract for default.

(B) ***Supplemental Bonds for Increase in Contract Price.*** If the Contract Price increases during construction by five percent or more over the original Contract Price, Contractor may be required provide supplemental or replacement bonds within ten days of written notice from City pursuant to this Section, covering 100% of the increased Contract Price and using the bond forms included with the Contract Documents.

4.2 **Indemnity.** To the fullest extent permitted by law, Contractor must indemnify, defend, and hold harmless City, including its elected officials, officers, agents, employees, consultants and volunteers (individually, an "Indemnitee," and collectively the "Indemnitees"), from and against any and all liability, loss, damage, claims, expenses (including, without limitation, attorney fees, expert witness fees, paralegal fees, and fees and costs of litigation or arbitration) (collectively, "Liability") of every nature arising out of or in connection with the acts or omissions of Contractor, including its officers, agents, representatives, employees, Subcontractors and suppliers, in bidding or performing the Work or in failing to comply with any obligation of Contractor under the Contract, except such Liability caused by the active negligence, sole negligence, or willful misconduct of an Indemnitee. This indemnity requirement applies to any Liability arising from alleged defects in the content or manner of submission of Contractor's bid for the Contract. Contractor's failure or refusal to timely accept a tender of defense pursuant to this Contract will be deemed a material breach of the Contract. City will timely notify Contractor upon receipt of any third-party claim relating to the Contract, as required by Public Contract Code Section 9201. Contractor's indemnity obligations under this Contract will survive the expiration or any early termination of the Contract.

4.3 **Insurance.** No later than ten days following issuance of the notice of award, and before commencing any Work, Contractor must, at its sole expense, procure the insurance

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coverage required by this Section and provide acceptable proof of the coverage to the satisfaction of City's Risk Manager. Proof of coverage must be evidenced within the body of the insurance policies or in the form of certificates and endorsements as described below. The required insurance must cover Contractor, including its officers, agents, representatives, employees, Subcontractors and suppliers, for claims now and in the future that may relate to or arise from the performance of the Work. The insurance must remain in full force and effect throughout the duration of the Contract. The insurance must be issued by companies licensed to do business in the State of California, and each such insurer must have an A.M. Best's financial strength rating of "A" or better and a financial size rating of "VII" or better. Contractor's procurement of the required insurance will not be construed to relieve Contractor of any performance obligations, to limit Contractor's liability, or to fulfill Contractor's indemnification obligations under the Contract. Contractor may carry any additional insurance it deems necessary or prudent, at its sole expense.

(A) ***Insurance Coverage and Limits.*** Any available insurance proceeds related to this Contract that are broader than or in excess of the specified minimum insurance coverage requirements or limits for Contractor must be made available to the additional insureds under this Contract. The requirements for Contractor's coverage and limits are: (1) the minimum coverage and limits specified in this Contract, or (2) the broader coverage and maximum limits of coverage of any insurance policy or proceeds available to the named insureds, whichever is greater. The limits of insurance required in this Contract may be satisfied by a combination of primary and umbrella or excess insurance. Any umbrella or excess insurance must contain or be endorsed to contain a provision that such coverage will also apply on a primary and non-contributory basis for the benefit of City, before City's own insurance or self-insurance will be called upon to protect it as a named insured.

(B) ***Minimum Scope of Insurance.*** Contractor must procure and maintain all of the following insurance coverage for this Contract, unless otherwise specified in the Special Conditions:

(1) Insurance Services Office Commercial General Liability ("CGL") insurance that includes:

a) Blanket contractual liability coverage;
b) Contractor's protected coverage;
c) Broad form property coverage;
d) Personal injury coverage;
e) Completed operations coverage; and
f) Employer's non-ownership liability coverage.

(2) Insurance Services Office Automobile Liability insurance, Code 1 (any auto).

(3) Builder's Risk insurance.

(4) Workers' Compensation insurance as required by the State of California and Employer's Liability insurance.

(5) Any other insurance coverage City may require in the Special Conditions.

(C) ***Minimum Limits of Insurance.*** Contractor must maintain coverage limits of at least the following for this Contract, unless otherwise specified in the Special Conditions:

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(1) CGL insurance: Issued on an occurrence basis, with $2,000,000 per occurrence for bodily injury, personal injury and property damage and $4,000,000 general aggregate. If CGL insurance or other form with a general aggregate liability is used, either the general aggregate limit must apply separately to this Contract or the general aggregate limit must be twice the required occurrence limit.

(2) Automobile Liability insurance: $1,000,000 per accident for bodily injury, death and property damage.

(3) Builder's Risk insurance*:* Issued on an occurrence basis, with all-risk coverage on a 100% completed value basis on the insurable portion of the Project for the benefit of City.

(4) Employer's Liability insurance:

a) Bodily Injury by Accident - $1,000,000 each accident;
b) Bodily Injury by Disease - $1,000,000 policy limit; and
c) Bodily Injury by Disease - $1,000,000 each employee.

(5) Any other limits City may require in the Special Conditions.

(D) ***Deductibles and Self-Insured Retentions.***

(1) Any deductible or self-insured retention (SIR) applicable to Contractor's insurance must be declared to and approved by City. At City's option, either: a) the insurer must reduce or eliminate such deductible or SIR with respect to City, including its elected officials, officers, agents, employees, consultants, volunteers and Design Professional; or b) Contractor must procure a bond guaranteeing payment of losses and related investigations, claims administration and defense expenses.

(2) Policies containing any SIR provision must provide or be endorsed to provide that the SIR may be satisfied by either the named insured or City.

(3) City reserves the right to obtain a full certified copy of any insurance policy and endorsement. Failure to exercise this right will not constitute a waiver of the right to exercise it later.

(E) ***Endorsements*****.** The required CGL, automobile liability and builder's risk insurance policies must contain, or be endorsed to contain, the following provisions:

(1) City, its elected officials, officers, agents, employees, consultants, volunteers and Design Professional, are covered as additional insureds as respects: any alleged liability arising out of activities performed by or on behalf of Contractor; products and completed operations of Contractor; premises owned, occupied or used by Contractor; any automobiles owned, leased, hired or borrowed by Contractor. The coverage will contain no special limitations on the scope of protection afforded to City, its elected officials, officers, agents, employees, consultants, volunteers and Design Professional.

(2) Any failure to comply with reporting or other provisions of the policies, including breaches of warranties, will not affect coverage provided to City, its

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elected officials, officers, agents, employees, consultants, volunteers and Design Professional.

(3) The insurance will apply separately to each insured against whom a claim is made or suit is brought, except with respect to the limits of the insurer's liability. The inclusion of more than one insured will not operate to impair the rights of one insured against another, and the coverages afforded will apply as though separate policies have been issued to each insured.

(4) The policy does not exclude explosion, collapse, underground excavation hazard, or removal of lateral support.

(F) ***Insurance Certificates and Endorsements***. Contractor must furnish properly executed certificates of insurance from insurance companies acceptable to City, with signed copies of the specified endorsements for each policy as required in Subsection M below. Such documentation must clearly evidence all coverages as required above, including specific evidence of separate endorsements naming City, its elected officials, officers, agents, employees, consultants, volunteers and Design Professional as additional insureds as also required above. The certificates must also provide that such insurance will not be materially changed, terminated or allowed to expire except after 30 days prior written notice thereof has been filed with the City Clerk by certified mail, return receipt requested, unless the change or termination is due to non-payment of premiums, in which case ten days prior written notice thereof must be filed with the City Clerk.

(G) ***Completed Operations.*** Contractor must maintain the required insurance coverage to the fullest amount allowed by law and must maintain the insurance for a minimum of five years following Final Completion of the Project. In the event Contractor fails to obtain or maintain completed operations coverage as required herein, City at its sole discretion may purchase the coverage required and the cost will be paid by Contractor.

(H) ***Cross-Liability.*** The CGL policy must include a cross-liability or severability of interest endorsement.

(I) ***Failure to Maintain Insurance Coverage.*** Contractor's failure, for any reason, to maintain the required insurance coverage will be deemed a material breach of this Contract. City, at its sole option, may terminate this Contract and obtain damages from Contractor resulting from such breach. Alternatively, City may purchase the required insurance coverage and, without further notice to Contractor, deduct from sums due to Contractor any premium costs advanced by City for the insurance.

(J) ***Primary and Non-Contributory.*** Contractor's insurance coverage under this Contract will be primary insurance as respects City, its elected officials, officers, agents, employees, consultants, volunteers and Design Professional. Any insurance or self-insurance maintained by City, its elected officials, officers, agents, employees, consultants, volunteers or Design Professional, will be excess of Contractor's insurance and will not contribute with it. The additional insured coverage under Contractor's policies will be "primary and non-contributory" and will not seek contribution from City's insurance or self-insurance and will be at least as broad as CG 20 01 04 13.

(K) ***Subcontractors***. Contractor must require all Subcontractors to maintain the same levels of insurance and provide the same indemnity that Contractor is required to provide under this Contract, including the requirements related to the additional insureds and waivers of subrogation. A Subcontractor is any party that is under contract with Contractor, or any of its Subcontractors, to perform Work under this Contract. Contractor

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must require each Subcontractor to provide evidence of the required insurance and endorsements prior to the Subcontractor's commencement of any Work.

(L) ***Subrogation Waiver.*** Contractor agrees to waive subrogation rights against City, regardless of the applicability of any insurance proceeds, and to require all Subcontractors or others involved in any way with the Work to do likewise. Each required insurance policy must include an endorsement providing that the carrier agrees to waive any right of subrogation it may have against City, its elected officials, officers, agents, employees, consultants, volunteers and Design Professional.

(M) ***Verification of Coverage.*** Contractor must furnish City with original endorsements effecting coverage required by this Section 4.3. The endorsements must be signed by a person authorized by that insurer to bind coverage on its behalf. All endorsements must be received and approved by City's Risk Manager before the Work commences. Contractor must provide substitute insurance coverage, and written proof of the substitute insurance coverage, to City, in the form of policies, certificates and endorsements acceptable to City's Risk Manager, no later than 30 days prior to the expiration date of any insurance policy required under this Contract.

4.4 **Warranty Bond.** If required for this Project, within ten days following issuance of the notice of award, Contractor must submit a warranty bond, using the form included with the Contract Documents, to guarantee its Work as specified in Article 11, Completion and Warranty Procedures. The warranty bond must be issued by a surety admitted in California for 20% of the awarded Contract Price or as otherwise specified in the Contract Documents. If an issuing surety cancels the bond or becomes insolvent, within seven days following written notice from City, Contractor must substitute a surety acceptable to City.

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Article 5 - Contract Time

5.1 **Time is of the Essence.** Time is of the essence in Contractor's performance and completion of the Work, and Contractor must diligently prosecute the Work and complete it within the Contract Time.

(A) ***General.*** Contractor must commence the Work on the date indicated in the Notice to Proceed, and must fully complete the Work in strict compliance with all requirements of the Contract Documents and within the Contract Time.

(B) ***Rate of Progress.*** Contractor and its Subcontractors must, at all times, provide workers, materials, and equipment sufficient to maintain the rate of progress necessary to ensure full completion of the Work within the Contract Time. If City determines that Contractor is failing to prosecute the Work at a sufficient rate of progress, City may, in its sole discretion, direct Contractor to provide additional workers, materials, or equipment, or to work additional hours or days without additional cost to City, in order to achieve a rate of progress satisfactory to City. If Contractor fails to comply with City's directive in this regard, City may, at Contractor's expense, separately contract for additional workers, materials, or equipment or use City's own forces to achieve the necessary rate of progress. Alternatively, City may terminate the Contract based on Contractor's default.

5.2 **Schedule Requirements.** All schedules must be prepared using standard scheduling software acceptable to City, and must provide schedules in electronic and paper form as requested.

(A) ***Baseline (As-Planned) Schedule.*** Within three calendar days following City's issuance of the Notice to Proceed (or as otherwise specified in the Special Conditions), Contractor must submit to City for review a final baseline (as-planned) schedule using critical path methodology showing in detail how Contractor plans to perform and fully complete the Work within the Contract Time. The final baseline schedule must be based on the draft baseline schedule submitted for the pre-construction conference pursuant to Section 2.2, above, and must incorporate City comments as directed during the pre-construction conference. The baseline schedule must show the order of the major items of Work and the dates of start and completion of each item, including when the materials and equipment will be procured. The schedule must also include the work of all trades, reflecting anticipated labor or crew hours and equipment loading for the construction activities, and must be sufficiently comprehensive and detailed to enable progress to be monitored on a day-by-day basis. For each activity, the baseline schedule must be dated, provided in the format specified in the Contract Documents or as required by City, and must include, at a minimum, a description of the activity, the start and completion dates of the activity, the activity's dependence on completion of other activities, and the duration of the activity.

(1) *Specialized Materials Ordering*. The baseline schedule must include ordering and estimated delivery dates for specialized materials or items that are not readily available from suppliers.

(2) *Long Lead Time Items.* The baseline schedule must include realistic estimates of the lead time required for ordering items that require a long lead time, such as items that must be specially fabricated or are subject to special handling or shipping.

(B) ***City's Review of Schedules.*** City will review and may note or take exceptions to the baseline schedule, and to the progress schedules submitted as required below, to assure completion of the Work within the Contract Time. Contractor is solely responsible for resolving any exceptions taken in a schedule and must, within seven days, correct the schedule to address them.

(C) ***Progress Schedules.*** After City reviews a final baseline schedule on which no exceptions are taken, Contractor must submit to City an updated progress schedule and three-week look-ahead schedule, in the format specified by City, for review with each application for a progress payment, or when otherwise specified by City, until completion of the Work. The updated progress schedule must: show how the actual progress of the Work as constructed to date compares to the baseline schedule; reflect any proposed changes in the method of operations, including to achieve Project milestones within the Contract Time; and identify any actual or potential impacts to the critical path. Contractor must also submit periodic reports to City of any changes in the projected material or equipment delivery dates for the Project.

(1) *Float*. The progress schedule must show early and late completion dates for each task. The number of days between those dates will be designated as the "float." Any float belongs to the Project and not to Contractor.

(2) *Failure to Submit Schedule*. Reliable, up-to-date schedules are essential to timely, efficient and cost-effective administration of the Project. If Contractor fails to submit a schedule within the time periods specified in this Section, or submits a schedule to which City has noted exceptions that are not corrected, City may withhold ten percent from payment(s) otherwise due to Contractor until the exceptions are resolved, the schedule is corrected and resubmitted, and City has taken no further exceptions.

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(D) ***Recovery Schedule.*** If City determines that the Work is more than two weeks behind schedule, within seven days following written notice of such determination, Contractor must submit a recovery schedule, showing how Contractor intends to perform and complete the Work within the Contract Time, based on actual progress to date.

(E) ***Effect of Acknowledgement.*** Contractor and its Subcontractors must perform the Work in accordance with the most current schedule unless otherwise directed by City. City's review of a schedule does not operate to extend the time for completion of the Work or any component of the Work, and will not affect City's right to assess liquidated damages for Contractor's unexcused delay in completing the Work within the Contract Time.

(F) ***Posting.*** Contractor must at all times prominently post in its on-site office a copy of the most current progress or recovery schedule that has no exceptions taken by City.

(G) ***Reservation of Rights.*** City reserves the right to direct the sequence in which the Work must be performed or to make changes in the sequence of the Work in order to facilitate the performance of work by City or others, or to facilitate City's use of its property. The Contract Time or Contract Price may be adjusted to the extent such changes in sequence actually increase or decrease Contractor's time or cost to perform the Work.

(H) ***Authorized Working Days and Times.*** Contractor is limited to working Monday through Friday, excluding holidays, from 7:30 a.m. until 4:00 p.m., except as provided in the Special Conditions or as authorized in writing by City. City reserves the right to charge Contractor for additional costs incurred by City due to Work performed on days or during hours not expressly authorized in the Contract Documents, including reimbursement of costs incurred for inspection, testing, and construction management services.

(I) ***Additional Requirements for Work Schedules.*** Any additional requirements for Work schedules may be included in the Special Conditions or Specifications.

5.3 Delay and Extensions of Contract Time.

(A) ***Excusable Delay.*** The Contract Time may be extended if Contractor encounters "Excusable Delay," which is an unavoidable delay in completing the Work within the Contract Time due to causes completely beyond Contractor's control, and which Contractor could not have avoided or mitigated through reasonable care, planning, foresight, and diligence. Grounds for Excusable Delay may include fire, natural disasters including earthquake or unusually severe weather, acts of terror or vandalism, epidemic, unforeseeable adverse government actions, unforeseeable actions of third parties, encountering unforeseeable hazardous materials, unforeseeable site conditions, or suspension for convenience under Article 13. Contractor is not entitled to an extension of the Contract Time for delay that will not affect the time for Final Completion, based on the critical path in the baseline schedule.

(B) ***Non-Excusable Delay***. Delay which Contractor could have avoided or mitigated through reasonable care, planning, foresight and diligence is "Non-Excusable Delay." Contractor is not entitled to an extension of Contract Time or any compensation for Non-Excusable Delay, or for Excusable Delay that is concurrent with Non-Excusable Delay. Non-Excusable Delay includes delay caused by:

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(1) weather conditions which are normal for the location of the Project, as determined by reliable records, including monthly rainfall averages, for the preceding ten years;

(2) Contractor's failure to order equipment and materials sufficiently in advance of the time needed for timely completion of the Work;

(3) Contractor's failure to provide adequate notification to utility companies or agencies for connections or services necessary for the timely performance and completion of the Work;

(4) foreseeable conditions which Contractor could have ascertained from reasonably diligent inspection of the Worksite or review of the Contract Documents or other information provided or available to Contractor; or

(5) Contractor's financial inability to perform the Work, including insufficient funds to pay its Subcontractors or suppliers.

(C) ***Compensable Delay.*** Pursuant to Public Contract Code Section 7102, in addition to entitlement to an extension of Contract Time, Contractor is entitled to compensation for costs incurred due to delay caused solely by City, when that delay is unreasonable under the circumstances involved and not within the contemplation of the parties ("Compensable Delay"). Contractor is not entitled to an extension of Contract Time or recovery of costs for Compensable Delay that is concurrent with Non-Excusable Delay, or that does not affect the time for Final Completion, based on the critical path in the baseline schedule.

(D) ***Recoverable Costs.*** Contractor is not entitled to compensation for Excusable Delay unless it is Compensable Delay, as defined above. Contractor is entitled to recover only the actual, direct, reasonable, and substantiated costs ("Recoverable Costs") for each working day that the Compensable Delay prevents Contractor from proceeding with more than 50% of the critical path Work scheduled for that day, based on the most recent progress schedule reviewed by City. Recoverable Costs will not include home office overhead or lost profit.

(E) ***Request for Extension of Contract Time or Recoverable Costs.*** A request for an extension of Contract Time or any associated Recoverable Costs must be submitted in writing to City within ten calendar days of the date the delay is first encountered, even if the duration of the delay is not yet known at that time, or any entitlement to the Contract Time extension or to the Recoverable Costs will be deemed waived. In addition to complying with the requirements of this Article 5, the request must be submitted in compliance with the Change Order request procedures in Article 6 below. Strict compliance with these requirements is necessary to ensure that any delay or consequences of delay may be mitigated as soon as possible, and to facilitate cost-efficient administration of the Project and timely performance of the Work. Any request for an extension of Contract Time or Recoverable Costs that does not strictly comply with all of the requirements of Article 5 and Article 6 will be deemed waived.

(1) *Required Contents.* The request must include a detailed description of the cause(s) of the delay, and must also describe the measures that Contractor has taken to mitigate the delay and/or its effects, including efforts to mitigate the cost impact of the delay, such as by workforce management or by a change in sequencing. If the delay is still ongoing at the time the request is submitted, the request should also include Contractor's plan for continued mitigation of the delay or its effects.

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(2) *Delay Days and Costs.* The request must specify the number of days of Excusable Delay claimed, or provide a realistic estimate if the duration of the delay is not yet known. If Contractor believes it is entitled to Recoverable Costs for Compensable Delay, the request must specify the amount and basis for the Recoverable Costs that are claimed, or provide a realistic estimate if the amount is not yet known. Any estimate of delay duration or cost must be updated in writing and submitted with all required supporting documentation as soon as the actual time and cost is known. The maximum extension of Contract Time will be the number of calendar days, if any, by which an Excusable Delay or a Compensable Delay exceeds a concurrent Non-Excusable Delay. Contractor is entitled to an extension of Contract Time, or compensation for Recoverable Costs for Compensable Delay, only if, and only to the extent that, such delay will unavoidably delay Final Completion.

(3) *Supporting Documentation.* The request must also include any and all supporting documentation necessary to evidence the delay and its actual impacts, including scheduling and cost impacts with a time impact analysis using critical path methodology and demonstrating the unavoidable delay to Final Completion. The time impact analysis must be submitted in a form or format acceptable to City.

(4) *Burden of Proof.* Contractor has the burden of proving that: (a) the delay was an Excusable or Compensable Delay, as defined above; (b) Contractor has made reasonable efforts to mitigate the delay and its schedule and cost impacts; (c) the delay will unavoidably result in delaying Final Completion; and (d) any Recoverable Costs claimed by Contractor were actually incurred and were reasonable under the circumstances.

(5) *Legal Compliance.* Nothing in this Section 5.3 is intended to require the waiver, alteration, or limitation of the applicability of Public Contract Code Section 7102.

(6) *No Waiver.* Any grant of an extension of Contract Time, or compensation for Recoverable Costs due to Compensable Delay, will not operate as a waiver of City's right to assess liquidated damages for Non-Excusable Delay.

(7) *Dispute Resolution.* In the event of a dispute over entitlement to an extension of Contract Time or compensation for Recoverable Costs, Contractor may not stop working pending resolution of the dispute, but must continue to comply with its duty to diligently prosecute the performance and timely completion of the Work. Contractor's sole recourse for an unresolved dispute based on City's rejection of a Change Order request for an extension of Contract Time or compensation for Recoverable Costs is to comply with the Dispute Resolution provisions set forth in Article 12 below.

5.4 **Liquidated Damages.** It is expressly understood that if Final Completion is not achieved within the Contract Time, City will suffer damages from the delay that are difficult to determine and accurately specify. Pursuant to Public Contract Code section 7203, if Contractor fails to achieve Final Completion within the Contract Time, City will charge Contractor in the amount specified in the Contract for each day that Final Completion is delayed beyond the Contract Time, as liquidated damages and not as a penalty.

(A) ***Liquidated Damages.*** Liquidated damages will not be assessed for any Excusable or Compensable Delay, as set forth above.

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(B) ***Milestones.*** Liquidated damages may also be separately assessed for failure to meet milestones specified elsewhere in the Contract Documents.

(C) ***Setoff.*** City is entitled to deduct the amount of liquidated damages assessed against any payments otherwise due to Contractor, including unreleased retention. If there are insufficient Contract funds remaining to cover the full amount of liquidated damages assessed, City is entitled to recover the balance from Contractor or its performance bond surety.

(D) ***Occupancy or Use.*** Occupancy or use of the Project in whole or in part prior to Final Completion does not constitute City's acceptance of the Project and will not operate as a waiver of City's right to assess liquidated damages for Contractor's Non-Excusable Delay in achieving Final Completion.

(E) ***No Limitation on Other Remedies.*** City's right to liquidated damages under this section applies only to damages arising from Contractor's Non-Excusable Delay or failure to complete the Work within the Contract Time. City retains its right to pursue all other remedies under the Contract for other types of default or damage, including damage to property or persons, or for defective materials or workmanship. This provision for liquidated damages will not apply to the Contract or limit City in any way if Contractor abandons the Work. In such event, Contractor will be liable to City for all losses incurred.

Article 6 - Contract Modification

6.1 Contract Modification and Changes in Work. Modifications to the Contract are valid and legally binding only pursuant to a written, duly authorized and signed Field Order or Change Order. City also reserves the right to make changes in the Work without invalidating the Contract. City may direct changes in the Work, which may include Extra Work as set forth in Subsection (B) below. Any change in the Work, whether directed by City or pursuant to Contractor's request for a Change Order under Section 6.2 below, will not be a valid and binding change to the Contract unless it is formalized in a Change Order, which may include commensurate changes in the Contract Price or Contract Time as applicable. Contractor must promptly comply with City-directed changes in the Work in accordance with the original Contract Documents, even if Contractor and City have not yet reached agreement as to adjustments to the Contract Price or Contract Time for the change in the Work or for the Extra Work.

(A) ***Disputes.*** In the event of a dispute over entitlement to or the amount of a change in Contract Time or a change in Contract Price related to a City-directed change in the Work, Contractor must perform the Work as directed and may not delay its Work or cease Work pending resolution of the dispute, but must continue to comply with its duty to diligently prosecute the performance and timely completion of the Work, including the Work in dispute. In the event that City and Contractor dispute whether a portion or portions of the Work are already required by the Contract Documents or constitute Extra Work, or otherwise dispute the interpretation of any portion(s) of the Contract Documents, Contractor must perform the Work as directed and may not delay its Work or cease Work pending resolution of the dispute, but must continue to comply with its duty to diligently prosecute the performance and timely completion of the Work, including the Work in dispute, as directed by City. Contractor's sole recourse for an unresolved dispute related to changes in the Work or performance of any Extra Work is to comply with the dispute resolution provisions set forth in Article 12, below.

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(B) ***Extra Work.*** Contractor must promptly perform any Extra Work authorized by City in accordance with the original Contract Documents, even if Contractor and City have not yet reached agreement on the adjustments to the Contract Price or Contract Time for such work. Contractor must maintain detailed daily records that itemize the cost of each element of Extra Work, and sufficiently distinguish the direct cost of the Extra Work from the cost of other Work performed. Contractor must also provide City with summary report(s) of the Extra Work performed and the related costs, together with copies of certified payroll, invoices, and other documentation substantiating the costs. The Engineer will make any adjustments to Contractor's Extra Work report(s) based on the Engineer's records of such Work. When an Extra Work report(s) is agreed on and signed by both City and Contractor, the report(s) will become the basis for payment under a duly authorized and signed Change Order.

(C) ***Remedy for Non-Compliance.*** Contractor's failure to promptly comply with a City-directed change is deemed a material breach of the Contract, and in addition to all other remedies available to it, City may, at its sole discretion, hire another contractor or use its own forces to complete the disputed Work at Contractor's sole expense, and may deduct the cost from the Contract Price.

6.2 Contractor Change Order Requests. Contractor must submit a request or proposal for a change in the Work or a change in the Contract Price or Contract Time as a written Change Order request or proposal.

(A) ***Time for Submission.*** Any request for a change in the Contract Price or the Contract Time must be submitted in writing to the Engineer within ten calendar days of the date that Contractor first encounters the circumstances, information or conditions giving rise to the Change Order request, even if the total amount of the requested change in the Contract Price or impact on the Contract Time is not yet known at that time. If City requests that Contractor propose the terms of a Change Order, unless otherwise specified in City's request, Contractor must provide the Engineer with a written proposal for the change in the Contract Price or Contract Time within five working days of receiving City's request, in a form satisfactory to the Engineer.

(B) ***Required Contents.*** Any Change Order request or proposal submitted by Contractor must include a complete breakdown of actual or estimated costs and credits, and must itemize labor, materials, equipment, taxes, insurance, and subcontract amounts. Any estimated cost must be updated in writing as soon as the actual amount is known.

(C) ***Required Documentation.*** All claimed costs must be fully documented, and any related request for an extension of time or delay-related costs must be included at that time and in compliance with the requirements of Article 5 of the General Conditions.

(D) ***Required Form.*** Contractor must use City's form(s), or a format(s) approved by City, for submitting all Change Order requests or proposals, unless otherwise specified by City during the pre-construction conference.

(E) ***Certification.*** All Change Order requests must be signed by Contractor and must include the following certification:

> "The undersigned Contractor certifies under penalty of perjury that its statements and representations in this Change Order request are true and correct. Contractor warrants that this Change Order request is comprehensive and complete, and agrees that any costs, expenses, or time extension request not included herein is deemed waived. Contractor understands that submission

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of claims which have no basis in fact or which Contractor knows to be false may violate the False Claims Act, as set forth in Government Code Sections 12650 et seq."

6.3 Adjustments to Contract Price. The amount of any increase or decrease in the Contract Price will be determined based on one of the following methods, but in the order provided:

(A) ***Unit Pricing.*** Amounts previously provided by Contractor in the form of unit prices, either in a bid schedule or schedule of values, will apply if unit pricing has previously been provided in Contractor's accepted bid schedule or schedule of values for the affected Work. No additional markup for overhead or profit or other indirect costs will be added to the calculation.

(B) ***Lump Sum.*** A mutually agreed upon lump sum, with no additional markup for overhead, profit or other indirect costs.

(C) ***Time and Materials.*** On a time and materials basis, which may include a not-to-exceed limit, calculated as the total of the following sums:

(1) All direct labor costs, plus 15 percent markup;

(2) All direct material costs, including sales tax, plus 15 percent markup;

(3) All direct plant and equipment rental costs, plus 15 percent markup; and

(4) All direct subcontract costs, plus 15 percent markup for the first $2,000 in such costs and five percent markup for all subcontract costs in excess of $2,000.

(D) ***Markup.*** Markup is deemed to include all indirect costs, including overhead and profit. Any additional bond or insurance premium costs will be considered to be included in the amounts charged to City as set forth above.

6.4 Unilateral Change Order. If City disagrees with the amount of compensation or extension of time that Contractor has requested, City may elect to issue a unilateral Change Order, directing performance of the Work, and authorizing a change in the Contract Price or Contract Time in the amount City believes is merited. Contractor's sole recourse to dispute the terms of a unilateral Change Order is to submit a timely Claim pursuant to Article 12, below.

6.5 Non-Compliance Deemed Waiver. Contractor waives its entitlement to any increase in the Contract Price or Contract Time if Contractor fails to fully comply with the provisions of this Article. Contractor will not be paid for unauthorized Extra Work.

6.6 Value Engineering. Unless otherwise specified in the Special Conditions, this Contract does not provide for payment of extra compensation to the Contractor for cost reductions resulting from a proposal submitted by the Contractor, and Contractor will not be entitled additional compensation for value engineering pursuant to Public Contract Code section 7101.

Article 7 - General Construction Provisions

7.1 Permits and Taxes.

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(A) ***General.*** With the exception of City building permit fees, Contractor must obtain and pay for all permits, fees, or licenses required to perform the Work, including a City business license. Contractor and all Subcontractors must pay City business tax and registration tax for the business license under Fremont Municipal Code Chapter 5.05. Contractor must cooperate with and provide notifications to all government agencies with jurisdiction over the Project, as may be required. Contractor must provide City with copies of all notices, permits, licenses, and renewals required for the Work. Contractor will be solely responsible for finalizing and closing out all permits for the Project issued by City's building department and all other government agencies with jurisdiction over the Project.

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(B) ***Federal Excise Tax.*** Contractor must pay for all taxes on labor, material and equipment, except Federal Excise Tax to the extent that City is exempt from Federal Excise Tax.

7.2 **Temporary Facilities.** Except as otherwise specified in the Special Conditions, and in addition to any requirements in the Specifications pertaining to temporary facilities, Contractor must provide, at Contractor's sole expense, any and all temporary facilities for the Project, including an onsite staging area for material and equipment, a field office, sanitary facilities, utilities, storage, scaffolds, barricades, walkways, and any other temporary structure required to safely perform the Work along with any utility services incidental thereto.

(A) ***Standards.*** Such structures must be safe and adequate for the intended use, and installed and maintained in accordance with all applicable federal, state, and local laws, codes, and regulations.

(B) ***Screening.*** Contractor must fence and screen the Project site and staging area, and its operation must minimize inconvenience to neighboring properties.

(C) ***Utilities.*** Contractor must install and maintain the light, power, water and all other utilities required for the Project site, including the piping, wiring, lamps and related equipment necessary to perform the Work.

(D) ***Removal and Repair.*** Contractor must promptly remove all such temporary facilities when they are no longer needed or upon completion of the Work, whichever comes first. Contractor must promptly repair any damage to City's property caused by the installation, use, or removal of the temporary facilities, and must promptly restore the property to its original or intended condition.

(E) ***Additional Requirements.*** Additional provisions pertaining to temporary facilities may be included in the Specifications or Special Conditions.

7.3 **Noninterference and Additional Work Areas.** Contractor must avoid interfering with City's use of its property at or adjacent to the Project site, including use of roadways, entrances, parking areas, walkways, and structures. Contractor must also minimize disruption of access to private property in the Project vicinity. Contractor must coordinate with affected property owners, tenants, and businesses, and maintain some vehicle and pedestrian access to their residences or properties at all times. Temporary access ramps, fencing or other measures must be provided as needed. Before blocking access to a private driveway or parking lot, Contractor must notify the affected parties of the pending closure and allow them to remove vehicles. Private driveways, residences and parking lots must have access to a roadway during non-Work hours.

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(A) ***Offsite Acquisition.*** Unless otherwise provided by City, Contractor must acquire, use and dispose of, at its sole expense, any additional Work areas, easements, and temporary facilities necessary to access and perform the Work.

(B) ***Offsite Staging Area and Field Office*****.** If additional space beyond the Project site is needed for the staging area or the field office, Contractor may need to make arrangements with the nearby property owner(s) to secure the space. Before occupying any property owned by a third party, Contractor must provide City with a copy of the necessary license agreement, easement, or other written authorization from the property owner, together with a written release from the property owner holding City harmless from any related liability.

7.4 Signs. No signs may be displayed on or about City's property, except signage which is required by law or by the Contract Documents, without City's prior written approval as to size, design, and location.

7.5 Worksite and Nearby Property Protections.

(A) ***General.*** Contractor is responsible at all times, on a 24-hour basis and at its sole cost, for protecting the Work, the Project site, and the materials and equipment to be incorporated into the Work, until the notice of completion has been recorded. Except as specifically authorized by City, Contractor must confine its operations to the area of the Project site indicated in the Drawings. Contractor is liable for any damage caused to the Work, City's real or personal property, the real or personal property of adjacent or nearby property owners, and the work or personal property of other contractors working for City.

(1) Subject to City's approval, Contractor will provide and install safeguards to protect the Work, the Project site, City's real or personal property, and the real or personal property of adjacent or nearby property owners.

(2) Public wastewater systems may not be interrupted. If the Work disrupts existing sewer facilities, Contractor must immediately notify City and establish a plan, subject to City's approval, to convey the sewage in closed conduits back into the sanitary sewer system. Sewage must not be permitted to flow in trenches or be covered by backfill.

(3) Contractor must remove with due care, and store at City's request, any objects or material from the Project site that City will salvage or reuse at another location(s).

(B) ***Securing Project Site.*** After completion of Work each day, Contractor must secure the Project site and, to the extent feasible, make the area reasonably accessible to the public unless City approves otherwise. All excess materials and equipment not protected by approved traffic control devices must be relocated to the staging area or demobilized. Trench spoils must be hauled off the Project site daily and open excavations must be protected with steel plates. Contractor and Subcontractor personnel may not occupy or use the Project site for any purpose during non-Work hours, except as may be provided in the Contract Documents or pursuant to prior written authorization from City.

(C) ***Reporting Damage.*** If any death, personal injury or property damage occurs in connection with the performance of the Work or otherwise in relation to the Project or the Contract, Contractor must immediately notify City. Contractor must first notify the Project Manager and the City Risk Manager's office by telephone and then promptly submit to the Project Manager and City Risk Manager a written report, in a form acceptable to City, with the following information: (1) a detailed description of the damage or injury, including

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the location, the circumstances, and the name and address of any injured or deceased person(s) and any affected property owner(s); (2) the name and address of any witnesses to the incident; and (3) the name and address of Contractor's insurance company representatives.

(D) ***Unforeseen Conditions.*** If Contractor encounters facilities, utilities, or other unknown conditions not shown on or reasonably inferable from the Drawings or apparent from inspection of the Project site, Contractor must immediately notify City and promptly submit a Request for Information to the Engineer and avoid taking any action which could cause damage to the facilities or utilities pending further direction from the Engineer. The Engineer's written response will be final and binding on Contractor. If the Engineer's subsequent direction to Contractor affects Contractor's cost or time to perform the Work, Contractor may submit a Change Order request as set forth in Article 6 above.

(E) ***Support; Adjacent Properties.*** Contractor must provide, install, and maintain all shoring, bracing, and underpinning necessary to provide support to City's property and adjacent properties and improvements thereon. Contractor must provide notifications to adjacent property owners as may be required by law.

(F) ***Post-Construction Restoration.*** Contractor must ensure, as part of the Work, that all parts of the construction are properly joined with the previously existing and adjacent improvements and conditions. Contractor must provide all cutting, fitting and patching needed to accomplish that requirement. Contractor must also repair or replace all existing improvements that are damaged or removed during the Work, both on and off the Project site, including curbs, sidewalks, driveways, fences, signs, utilities, street surfaces and structures. Repairs and replacements must be at least equal to the previously existing improvements, and the condition, finish and dimensions must match the previously existing improvements.

(G) ***Additional Requirements.*** Any additional requirements for protecting the Work, the Project site and the adjacent or nearby property may be included in the Special Conditions or Specifications.

7.6 Materials and Equipment.

(A) ***General.*** Unless otherwise specified, all materials and equipment required for the Work must be new, free from defects, and of the best grade for the intended purpose, and furnished in sufficient quantities to ensure the proper and expeditious performance of the Work. Contractor must furnish evidence satisfactory to the Project Manager concerning the kind and quality of materials and equipment provided. Contractor must also employ measures to preserve the specified quality and fitness of the materials and equipment. Unless otherwise specified, all materials and equipment required for the Work are deemed to include all components required for complete installation and intended operation, and must be installed in accordance with the manufacturer's recommendation. Contractor is responsible for all shipping, handling, and storage costs associated with the materials and equipment required for the Work, and is responsible for providing security and protecting the Work and all of the required materials, supplies, tools and equipment at Contractor's sole cost until City has formally accepted the Project as set forth in Section 11.1 below. Contractor will not assign, sell, mortgage, or hypothecate any materials or equipment for the Project, or remove any materials or equipment that have been installed or delivered.

(B) ***City-Provided.*** If the Work includes installation of materials or equipment to be provided by City, Contractor is solely responsible for the proper examination, handling, storage, and installation of such items in accordance with the Contract Documents.

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Contractor must promptly notify City of any defects discovered in City-provided materials or equipment. Contractor is solely responsible for any loss of or damage to such items which occurs while the items are in Contractor's custody and control, the cost of which may be offset from the Contract Price and deducted from any payment(s) due to Contractor.

(C) ***Intellectual Property Rights.*** Contractor must, at its sole expense, obtain any authorization or license required, including payment of any royalties or license fees, for the use for or incorporation into the Work of an invention, design, product, material, equipment, device, or process that is patented, copyright-protected, or subject to advance licensure for use. Contractor's indemnity obligation in Article 4 applies to any claimed violation of intellectual property rights in violation of this provision.

(D) ***Certificate of Compliance.*** When a Certificate of Compliance is specified or for any material produced outside of the United States, Contractor must submit a Certificate of Compliance before incorporating that material into the Project. The Certificate of Compliance must be in a form acceptable to the Engineer, identifying the material and its source, and the lot. The Certificate of Compliance must be signed by the material producer stating that the material fully complies with the applicable requirements of the specifications. Submission of a Certificate of Compliance will not limit Contractor's continuing obligation to use only materials that conform with the requirements of the Contract Documents.

7.7 Substitutions.

(A) ***"Or Equal."*** Any specification designating a material, product, or thing (collectively, "item") or service by specific brand or trade name that is followed by the words "or equal" is intended to indicate the quality and type of item or service desired, and Contractor may request use of any equal item or service.

(B) ***Request for Substitution.*** A post-award request for substitution of an item or service must be submitted in writing to the Engineer for approval in advance, within the applicable time period provided in the Contract Documents. If no time period is specified, the substitution request may be submitted any time within 35 days after the date of award of the Contract, or sufficiently in advance of the time needed to avoid delay of the Work, whichever is earlier.

(C) ***Substantiation.*** Any available data substantiating the proposed substitute as an equal item or service must be submitted with the written request for substitution. Contractor's failure to timely provide all necessary substantiation, including any required test results as soon as they are available, is grounds for rejection of the proposed substitution, without further review.

(D) ***Burden of Proving Equality.*** Contractor has the burden of proving the equality of the proposed substitution at Contractor's sole cost, including testing using methods acceptable to City. City has sole discretion to determine whether a proposed substitution is equal, and City's determination is final.

(E) ***Approval or Rejection.*** If the proposed substitution is approved, Contractor is solely responsible for any additional costs or time associated with the substituted item or service. If the proposed substitution is rejected, Contractor must, without delay, install the item or use the service as specified by City with no increase in Contract Price or Contract Time.

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(F) ***Contractor's Obligations.*** City's review of a proposed substitution will not relieve Contractor from any of its obligations under the Contract Documents. In the event Contractor makes an unauthorized substitution, Contractor will be solely responsible for all resulting cost impacts, including the cost of removal and replacement and the impact to other design elements.

(G) ***Additional Requirements for Substitutions.*** Any additional requirements for substitutions may be included in the Special Conditions or Specifications.

7.8 Testing and Inspection.

(A) ***General.*** All materials, equipment, and workmanship used in the Work are subject to inspection and testing by City at all times and locations during construction and/or fabrication and at any Work site, including at shops and yards as well as at the Project site. All manufacturers' application or installation instructions must be provided to the Inspector at least ten days prior to the first such application or installation. Contractor must, at all times, provide City with safe access to the Work site and make all portions of the Work available for inspection.

(B) ***Scheduling and Notification.*** Contractor must cooperate with City in coordinating the inspections and testing. Contractor must schedule all tests required by the Contract Documents in time to avoid any delay to the progress of the Work. Contractor must notify the Engineer no later than two Working Days before any inspection or testing, and must provide timely notice to the other necessary parties as specified in the Contract Documents. If Contractor schedules an inspection or test beyond specified Work hours, or on a Saturday, Sunday, or recognized City holiday, Contractor must notify the Engineer at least two Working Days in advance for approval. If approved, Contractor must reimburse City for the cost of the overtime inspection or testing.

(C) ***Responsibility for Costs.*** City will bear the initial cost of testing to be performed by City's inspectors or any independent testing consultants retained by City, subject to the following exceptions:

(1) Contractor will be responsible for the costs of any subsequent tests which are required to substantiate compliance with the Contract Documents, and any associated remediation costs.

(2) Contractor will be responsible for inspection costs, at City's established rates, for inspection time lost because the Work is not ready or Contractor fails to appear for a scheduled inspection.

(3) If any portion of the Work that is subject to inspection or testing is covered or concealed by Contractor prior to the inspection or testing, Contractor will bear the cost of making that portion of the Work available for the inspection or testing required by the Contract Documents, and any associated repair or remediation costs. If the Engineer requests to see a covered or concealed portion of the Work that was not subject to such testing or inspection, Contractor must promptly uncover the Work but may also submit a request for a Change Order for the cost of uncovering and then re-covering that portion of the Work. However, if the uncovered Work does not conform to the Contract Documents, Contractor must pay all such costs and will not be entitled to any adjustment to the Contract Time or Contract Price.

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(4) Contractor is responsible for properly shoring all compaction test sites deeper than five feet below grade, as required under Section 7.15 below.

(5) Any Work or material that is defective or fails to comply with the requirements of the Contract Documents must be promptly repaired, removed, replaced, or corrected by Contractor, at Contractor's sole expense, even if that Work or material was previously inspected or included in a progress payment.

(D) ***Contractor's Obligations.*** Contractor is solely responsible for any delay occasioned by remediation of defective or noncompliant Work or material. Inspection of the Work does not in any way relieve Contractor of its obligations to perform the Work as specified. Any Work done without the required inspection(s) will also be subject to rejection by City.

(E) ***Distant Locations.*** If required off-site testing or inspection must be conducted at a location more than 100 miles from the Project site, Contractor is solely responsible for the additional travel costs required for testing and/or inspection at such locations.

(F) ***Final Inspection.*** The provisions of this Section 7.8 apply to final inspection under Article 11, Completion and Warranty Provisions.

(G) ***Additional Requirements for Testing and Inspection.*** Any additional requirements for inspection and testing may be included in the Special Conditions or Specifications.

7.9 Worksite Maintenance and Operation. Contractor must at all times, on a 24 hour basis and at its sole cost, maintain the Project site and staging and storage areas in clean and neat condition and in compliance with all regulatory requirements for air quality and dust control. Contractor must also, on a daily basis and at its sole cost, remove and properly dispose of the debris and waste materials from the Project site. Project site maintenance expenses are deemed to have been included in Contractor's Bid Proposal.

(A) ***Air Emissions Control***. Contractor must not discharge smoke or other air contaminants into the atmosphere in violation of any applicable law, regulation or rule.

(B) ***Dust and Debris***. Contractor must minimize and confine dust and debris resulting from the Work. Contractor must abate dust nuisance by cleaning, sweeping, and immediately sprinkling with water excavated areas of dirt or other materials prone to cause dust, and within one hour after the Engineer notifies Contractor that an airborne nuisance exists. The Engineer may direct that Contractor provide an approved water-spraying truck for this purpose. If the Engineer determines that the dust control is not adequate, City may have the work done by others and deduct the cost from the Contract Price. Contractor will immediately remove any excess excavated material from the Worksite and any dirt deposited on public streets.

(C) ***Clean up.*** Before discontinuing Work in an area, Contractor must clean the area and remove all rubbish and debris along with the construction equipment, tools, machinery, waste and surplus materials. Except as otherwise specified, all excess Project materials, and the materials removed from existing improvements on the Project site with no salvage value or intended reuse by City, will be Contractor's property.

(1) Hauling trucks and other vehicles leaving the Project site must be cleaned of exterior mud or dirt before traveling on City streets. Materials and loose debris must be delivered and loaded to prevent dropping materials or debris. Contractor must immediately remove spillage from

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hauling on any publicly traveled way. Streets affected by Work on the Project must be kept clean by street sweeping.

(2) If the Contract Documents include the Caltrans Standard Specifications, Contractor must comply with the Caltrans requirements for disposal of material outside of the highway right of way.

(D) ***Disposal.*** Contractor must dispose of all Project debris and waste materials in a safe and legal manner. Contractor may not burn or bury waste materials on the Project site. Contractor will not allow any dirt, refuse, excavated material, surplus concrete or , or any associated washings, to be disposed of onto streets, into manholes or into City's storm drain system.

(E) ***Completion.*** At the completion of the Work, Contractor must remove from the Worksite all of its equipment, tools, surplus materials, waste materials and debris, presenting a clean and neat appearance. Before demobilizing from the Worksite, Contractor must ensure that all surfaces are cleaned, sealed, waxed, or finished as applicable, and that all marks, stains, paint splatters, and the like have been properly removed from the completed Work and the surrounding areas, leaving those areas in the condition originally found or better.

(F) ***Non-Compliance.*** If Contractor fails to comply with its maintenance and cleanup obligations or any City clean up order, City may, acting in its sole discretion, elect to suspend the Work until the condition(s) is corrected with no increase in the Contract Time or Contract Price, or undertake appropriate cleanup measures without further notice and the cost will be deducted from any amounts due or to become due to Contractor.

7.10 Instructions and Manuals. Contractor must provide to City three copies each of all instructions and manuals required by the Contract Documents, unless otherwise specified. These must be complete as to drawings, details, parts lists, performance data, and other information that may be required for City to easily maintain and service the materials and equipment installed for this Project.

(A) ***Submittal Requirements.*** All manufacturers' application or installation instructions must be provided to City at least ten days prior to the first such application. The instructions and manuals, along with any required guarantees and warranties, must be delivered to City for review.

(B) ***Instruction of Personnel.*** Contractor or its Subcontractors must instruct City's personnel in the operation and maintenance of any complex equipment as a condition precedent to Final Completion, if required in the Contract Documents.

7.11 As-built Drawings. Contractor and its Subcontractors must maintain at the Project site a separate complete set of the Drawings which will be used solely for the purpose of recording changes made in any portion of the Work in order to create accurate record drawings at the end of the Project.

(A) ***Duty to Update.*** The as-built drawings must be updated as changes occur, on a daily basis if necessary. Progress payments may be delayed, in whole or in part, until the as-built drawings are brought up to date to the satisfaction of City. Actual locations to scale must be identified on the as-built drawings for all runs of mechanical and electrical work, including all site utilities installed underground, in walls, floors, or otherwise concealed. Deviations from the original Drawings must be shown in detail. The location of all main runs, whether piping, conduit, ductwork or drain lines, must be shown by dimension and elevation.

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(B) ***Final Completion.*** Contractor must verify that all changes in the Work are depicted in the as-built drawings and must deliver the complete set of as-built drawings in PDF format to City for review and approval as a condition precedent to Final Completion.

7.12 Existing Utilities. As required by Government Code Section 4215, if, during the performance of the Work, Contractor discovers utility facilities not identified by City in the Contract Documents, Contractor must immediately provide written notice to City and the utility. City assumes responsibility for the timely removal, relocation, or protection of existing main or trunkline utility facilities located on the Project site if those utilities are not identified in the Contract Documents. Contractor will be compensated in accordance with the provisions of the Contract Documents for the costs of locating, repairing damage not due to Contractor's failure to exercise reasonable care, and removing or relocating such utility facilities not indicated in the Drawings or Specifications with reasonable accuracy, and for equipment on the Project necessarily idled during such work. Contractor will not be assessed liquidated damages for delay in completion of the Work, to the extent such delay was caused by City's failure to provide for removal or relocation of the utility facilities.

7.13 Notice of Excavation. Government Code Section 4216.2 requires that, except in an emergency, Contractor must contact the appropriate regional notification center, or Underground Services Alert ("USA") at 800-642-2444 (for Northern California), at least two working days but not more than 14 calendar days before starting any excavation if the excavation will be conducted in an area that is known, or reasonably should be known, to contain subsurface installations, and, if practical, Contractor must delineate with white paint or other suitable markings the area to be excavated. Contractor is required to contact USA before beginning Work on the Project, and take appropriate measures to avoid damaging or obstructing access to subsurface installations.

7.14 Trenching and Excavations of Four Feet or More. As required by Public Contract Code Section 7104, if the Work includes digging trenches or other excavations that extend deeper than four feet below the surface, the following provisions in this Section apply to the Work and the Project.

(A) ***Duty to Notify.*** Contractor must promptly, and before the following conditions are disturbed, provide written notice to City if Contractor finds any of the following conditions:

(1) Material that Contractor believes may be a hazardous waste, as defined in Section 25117 of the Health and Safety Code, that is required to be removed to a Class I, Class II, or Class III disposal site in accordance with the provisions of existing law;

(2) Subsurface or latent physical conditions at the Worksite differing from those indicated by information about the Worksite made available to bidders prior to the deadline for submitting bids; or

(3) Unknown physical conditions at the Worksite of any unusual nature, materially different from those ordinarily encountered and generally recognized as inherent in work of the character required by the Contract Documents.

(B) ***City Investigation.*** City will promptly investigate the conditions and if City finds that the conditions do materially differ or do involve hazardous waste, and cause a decrease or increase in Contractor's cost of, or the time required for, performance of any part of the Work, City will issue a Change Order.

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(C) ***Disputes.*** In the event that a dispute arises between City and Contractor regarding any of the conditions specified in subsection (A) above, Contractor will not be excused from any scheduled completion date provided for in the Contract Documents, but must proceed with all Work to be performed under the Contract. Contractor will retain any and all rights provided either by the Contract or by law which pertain to the resolution of disputes between Contractor and City.

7.15 Trenching of Five Feet or More. As required by Labor Code Section 6705, if the Contract Price exceeds $25,000 and the Work includes the excavation of any trench or trenches of five feet or more in depth, a detailed plan must be submitted to City for acceptance in advance of the excavation. The detailed plan must show the design of shoring, bracing, sloping, or other provisions to be made for worker protection from the hazard of caving ground during the excavation. If the plan varies from the shoring system standards, it must be prepared by a California registered civil or structural engineer. Use of a shoring, sloping, or protective system less effective than that required by the Construction Safety Orders is prohibited.

7.16 New Utility Connections. City will pay connection charges and meter costs for new permanent utilities required by the Contract Documents, if any. Contractor must notify City sufficiently in advance of the time needed to request service from each utility provider so that connections and services are initiated in accordance with the Project schedule.

7.17 Lines and Grades. Contractor is required to use any benchmark provided by the Engineer. Unless otherwise specified in the Contract Documents, Contractor must engage a California licensed surveyor to provide all lines and grades required to execute the Work. Contractor must also provide, preserve, and replace if necessary, all construction stakes required for the Project. All stakes or marks must be set by a California licensed surveyor or a California registered civil engineer. Contractor must notify the Engineer of any discrepancies found between Contractor's staking and grading and information provided by the Contract Documents. Upon completion, all Work must conform to the lines, elevations, and grades shown in the Plans.

7.18 Historic or Archeological Items.

(A) ***Contractor's Obligations.*** Contractor must ensure that all persons performing Work at the Project site are required to immediately notify the Project Manager, upon discovery of any potential historic or archeological items, including historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints or other archeological, paleontological or historical feature on the Project site (collectively, "Historic or Archeological Items").

(B) ***Discovery; Cessation of Work.*** Upon discovery of any potential Historic or Archeological Items, Work must be stopped within an 85-foot radius of the find and may not resume until authorized in writing by City. If required by City, Contractor must assist in protecting or recovering the Historic or Archeological Items, with any such assistance to be compensated as Extra Work on a time and materials basis under Article 6, Contract Modification. Any suspension of Work required due to discovery of Historic or Archeological Items will be treated as a suspension for convenience under Article 13.

7.19 Environmental Control. Contractor must not pollute any drainage course or its tributary inlets with fuels, oils, bitumens, acids, insecticides, herbicides or other harmful materials. Contractor must prevent the release of any hazardous material or hazardous waste into the soil or groundwater, and prevent the unlawful discharge of pollutants into City's storm

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drain system as required below. Contractor and its Subcontractors must at all times in the performance of the Work comply with all applicable federal, state, and local laws and regulations concerning pollution of waterways.

(A) ***Stormwater Permit.*** Contractor must comply with all applicable conditions of the State Water Resources Control Board National Pollutant Discharge Elimination System General Permit for Waste Discharge Requirements for Discharges of Stormwater Runoff Associated with Construction Activity ("Stormwater Permit").

(B) ***Contractor's Obligations.*** If required for the Work, a copy of the Stormwater Permit is on file in City's principal administrative offices, and Contractor must comply with the same without adjustment of the Contract Price or the Contract Time. Contractor must timely and completely submit required reports and monitoring information required by the conditions of the Stormwater Permit. Contractor also must comply with all other applicable state, municipal or regional laws, ordinances, rules or regulations governing discharge of stormwater, including applicable municipal stormwater management programs.

7.20 **Noise Control.** The noise level from Contractor's operations must not exceed 86 dBa at a distance of 50 feet at any time. In addition, Contractor must comply with all applicable noise control laws, ordinances, regulations and rules, including any noise mitigation requirements in an environmental document applicable to the Project, such as a mitigated negative declaration or environmental impact report. Noise control requirements apply to all equipment used for the Work or related to the Work, including trucks, transit mixers or transient equipment that may or may not be owned by Contractor.

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Article 8 - Payment

8.1 **Schedule of Values.** Prior to submitting its first application for payment, Contractor must prepare and submit to the Project Manager a schedule of values apportioned to the various divisions and phases of the Work, providing an itemized breakdown of all lump sum pricing previously provided in Contractor's Bid Proposal or Bid Schedule, including mobilization and demobilization. Each line item contained in the schedule of values must be assigned a value such that the total of all items equals the Contract Price. The items must be sufficiently detailed to enable accurate evaluation of the percentage of completion claimed in each application for payment, and the assigned value consistent with any itemized or unit pricing submitted with Contractor's bid.

(A) ***Measurements for Unit Price Work.*** Materials and items of Work to be paid for on the basis of unit pricing will be measured according to the methods stipulated in the Contract Documents. For progress payments, compensation for unit-priced items will be based on the actual quantities installed during the preceding month, with the exception of items identified by City as a "Final Pay" items on the Bid Schedule, which will be paid for based solely on City's estimated quantities, except as provided in Section 8.8, on Final Payment.

(B) ***Deleted or Reduced Work.*** Contractor will not be compensated for Work that City has deleted or reduced in scope, except for any labor, material or equipment costs for such Work that Contractor reasonably incurred before Contractor learned that the Work could be deleted or reduced. Contractor will only be compensated for those actual, direct and documented costs incurred, and will not be entitled to any mark up for overhead or lost profits.

8.2 **Progress Payments.** Following the last day of each month, or as otherwise required by the Special Conditions or Specifications, Contractor will submit to the Project Manager a monthly application for payment for Work performed during the preceding month based on the estimated value of the Work performed during that preceding month.

(A) ***Application for Payment.*** Each application for payment must be itemized to include labor, materials, and equipment incorporated into the Work, and materials and equipment installed in the Project, as well as authorized and approved Change Orders. Each pay application must be supported by Contractor's Bid Schedule or schedule of values and any other substantiating data required by the Contract Documents.

(B) ***Payment of Undisputed Amounts.*** City will pay the undisputed amount due within thirty (30) days after Contractor has submitted a complete and accurate payment application, subject to Public Contract Code Section 20104.50. City will deduct a percentage from each progress payment as retention, as set forth in Section 8.5, below, and may deduct additional amounts as set forth in Section 8.3, below.

8.3 **Adjustment of Payment Application.** City may adjust the amount requested, withhold disputed sums, or reject a payment application, including application for Final Payment, in whole or in part, based upon any of the circumstances listed below. Contractor will be notified in writing of the basis for the modification to the amount requested, and will be promptly paid if the basis for that modification has been remedied and no longer exists.

(A) Contractor's unexcused failure to perform the Work as required by the Contract Documents, including correction or completion of punch list items;

(B) Loss or damage caused by Contractor or its Subcontractor(s) arising out of or relating to performance of the Work or any failure to protect the Worksite;

(C) Contractor's failure to pay its Subcontractors and suppliers when payment is due;

(D) Contractor's failure to timely correct rejected, nonconforming, or defective Work;

(E) Any unreleased stop notice, retained as 125% of the amount claimed;

(F) Contractor's failure to submit any required schedule or schedule update in the manner and within the time specified in the Contract Documents;

(G) Contractor's failure to maintain or submit as-built documents in the manner and within the time specified in the Contract Documents;

(H) Work performed without City review of Shop Drawings, when review of Shop Drawings is required before proceeding with the Work;

(I) Fines assessed under the Labor Code; or

(J) Any other costs or charges that may be offset against payments due, as provided in the Contract Documents, including liquidated damages.

8.4 **Acceptance of Work.** Neither City's payment of progress payments nor its partial or full use or occupancy of the Project constitutes acceptance of any part of the Work.

8.5 **Retention.** City will retain five percent of the amount due on each progress payment, or the percentage stated in the Notice Inviting Bids, whichever is greater, as retention to ensure full and satisfactory performance of the Work.

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(A) ***Substitution of Securities.*** As provided by Public Contract Code Section 22300, Contractor may request in writing that it be allowed, at its sole expense, to substitute securities for the retention withheld by City. Any escrow agreement entered into pursuant to this provision must fully comply with Public Contract Code Section 22300, and will be subject to approval as to form by City's legal counsel.

(B) ***Release of Undisputed Retention.*** All undisputed retention, less any amounts that may be assessed as liquidated damages, retained for stop notices, or otherwise withheld under Section 8.3 or Section 8.6, will be released as Final Payment to Contractor no sooner than 35 days following recordation of the notice of completion, and no later than 60 days following acceptance of the Project by City's governing body or authorized designee pursuant to Section 11.1(D) below, or, if the Project has not been accepted, no later than 60 days after the Project is otherwise considered complete under Public Contract Code Section 7107(c).

8.6 **Setoff.** City is entitled to set off any amounts due from Contractor against any payments due to Contractor. City's entitlement to setoff includes progress payments as well as Final Payment and unreleased retention.

8.7 **Payment to Subcontractors and Suppliers.** Each month, Contractor must promptly pay each Subcontractor and supplier the value of the portion of labor, materials, and equipment incorporated into the Work or delivered to the Worksite by the Subcontractor or supplier during the preceding month. Such payments must be made in accordance with the requirements of the law, and those of the Contract Documents and applicable subcontract or supplier contract.

(A) ***Withholding for Stop Notice.*** Pursuant to Civil Code Section 9358, City will withhold 125% of the amount claimed by an unreleased stop notice, a portion of which may be retained by City for the costs incurred in handling the stop notice claim, including attorneys' fees and costs, as authorized by law.

(B) ***Joint Checks.*** City reserves the right to issue joint checks made payable to Contractor and its Subcontractors or suppliers. As a condition to release of payment by a joint check, the joint check payees may be required to execute a joint check agreement in a form provided or approved by City. The joint check payees will be jointly and severally responsible for the allocation and disbursement of funds paid by joint check. Payment by joint check will not be construed to create a contractual relationship between City and a Subcontractor or supplier of any tier beyond the scope of the joint check agreement.

8.8 **Final Payment.** Contractor's application for Final Payment must comply with the requirements for submitting an application for a progress payment as stated in Section 8.2, above. Adjustments to under-payment or over-payment in previous progress payments, including adjustments to payments for unit-priced items based on actual quantities, may be included in the calculation of Final Payment. However, compensation items for identified by City as a "Final Pay" item on the Bid Schedule (marked "F") will be based solely on the estimated quantities provided in the Bid Schedule. Only changes in quantities due to design changes will be measured and paid separately pursuant to a Change Order. The date of Final Payment is deemed to be effective on the date that City acts to release undisputed retention as final payment to Contractor, or otherwise provides written notice to Contractor of Final Payment. If the amount due from Contractor to City exceeds the amount of Final Payment, City retains the right to recover the balance from Contractor or its sureties.

8.9 **Release of Claims.** City may, at any time, require that payment of the undisputed portion of any progress payment or Final Payment be contingent upon Contractor

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furnishing City with a written release of all claims against City arising from or related to the portion of Work covered by those undisputed amounts, in accordance with Civil Code Section 8120, et seq. Any disputed amounts may be specifically excluded from the release.

8.10 **Warranty of Title.** Contractor warrants that title to all work, materials, or equipment incorporated into the Work and included in a request for payment will pass over to City free of any claims, liens, or encumbrances upon payment to Contractor.

Article 9 - Labor Provisions

9.1 **Discrimination Prohibited**. Discrimination against any prospective or present employee engaged in the Work on grounds of race, color, ancestry, national origin, ethnicity, religion, sex, sexual orientation, age, disability, or marital status is strictly prohibited. Contractor and its Subcontractors are required to comply with all applicable federal and California laws, including the California Fair Employment and Housing Act (Government Code Sections 12900 et seq.), Government Code Section 11135, and Labor Code Sections 1735, 1777.5, 1777.6, and 3077.5.

9.2 **Labor Code Requirements.**

(A) ***Eight Hour Day.*** Under Labor Code Section 1810, eight hours of labor constitute a legal day's work under this Contract.

(B) ***Penalty.*** Under Labor Code Section 1813, Contractor will forfeit to City as a penalty, the sum of $25.00 for each day during which a worker employed by Contractor or any Subcontractor is required or permitted to work more than eight hours in any one calendar day or more than 40 hours per calendar week, except if such workers are paid overtime under Labor Code Section 1815.

(C) ***Apprentices.*** Contractor is responsible for compliance with the requirements governing employment and payment of apprentices, as set forth in Labor Code Section 1777.5, which is fully incorporated by reference.

(D) ***Notices.*** Under Labor Code Section 1771.4, Contractor is required to post all job site notices prescribed by law or regulation.

9.3 **Prevailing Wages.** Each worker performing Work under this Contract that is covered under Labor Code Section 1720 or 1720.9, including cleanup at the Project site, must be paid at a rate not less than the prevailing wage as defined in Sections 1771 and 1774 of the Labor Code. The prevailing wage rates are available online at http://www.dir.ca.gov/dlsr. Contractor must post a copy of the applicable prevailing rates at the Worksite.

(A) ***Penalties.*** Under Labor Code Section 1775, Contractor and any Subcontractor will forfeit to City as a penalty up to $200.00 for each calendar day, or portion a day, for each worker paid less than the applicable prevailing wage rate. Contractor must also pay each worker the difference between the applicable prevailing wage rate and the amount actually paid to that worker.

(B) ***Federal Requirements.*** If this Project is subject to federal prevailing wage requirements in addition to California prevailing wage requirements, Contractor and its Subcontractors are required to pay the higher of the current applicable prevailing wage

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rates under federal law, available online at http://www.access.gpo.gov/davisbacon/ca.html.

9.4 **Payroll Records.** Contractor must comply with the provisions of Labor Code Sections 1776 and 1812 and all implementing regulations, which are fully incorporated by this reference, including requirements for electronic submission of payroll records.

(A) ***Contractor and Subcontractor Obligations***. Contractor and each Subcontractor must keep accurate payroll records, showing the name, address, social security number, work classification, straight time and overtime hours worked each day and week, and the actual per diem wages paid to each journeyman, apprentice, worker, or other employee employed in connection with the Work. Each payroll record must contain or be verified by a written declaration that it is made under penalty of perjury, stating both of the following:

(1) The information contained in the payroll record is true and correct; and

(2) Contractor or the Subcontractor has complied with the requirements of Labor Code Sections 1771, 1811, and 1815 for any Work performed by its employees on the Project.

(B) ***Certified Record.*** A certified copy of an employee's payroll record must be made available for inspection or furnished to the employee or his or her authorized representative on request, to City, to the Division of Labor Standards Enforcement, to the Division of Apprenticeship Standards of the Department of Industrial Relations, and as further required by the Labor Code.

(C) ***Enforcement.*** Upon notice of noncompliance with Labor Code Section 1776, Contractor or Subcontractor has ten days in which to comply with requirements of this section. If Contractor or Subcontractor fails to do so within the ten day period, Contractor or Subcontractor will forfeit a penalty of $100.00 per day, or portion a day, for each worker for whom compliance is required, until strict compliance is achieved. Upon request by the Division of Apprenticeship Standards, or the Division of Labor Standards Enforcement, these penalties will be withheld from progress payments then due.

9.5 **Labor Compliance.** Under Labor Code section 1771.4, the Contract for this Project, if awarded on or after January 15, 2015, is subject to compliance monitoring and enforcement by the California Department of Industrial Relations.

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Article 10 - Safety Provisions

10.1 **Safety Precautions and Programs.** Contractor and its Subcontractors are fully responsible for safety precautions and programs, and for the safety of persons and property in the performance of the Work. Contractor and its Subcontractors must comply with all applicable safety laws, rules and regulations and seek to avoid injury, loss, or damage to persons or property by taking reasonable steps to protect its employees and other persons at the Worksite, materials and equipment stored on or off site, and property at or adjacent to the Worksite.

(A) ***Reporting Requirements.*** Contractor must immediately provide a written report to City of all recordable accidents and injuries occurring at the Worksite. If Contractor is required to file an accident report with a government agency, Contractor will provide a copy of the report to City.

(B) ***Legal Compliance.*** Contractor's safety program must comply with the applicable legal and regulatory requirements. Contractor must provide City with copies of all notices required by law or regulation.

(C) ***Contractor's Obligations.*** Any damage or loss caused by Contractor arising from the Work which is not insured under property insurance must be promptly remedied by Contractor.

(D) ***Remedies.*** If City determines, in its sole discretion, that any part of the Work or Worksite is unsafe, City may, without assuming responsibility for Contractor's safety program, require Contractor or its Subcontractor to cease performance of the Work or to take corrective measures to City's satisfaction. If Contractor fails to promptly take the required corrective measures, City may perform them and deduct the cost from the Contract Price. Contractor agrees it is not entitled to submit a Claim for damages, for an increase in Contract Price, or for a change in Contract Time based on Contractor's compliance with City's request for corrective measures pursuant to this provision.

10.2 **Hazardous Materials.** Unless otherwise specified in the Contract Documents, this Contract does not include the removal, handling, or disturbance of any asbestos or other Hazardous Materials. If Contractor encounters materials on the Worksite that Contractor reasonably believes to be asbestos or other Hazardous Materials, and the asbestos or other Hazardous Materials have not been rendered harmless, Contractor may continue Work in unaffected areas reasonably believed to be safe, but must immediately cease work on the area affected and report the condition to City. No asbestos, asbestos-containing products or other Hazardous Materials may be used in performance of the Work.

10.3 **Material Safety.** Contractor is solely responsible for complying with Section 5194 of Title 8 of the California Code of Regulations, including by providing information to Contractor's employees about any hazardous chemicals to which they may be exposed in the course of the Work. A hazard communication program and other forms of warning and training about such exposure must be used. Contractor must also maintain Material Safety Data Sheets ("MSDS") at the Worksite, as required by law, for materials or substances used or consumed in the performance of the Work. The MSDS will be accessible and available to Contractor's employees, Subcontractors, and City.

(A) ***Contractor Obligations.*** Contractor is solely responsible for the proper delivery, handling, use, storage, removal, and disposal of all materials brought to the Worksite and/or used in the performance of the Work. Contractor must notify the Engineer if a specified product or material cannot be used safely.

(B) ***Labeling.*** Contractor must ensure proper labeling on any material brought onto the Worksite so that any persons working with or in the vicinity of the material may be informed as to the identity of the material, any potential hazards, and requirements for proper handling, protections, and disposal.

10.4 **Hazardous Condition.** Contractor is solely responsible for determining whether a hazardous condition exists or is created during the course of the Work, involving a risk of bodily harm to any person or risk of damage to any property. If a hazardous condition exists or is created, Contractor must take all precautions necessary to address the condition and ensure that the Work progresses safely under the circumstances. Such conditions may result from, but are not limited to, use of specified materials or equipment, the Work location, the Worksite condition, the method of construction, or the way any Work must be performed.

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Article 11 - Completion and Warranty Provisions

11.1 Final Completion.

(A) ***Final Inspection.*** When the Work required by this Contract is fully performed, Contractor must provide written notification to City requesting final inspection. Based on that inspection, City will prepare a punch list of items that are incomplete, incorrectly installed, or not operating as required by the Contract Documents. The omission of any such item from this punch list will not relieve Contractor from fulfilling all requirements of the Contract Documents.

(B) ***Punch List.*** City will deliver the punch list to Contractor and will specify the time by which all of the punch list items must be completed or corrected. The punch list may include City's estimated cost to complete each punch list item if Contractor fails to do so within the specified time. Following the final inspection, City will charge Contractor for City's staff time and any other costs incurred for City's additional inspection(s) and review(s) of incomplete or unacceptable punch list Work.

(C) ***Requirements for Final Completion.*** Final Completion will be achieved upon completion or correction of all punch list items, as verified by City inspection, and upon satisfaction of all other Contract requirements, including any commissioning required under the Contract Documents and submission of all final submittals, including a warranty bond if required, instructions and manuals as required under Section 7.10, and as-built drawings as required under Section 7.11, all to City's satisfaction.

(D) ***Acceptance.*** The Project will be considered accepted upon the date specified in the Engineer's written memorandum of acceptance. With the exception of warranty work, City's acceptance, subject to any express exceptions, terminates Contractor's duty to perform the Work.

(E) ***Final Payment.*** Final Payment and release of retention, less any sums withheld pursuant to the provisions of the Contract Documents, will not be made sooner than 35 days after recordation of the notice of completion. If Contractor fails to complete all of the punch list items within the specified time, City may elect to accept the Project and record the notice of completion, and withhold up to 150% of City's estimated cost to complete the remaining items from Final Payment.

11.2 Warranty.

(A) ***General.*** Contractor warrants that all materials and equipment will be new unless otherwise specified, of good quality, in conformance with the Contract Documents, and free from defective workmanship and materials. Contractor further warrants that the Work will be free from material defects not intrinsic in the design or materials required in the Contract Documents. At City's request, Contractor must furnish satisfactory evidence of the quality and type of materials and equipment furnished. Contractor's warranty does not extend to damage caused by normal wear and tear, or improper use or maintenance.

(B) ***Warranty Period.*** Contractor's warranty must guarantee its Work for a period of one year from the date of recordation of the notice of completion (the "Warranty Period"), except when a longer guarantee is provided by a supplier or manufacturer or is required by the Specifications or Special Conditions. Contractor must obtain from its Subcontractors, suppliers and manufacturers any special or extended warranties required by the Contract Documents.

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(C) ***Warranty Documents.*** As a condition precedent to acceptance, Contractor must supply City with all warranty and guarantee documents relevant to equipment and materials incorporated into the Work and guaranteed by their suppliers or manufacturers.

(D) ***Subcontractors.*** The warranty obligations in the Contract Documents apply to Work performed by Contractor and its Subcontractors, and Contractor expressly agrees to act as co-guarantor of such Work.

(E) ***Contractor's Obligations.*** Upon written notice from City to Contractor of any defect in the Work discovered during the Warranty Period, Contractor or its responsible Subcontractor must promptly correct the defective Work at its own cost. Contractor's obligation to correct defects discovered during the Warranty Period will continue past the expiration of the Warranty Period as to any defects in Work for which Contractor was notified prior to expiration of the Warranty Period.

(F) ***City's Remedies.*** If Contractor or its responsible Subcontractor fails to correct defective Work within ten days following notice by City, or sooner if required by the circumstances, Contractor expressly agrees that City may correct the defects to conform with the Contract Documents at Contractor's sole expense. Contractor must reimburse City for its costs within 30 days following City's submission of a demand(s) for payment pursuant to this provision. If City is required to initiate legal action to compel Contractor's compliance with this provision, and City is the prevailing party in such action, Contractor and its surety are solely responsible for all of City's attorney's fees and legal costs expended to enforce Contractor's warranty obligations herein in addition to any and all costs City incurs to correct the defective Work.

(G) ***Emergency Repairs.*** In cases of emergency where any delay in correcting defective Work could cause harm, loss or damage, Contractor expressly agrees that City may immediately correct the defects to conform with the Contract Documents at Contractor's sole expense. Contractor must reimburse City for its costs within 30 days following City's submission of a demand(s) for payment pursuant to this provision. If City is required to initiate legal action to compel Contractor's compliance with this provision, and City is the prevailing party in such action, Contractor and its surety are solely responsible for all of City's attorney's fees and legal costs expended to enforce Contractor's warranty obligations herein in addition to any and all costs City incurs to immediately correct the defective Work, including any associated overtime charges.

11.3 Use Prior to Final Completion. City reserves the right to occupy or make use of the Project, or any portions of the Project, prior to Final Completion if City has determined that the Project or portion of it is in a condition suitable for the proposed occupation or use, and that it is in its best interest to occupy or make use of the Project, or any portions of it, prior to Final Completion. City will notify Contractor in writing of its intent to occupy or make use of the Project or any portions of the Project, pursuant to this provision.

(A) ***Non-Waiver.*** Occupation or use prior to Final Completion will not operate as acceptance of the Work or any portion of it, nor will it operate as a waiver of any of City's rights or Contractor's duties pursuant to these Contract Documents, and will not affect nor bear on the determination of the time of substantial completion with respect to any statute of repose pertaining to the time for filing an action for construction defect.

(B) ***City's Responsibility.*** City will be responsible for the cost of maintenance and repairs due to normal wear and tear with respect to those portions of the Project that are being occupied or used before Final Completion. The Contract Price or the Contract Time may be adjusted pursuant to the applicable provisions of these Contract Documents

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if, and only to the extent that, any occupation or use under this Section actually adds to Contractor's cost or time to perform the Work.

11.4 **Substantial Completion.** For purposes of determining "substantial completion" with respect to any statute of repose pertaining to the time for filing an action for construction defect, "substantial completion" is deemed to mean the last date that Contractor or any Subcontractor performs Work on the Project prior to recordation of the notice of completion, except for warranty work performed under this Article.

Article 12 - Dispute Resolution

12.1 **Claims.** This Article applies to and provides the exclusive procedures for any Claim arising from or related to the Contract or performance of the Work.

(A) ***Definition.*** "Claim" means a separate demand by Contractor, submitted in writing by registered or certified mail with return receipt requested, for change in the Contract Time, including a time extension or relief from liquidated damages, or a change in the Contract Price, that has previously been submitted to City in accordance with the requirements of the Contract Documents, and which has been rejected or disputed by City, in whole or in part.

(B) ***Limitations.*** A Claim may only include the portion of a previously rejected demand that remains in dispute between Contractor and City. With the exception of any dispute regarding the amount of money actually paid to Contractor as Final Payment, Contractor is not entitled to submit a Claim demanding a change in the Contract Time or the Contract Price, which has not previously been submitted to City in full compliance with Article 5 and Article 6, and subsequently rejected in whole or in part by City.

(C) ***Scope of Article.*** This Article is intended to provide the exclusive procedures for submission and resolution of Claims of any amount, and applies in addition to the provisions of Public Contract Code Section 9204 and Sections 20104 et seq., which are incorporated by reference herein.

(D) ***No Work Delay.*** Notwithstanding the submission of a Claim or any other dispute between the parties related to the Project or the Contract Documents, Contractor must perform the Work and may not delay or cease Work pending resolution of the Claim or other dispute, but must continue to diligently prosecute the performance and timely completion of the Work, including the Work pertaining to the Claim or other dispute.

12.2 **Claims Submission.** The following requirements apply to any Claim subject to this Article:

(A) ***Substantiation.*** The Claim must be submitted to City in writing, clearly identified as a "Claim" submitted pursuant to this Article 12, and must include all of the documents necessary to substantiate the Claim including the Change Order request that was rejected in whole or in part, and a copy of City's written rejection that is in dispute. The Claim must clearly identify and describe the dispute, including relevant references to applicable portions of the Contract Documents, and a chronology of relevant events. Any Claim for additional payment must include a complete, itemized breakdown of all labor, materials, taxes, insurance, and subcontract, or other costs. Substantiating documentation such as payroll records, receipts, invoices, or the like, must be submitted in support of each claimed cost. Any Claim for an extension of time or delay costs must be substantiated with schedule analysis and narrative depicting and explaining claimed time impacts.

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(B) ***Claim Format.*** A Claim must be submitted in the following format:

(1) General introduction, specifically identifying the submission as a "Claim" submitted under this Article 12.

(2) Relevant background information, including identification of the specific demand at issue, and the date of City's rejection of that demand.

(3) Detailed explanation of the issue(s) in dispute. For multiple issues, separately number and identify each issue and include the following for each separate issue:

(a) The background of the issue, including references to relevant provisions of the Contract Documents;

(b) A succinct statement of the matter in dispute, including Contractor's position and the basis for that position;

(c) A chronology of relevant events;

(d) The identification and attachment of all supporting documents (see subsection (A), above, on Substantiation); and

(e) Use of a separate page for each issue.

(4) Summary of issues and damages.

(5) The following certification, executed by Contractor's authorized representative:

"The undersigned Contractor certifies under penalty of perjury that its statements and representations in this Claim are true and correct. Contractor warrants that this Claim is comprehensive and complete as to the matters in dispute, and agrees that any costs, expenses, or delay claim not included herein are deemed waived. Contractor understands that submission of a Claim which has no basis in fact or which Contractor knows to be false may violate the False Claims Act (Government Code Section 12650 et seq.)."

(C) ***Submission Deadlines.***

(1) A Claim must be submitted within 15 days following the date that City notified Contractor in writing that a request for a change in the Contract Time or Contract Price, duly submitted in compliance with Article 5 and Article 6, has been rejected in whole or in part.

(2) With the exception of any dispute regarding the amount of Final Payment, any Claim must be filed on or before the date of Final Payment, or will be deemed waived.

(3) A Claim disputing the amount of Final Payment must be submitted within 15 days of the effective date of Final Payment, under Section 8.8, above.

(4) Strict compliance with these Claim submission deadlines is necessary to ensure that any dispute may be mitigated as soon as possible, and to facilitate

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cost-efficient administration of the Project. ***Any Claim that is not submitted within the specified deadlines will be deemed waived by Contractor.***

12.3 City's Response. City will respond within 45 days of receipt of the Claim with a written statement identifying which portion(s) of the Claim are disputed, unless the 45-day period is extended by mutual agreement of City and Contractor or as otherwise allowed under Public Contract Code section 9204. However, if City determines that the Claim is not adequately documented, City may first request in writing, within 30 days of receipt of the Claim, any additional documentation supporting the Claim or relating to defenses to the Claim that City may have against the Claim. If Contractor fails to submit the additional documentation to City within 15 days of receipt of City's request, the Claim will be deemed waived.

(A) ***Additional Information.*** If additional information is thereafter required, it may be requested and provided upon mutual agreement of City and Contractor.

(B) ***Non-Waiver.*** Any failure by City to respond within the times specified above may not be construed as acceptance of the Claim in whole or in part, or as a waiver of any provision of these Contract Documents.

12.4 Meet and Confer. If Contractor disputes City's written response, or City fails to respond within the specified time, within 15 days of receipt of City's response, or within 15 days of City's failure to respond within the applicable 45-day time period under Section 12.3, respectively, Contractor may notify City of the dispute in writing of the sent by registered or certified mail, return receipt requested, and demand an informal conference to meet and confer for settlement of the issues in dispute. If Contractor fails to dispute City's response in writing within the specified time, Contractor's Claim will be deemed waived.

(A) ***Schedule Meet and Confer.*** Upon receipt of the demand to meet and confer, City will schedule the meet and confer conference to be held within 30 days, or later if needed to ensure the mutual availability of each of the individuals that each party requires to represent its interests at the meet and confer conference.

(B) ***Location for Meet and Confer.*** The meet and confer conference will be scheduled at a location at or near City's principal office.

(C) ***Written Statement After Meet and Confer.*** Within ten working days after the meet and confer has concluded, City will issue a written statement identifying which portion(s) of the Claim remain in dispute, if any.

(D) ***Submission to Mediation.*** If the Claim or any portion remains in dispute following the meet and confer conference, within ten working days after the City issues the written statement identifying any portion(s) of the Claim remaining in dispute, the disputed portion(s) will be submitted for mediation, as set forth below.

12.5 Mediation and Government Code Claims.

(A) ***Mediation.*** Within ten working days after the City issues the written statement identifying any portion(s) of the Claim remaining in dispute following the meet and confer, City and Contractor will mutually agree to a mediator, as provided under Public Contract Code section 9204. Mediation will be scheduled to ensure the mutual availability of the selected mediator and all of the individuals that each party requires to represent its interests. The parties will share the costs of mediation equally, except costs incurred by each party for its representation by legal counsel or any other consultants.

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(B) ***Government Code Claims***.

(1) Timely presentment of a Government Code Claim is a condition precedent to filing any legal action based on or arising from the Contract.

(2) The time for filing a Government Code Claim will be tolled from the time Contractor submits its written Claim pursuant to Section 12.2, above, until the time that Claim is denied in whole or in part at the conclusion of the meet and confer process, including any period of time used by the meet and confer process. However, if the Claim is submitted to mediation, the time for filing a Government Code Claim will be tolled until conclusion of the mediation, including any continuations, if the Claim is not fully resolved by mutual agreement of the parties during the mediation or any continuation of the mediation.

12.6 **Tort Claims.** This Article does not apply to tort claims and nothing in this Article is intended nor will be construed to change the time periods for filing tort-based Government Code Claims.

12.7 **Arbitration.** It is expressly agreed, under California Code of Civil Procedure Section 1296, that in any arbitration to resolve a dispute relating to this Contract, the arbitrator's award must be supported by law and substantial evidence.

12.8 **Damages.** Contractor bears the burden of proving entitlement to and the amount of any claimed damages. Contractor is not entitled to damages calculated on a total cost basis, but must prove actual damages. Contractor is not entitled to recovery of any alleged home office overhead. The Eichleay Formula or similar formula may not be used for any recovery under the Contract. Contractor is not entitled to consequential damages, including home office overhead or any form of overhead not directly incurred at the Worksite; lost profits; loss of productivity; lost opportunity to work on other projects; diminished bonding capacity; increased cost of financing for the Project; extended capital costs; non-availability of labor, material or equipment due to delays; or any other indirect loss arising from the Contract.

12.9 **Multiple Claims.** In the interest of efficiency, City, acting in its sole discretion, may elect to process multiple Claims concurrently, in which case the applicable procedures above will be based on the total amount of such Claims rather than the amount of each individual Claim. Any such election will not operate to change or waive any other requirements of this Article.

12.10 **Other Disputes.** The procedures in this Article 12 will apply to any and all disputes or legal actions, in addition to Claims, arising from or related to this Contract, unless and only to the extent that compliance with a procedural requirement is expressly and specifically waived by City. Nothing in this Article is intended to delay suspension or termination under Article 13.

Article 13 - Suspension and Termination

13.1 **Suspension for Cause.** In addition to all other remedies available to City, if Contractor fails to perform or correct work in accordance with the Contract Documents, City may immediately order the Work, or any portion of it, suspended until the cause for the suspension has been eliminated to City's satisfaction.

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(A) ***Failure to Comply.*** Contractor will not be entitled to an increase in Contract Time or Contract Price for a suspension occasioned by Contractor's failure to comply with the Contract Documents.

(B) ***No Duty to Suspend.*** City's right to suspend the Work will not give rise to a duty to suspend the Work, and City's failure to suspend the Work will not constitute a defense to Contractor's failure to comply with the requirements of the Contract Documents.

13.2 **Suspension for Convenience.** City reserves the right to suspend, delay, or interrupt the performance of the Work in whole or in part, for a period of time determined to be appropriate for City's convenience, and not due to any act or omission by Contractor or its Subcontractors. Upon notice by City pursuant to this provision, Contractor must immediately suspend, delay, or interrupt the Work as directed by City. The Contract Price and the Contract Time will be equitably adjusted by Change Order to reflect the cost and delay impact occasioned by such suspension for convenience.

13.3 **Termination for Default.** Contractor may be deemed in default for any material breach of or inability to perform the Contract, including Contractor's: refusal or failure to supply sufficient skilled workers, proper materials, or equipment to perform the Work within the Contract Time; refusal or failure to make prompt payment to its employees, Subcontractors, or suppliers; refusal or failure to correct rejected Work or replace or repair any damage caused by Contractor, its agents, or Subcontractors; disregard of laws, regulations, ordinances, rules, or orders of any public agency with jurisdiction over the Project; lack of financial capacity to complete the Work within the Contract Time; abandonment of the Work; or responsibility for any other material breach of the Contract requirements.

(A) ***Notice of Default.*** Upon City's determination that Contractor is in default, City may provide Contractor and its surety a written notice of default. The notice may, in City's sole discretion: provide an opportunity for Contractor to immediately cure the default; inform Contractor of City's intent to cure the default; or inform Contractor of City's intent to terminate the Contract as set forth below.

(B) ***City's Right to Cure.*** City may choose to cure the default through use of its own forces and charge Contractor for all resulting expenses. Such expenses may include charges for all City staff time spent and charges for any replacement contractor(s) engaged to cure the default, and any associated expenses such as for City administrative staff time, consultant fees and attorney's fees. Interest on all expenses will also be charged, in the amount of seven percent per annum from the date of payment for each expense. City may deduct all such expenses and costs from amounts otherwise payable to Contractor under the Contract.

(C) ***Notice of Termination.*** Within seven calendar days after the written notice of default has been given, unless the default is otherwise cured or arrangements to cure the default have been made and memorialized in writing to City's satisfaction, City may terminate the Contract by providing written notice thereof to Contractor with a copy to Contractor's surety.

(D) ***Waiver.*** Time being of the essence in the performance of the Work, if Contractor's surety fails to, within seven calendar days from the date of City's notice of termination, arrange for completion of the Work in accordance with the Performance Bond, Contractor's surety will be deemed to have waived its right to complete the Work under the Contract, and City may immediately make arrangements for the completion of the Work through use of its own forces. City may use City staff or hire a replacement contractor(s), or use any other means that City determines advisable under the

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circumstances. Contractor and its surety will be jointly and severally liable for any additional expenses and costs incurred by City to complete the Work following termination. Such expenses may include charges for all City staff time spent and charges for any replacement contractor(s) engaged to complete the Work, and any associated expenses such as for City administrative staff time, consultant fees, and attorney's fees. Interest on all expenses will also be charged, in the amount of seven percent per annum from the date of payment for each expense. In addition, City will have the right to use any materials, supplies, and equipment belonging to Contractor and located at the Worksite for the purposes of completing the remaining Work.

(E) ***Other Rights and Remedies.*** No Contract termination by City, or other action City takes following such termination, will prejudice, limit or extinguish any other rights or remedies that will remain available to City by law or under the Contract Documents upon such termination. City may proceed against Contractor following Contract termination to recover all losses and costs City has suffered or incurred relating to Contractor's default.

(F) ***Wrongful Termination.*** If a court of competent jurisdiction or an arbitrator later determines that the termination for default was wrongful, the termination will be deemed to be a termination for convenience, and Contractor's damages will be strictly limited to the compensation provided for termination for convenience under Section 13.4, below. Contractor waives any claim for any other damages for wrongful termination including consequential damages, lost opportunity costs or lost profits.

13.4 Termination for Convenience. City reserves the right to terminate all or part of the Contract for convenience upon written notice to Contractor. Upon receipt of such notice, Contractor must: immediately stop the Work, including under any terms or conditions that may be specified in the notice; comply with City's instructions to protect the completed Work and materials; and use its best efforts to minimize further costs. Subject to City's directions in the notice, Contractor must not place further orders or enter into new subcontracts for materials, equipment, services or facilities, except as may be necessary to complete any portion of the Work that is not terminated. Contractor must also promptly cancel, on the most favorable terms possible, all existing subcontracts that relate to performance of the discontinued Work.

(A) ***Compensation to Contractor.*** In the event of City's termination for convenience, Contractor waives any claim for damages, including for loss of anticipated profits from the Project. The following will constitute full and fair compensation to Contractor, and Contractor will not be entitled to any additional claim or compensation:

(1) *Completed Work.* The value of its Work satisfactorily performed to date, based on Contractor's schedule of values and unpaid costs for items delivered to the Project site that were fabricated for incorporation in the Work;

(2) *Demobilization.* Actual and substantiated demobilization costs; and

(3) *Markup.* Five percent of the total value of the Work performed as of the date of notice of termination or five percent of the value of the Work yet to be completed, whichever is less, which is deemed to cover all overhead and profit to date.

13.5 Effect of Any Contract Termination. Upon any termination pursuant to this Article, City may enter upon and take possession of the Project and the Work. City may also take possession of, for the sole purpose of completing the Work, all of Contractor's tools, equipment and appliances, and all materials on the Work site or stored off the Work site

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that will be incorporated in the Work. Regardless of any Contract termination, Contractor's obligations for portions of the Work already performed will continue and the provisions of the Contract Documents will remain in effect as to any claim, indemnity obligation, warranties, guarantees, submittals of as-built drawings, instructions, or manuals, or other such rights and obligations arising prior to the termination date.

Article 14 - Miscellaneous Provisions

14.1 Assignment of Unfair Business Practice Claims. Under Public Contract Code Section 7103.5, Contractor and its Subcontractors agree to assign to City all rights, title, and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. Section 15) or under the Cartwright Act (Chapter 2 (commencing with Section 16700) of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, services, or materials pursuant to the Contract or any subcontract. This assignment will be effective at the time City tenders Final Payment to Contractor, without further acknowledgement by the parties.

14.2 Provisions Deemed Inserted. Every provision of law required to be inserted in the Contract Documents is deemed to be inserted, and the Contract Documents will be construed and enforced as though such provision has been included. If it is discovered that through mistake or otherwise that any required provision was not inserted, or not correctly inserted, the Contract Documents will be deemed amended accordingly.

14.3 Waiver. City's waiver of a breach, failure of any condition, or any right or remedy contained in or granted by the provisions of the Contract Documents will not be effective unless it is in writing and signed by City. City's waiver of any breach, failure, right, or remedy will not be deemed a waiver of any other breach, failure, right, or remedy, whether or not similar, nor will any waiver constitute a continuing waiver unless specified in writing by City.

14.4 Titles, Headings, and Groupings. The titles and headings used and the groupings of provisions in the Contract Documents are for convenience only and may not be used in the construction or interpretation of the Contract Documents or relied upon for any other purpose.

14.5 Statutory and Regulatory References. With respect to any amendments to any statutes or regulations referenced in these Contract Documents, the reference is deemed to be the version in effect on the date that that bids were due.

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END OF GENERAL CONDITIONS

SECTION 01 00 00 Supplemental to the General Conditions

1.01 Section Includes:

A. Order of Work
B. Permits Fees, and Licenses
C. Submittals
D. Hours of Work and City Holidays
E. Builders Risk Insurance Waived
F. Watering
G. Testing
H. Supplemental Work

1.02 Order of Work

A. Refer to Article 5 of the General Conditions – Contract Time.

B. As described in Article 5.2.A, after approval of the project progress schedule, the Contractor may place temporary construction fencing. Work shall commence within 10 days of installing any Temporary Construction Fence. Temporary construction fencing must be complete and in place before all other phases of work can commence. Failure to begin work within 10 days of placing temporary construction fencing shall be deemed breach of contract.

C. Refer to "Temporary Construction Fencing" found elsewhere in this section for additional information on acceptable fencing and payment.

D. At least ten (10) working days prior to the beginning of work, The Contractor shall submit traffic control handling plans for approval. Updated traffic handling plans as required should be submitted prior to each subsequent stage of traffic handling a minimum of ten (10) working days prior to the beginning of work on that stage. Attention is directed to the "Maintaining Traffic" section of these special provisions.

E. At least five (5) working days prior to the beginning of work, the Contractor shall notify local authorities, including the City of Fremont Police Department of his intent to begin work. The Contractor shall cooperate with the Engineer relative to handling traffic through the area and shall make his own arrangements relative to keeping the working area clear of parked vehicles. The following contact information is provided for the Contractors information only. Contractor is responsible for contacting and coordinating with local authorities and agencies.

1.	Fremont Police Department – Dispatch	(510) 790-6800
2.	Fremont Fire Department - Dispatch	(925) 422-7594
3.	Paramedic Plus - Operations	(510) 746-5700
4.	Paramedic Plus - Dispatch	ph: (925) 422-7595
		fax: (510) 625-1486
5.	U.S. Postal Service - Fremont Main Post Office	(510) 792-8655
6.	A.C. Transit - Dispatch	(510) 891-4901
7.	East Bay Para Transit	(510) 446-2008

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8.	Fremont Unified School District – Dispatch	(510) 657-1450 x13147
9.	Republic Services "Allied Waste" (Garbage Pickup)	(510) 657-3500
10.	BLT – Fremont Recycling Transfer Station	(510) 252-0500

F. The Contractor shall commence construction of the project on the first chargeable work day as specified on the Notice to Proceed, which will be issued on the day of the preconstruction conference.

G. **24 Hour Contact Number** - The Contractor shall assign a Project Superintendent who has the complete authority to make decisions on behalf of the Contractor. The Project Superintendent shall have the ability to speak, read and write in English. The Project Superintendent shall be on the job at all times during the construction and shall be available and on call 24 hours a day for the duration of the project. The Project Superintendent shall meet with the Engineer at least once per day while the project is actively under construction. Additionally, the Project Engineer shall attend all regularly scheduled job progress meetings. The Contractor shall provide to the Engineer and the Fremont Police Department a 24-hour contact number for the Project Superintendent. This number shall not direct calls to a recorder or other message taking service.

H. **Advance Public Notification** – Not less than two (2) weeks prior to beginning work, the Contractor shall deliver written notice to all adjoining residents, businesses, tenants and other applicable parties listed above. Written notice shall include posting of Notices at affected court areas for the park and court users. Notice shall be given for general construction activity to occur, as well as specific activities that will, in any way, inconvenience residents/property owners/tenants or affect their operations or access to their properties. Such notice shall include the expected date for the start of construction, a general description of the construction activities that will take place, expected duration, and the name, address, and contact number of the Contractor's Project Superintendent and of the City's Project Engineer. A follow up notice shall then also be distributed no later than three (3) days prior to the start of construction. The follow-up notice from the Contractor should include the specific location and dates of when the work will be done, in accordance with the approved schedule. Copies of both notices shall be provided to the Engineer for approval five (5) working days prior to the initial distribution dates of each notice.

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1.03 Permits, Fees and Licenses

A. Refer to Article 7.1 of the General Conditions – General Construction Provisions

B. All permits must be obtained by the contractor prior to the City scheduling a pre-construction meeting. At the pre-construction meeting, the contractor shall bring the permit and permitted set of drawings to the meeting.

C. City of Fremont Business Tax / License: General Contractor and all subcontractors shall have and maintain a current City of Fremont business license, demonstrating evidence of valid workers compensation insurance and valid contractor's license; and will have demonstrated payment of current business license fees to conduct business within the City of Fremont prior to the commencement of the work.

D. Failure to secure and obtain the appropriate permits does not stop working days from being counted, nor will it be deemed fault of the City for allow the contractor to proceed with work that is subsequently delayed due to lack of the appropriate permits.

E. The Business Tax/License Dept. of the City of Fremont can be reached at 494-4790. Office hours are Monday through Friday 8 AM to 4 PM. The address is 39550 Liberty Street, at the corner of Liberty and Kearney. If you have questions about what types of businesses are allowed in residential or commercial locations, please contact the City of Fremont Planning Division at 510-494-4440. The City of Fremont uses the term *business tax* instead of *business license.* If you are a business located outside of Fremont and you will be physically coming into Fremont to conduct business, completion of an Out-of-Town Business Tax Application Form is required by the City of Fremont. Applications are available at the Development Services Center at 39550 Liberty Street at the corner of Liberty and Kearney Streets, one block from Stevenson Blvd. Office hours are Monday through Friday, 8 AM to 4PM. Applications can also be downloaded from: http://www.ci.fremont.ca.us/business/outoftown.html.

1.04 Submittals

A. Refer to Article 2.5 in the General Conditions – Submittals

1.05 Hours of Work and City Holidays

A. There are no restrictions to work hours or days for this project, except for those noted below.

- 7:00 a.m. to 5:00 p.m. during weekdays
- No work allowed on Saturday, without written authorization from the Project Inspector or Project Engineer.
- No work allowed on Sunday, without written authorization from the Project Inspector or Project Engineer

B. Work will not be performed on City holidays (and/or holiday weekends preceding or following identified holidays), without prior approval from Engineer. City recognized holidays are as follows:

1. New Year's Day- Tuesday, January 2, 2018
2. Dr. Martin Luther King, Jr. Day- Monday, January 15, 2018
3. President day- Monday, February 19, 2018
4. Memorial Day- Monday, May 28, 2018
5. Independence Day – July 4, 2018
6. Labor Day – Monday, September 3, 2018
7. Veterans Day– Monday, November 12, 2018
8. Thanksgiving Day, Thursday, November 22
9. The day following Thanksgiving Day, Friday, November 23
10. Christmas Day – December 25, 2018
11. Day preceding New Years Day – Monday December 31, 2018

C. Exceptions to this section will only be permitted upon written authorization from the Engineer.

1.06 Builders Risk Insurance Waived

The builder's risk insurance policy requirement set forth in subsection 4.3(A)(2) of the General Conditions is hereby waived and does not apply to this Contract.

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1.07 Watering

A. It shall be the responsibility of the contractor to contact the local utility district in order to obtain a temporary water meter, and provide their own source of water for all elements of work in this project. The City shall not provide a source of water.

B. If the Contractor uses non-potable water on the project, the sources and discharge of non-potable water shall meet the California Department of Health Services water reclamation criteria and the Regional Water Quality Control Board requirements. The Contractor shall obtain either a waste water discharge permit or a waiver from the Regional Water Quality Control Board. Copies of permits or waivers from the Regional Water Quality Control Board shall be delivered to the Engineer before using non-potable water on the project.

C. Non-potable water, if used, shall not be conveyed in tanks or drain pipes which will be used to convey potable water. There shall be no connection between non-potable water supplies and potable water supplies. Non-potable water supply, tanks, pipes, and other conveyances of non-potable water shall be labeled:

NONPOTABLE WATER

DO NOT DRINK

1.08 Testing

Testing is not a duty of the City and is solely at the discretion of the Engineer. Non-testing by the City does not release the Contractor from their responsibility to perform all work in conformance to the Standard Specifications and these Special Provisions.

1.09 Supplemental Work

A. This item is provided on the Bid Schedule to account for new and unforeseen work not specifically provided for on the plans or in the special provisions, or for measured quantities that go over or under the estimated quantity in the bid schedule.

B. The dollar amount listed in the Estimate of Quantities is an estimate only and will be included in each bidder's proposal.

C. Supplemental work shall be performed only upon direct authorization from the Engineer. Daily extra work reports will be required if the work is to be paid for on a force account basis. Agreed price or unit price may be used as an alternate method of payment, if directed by the Engineer.

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SECTION 01 43 00 Quality Assurance

Part 1 - General

1.01 **Section Includes**

A. Engineer's monitoring.
B. Engineer's inspections and test.
C. Inspections and Tests by Governing Authorities
D. Inspections and Tests by Serving Utilities
E. Test Reports.
F. Construction Quality Assurance Records Review.
G. Certificates of Compliance.

1.02 **Related Sections**

A. Contractor's quality control requirements are specified in Article 15 – Special Conditions, Section 01 45 00 - Quality Control.

1.03 **Engineer's Monitoring, Inspections and Testing**

A. The Engineer may perform inspection and tests of the Contractor's on-site construction activities, as necessary, to determine the Contractor's compliance with Contract Document requirements. Inspection consists of a review, observation, or inspection of Contractor personnel, material, equipment, processes, and test results, performed at random or at selected stages of the construction operations. The purpose of surveillance inspection is to determine if an action has been accomplished or if documents have been prepared in accordance with selected requirements of the Contract Documents.

B. Unless otherwise specified, samples and test specimens required under the Contract Documents will be furnished by the Contractor and prepared for testing in ample time for the completion of the necessary tests and analyses before the subject materials or articles are to be used. The Contractor will furnish all required test specimens at its own expense.

C. For inspections and tests by the City Engineer, the City Engineer may provide the services of a qualified testing laboratory, soils engineer, or inspector, selected and paid for by the City.

D. Except as otherwise provided in the Contract Documents, performance of the required initial test will be by the City or their representative, and all costs therefore will be borne by the City. The cost of any failed re-tests after the first test will be borne by the Contractor.

E. A City-employed testing laboratory may supervise the preparation and selection of samples required for testing, as necessary.

F. Unless otherwise specified, all testing will be in accordance with the methods prescribed in the current specified published standards, as applicable to the class and nature of the articles or materials considered. However, the City reserves the right to use any generally accepted system of sampling and testing which, in the opinion of the Engineer, will assure the City that the quality of the workmanship is in full accord with the Contract Documents.

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G. Failure of any portion of the work to meet any of the requirements of the Contract Documents will be reasonable cause for the Engineer to require the removal or correction and reconstruction of any such work at the Contractor's sole cost and expense.

H. Testing is not a duty of the City and is solely at the discretion of the City Engineer. Non-testing by the City does not release the Contractor from their responsibility to perform all work in conformance with the Contract Documents.

I. Verification of Quality: Work will be subject to verification of quality by Engineer in accordance with provisions of the General Conditions of the Contract, the City of Fremont's Quality Assurance Program, and these Contract Documents.

1. Contractor will cooperate by making Work available for inspection by the Engineer.

2. Such verification may include field inspection as required.

3. Contractor shall provide access to all parts of the Work.

4. Whenever Contractor is ready to backfill, bury, cast in concrete, hide, or otherwise cover or make inaccessible any Work under the Contract, the Contractor shall notify the Engineer not less than four calendar days in advance of beginning such work.

i. Failure by Contractor to notify Engineer shall be reasonable cause for the Engineer to require uncovering of any such work, at no cost to the City, and no applicable delay to the Contract.

5. Provide all information and assistance, as required, for verification of quality by Engineer.

6. Contract modifications, if any, resulting from such verification activities will be governed by applicable provisions in the General Conditions of the Contract.

J. Rejection of Work: City reserves the right to reject all Work not in conformance to the requirements of the Drawings and Specifications.

K. Correction of Non-Conforming Work: Non-conforming Work will be modified, replaced, repaired or redone by the Contractor at no change in Contract Price or Contract Time.

L. Acceptance of Non-Conforming Work: Acceptance of nonconforming Work, without specific written acknowledgement and approval from the Engineer, will not relieve the Contractor of the obligation to correct such Work.

M. Contract Adjustment for Non-Conforming Work: Should the Engineer determine that it is not feasible or in the City's interest to require non-conforming Work to be repaired or replaced, an equitable reduction in Contract Price will be made by agreement between City and Contractor. If equitable amount cannot be agreed upon, a Construction Change Order will be issued and the amount in dispute resolved in accordance with Article 12 – Dispute Resolution of the General Conditions.

1.04 **Inspection and Tests By The City**

A. It is the responsibility of the contractor to coordinate all aspects of work, inspection, and observation required by governing authorities having jurisdiction over the Work under this Contract. Such authorities include, but are not limited to, the City of

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Fremont Public Works Division, the City of Fremont Community Services Department.

B. Except as specifically noted, scheduling and conducting such inspections is the Contractor's responsibility and will be performed at the Contractor's expense.

C. Contractor must notify the Engineer no later than four calendar days before any inspection or testing, and must provide timely notice to the other necessary parties as specified in the Contract Documents. If Contractor schedules an inspection or test beyond specified Work hours Contractor must notify the Engineer at least four calendar days in advance for approval. If approved, Contractor must reimburse City for the cost of the overtime inspection or testing.

D. The City may engage an inspection and testing firm. The inspection and testing firm may provide any or all of the following:

1. Provide qualified personnel at site. Cooperate with Engineer in performance of services. Engineer may direct firm, as necessary, to location of field tests.
2. Perform specified inspection, sampling, and testing in accordance with specified standards.
3. Ascertain compliance of materials with requirements of Contract Documents.
4. Promptly notify Engineer of observed irregularities or non-conformance of work or products.
5. Perform additional inspections and tests required by Engineer.

E. Reports by City Testing and Inspection Firm: After each inspection and test, one copy of report may be submitted to the Engineer.

1. Reports may identify any of the following:

   a. Date issued.

   b. Project name and number.

   c. Identification of product and Specifications Section in which Work is specified.

   d. Name of inspector.

   e. Date and time of sampling or inspection.

   f. Location in Project where sampling or inspection was conducted.

   g. Type of inspection or test.

   h. Date of test.

   i. Results of tests.

   j. Comments concerning conformance with Contract Documents and other requirements.

2. Test reports may indicate specified or required values and may include statement whether test results indicate satisfactory performance of products.

3. Test reports and samples taken but not tested will be reported.

4. Test reports may confirm that methods used for sampling and testing conform to specified test procedures.

5. When requested, testing and inspection firm may provide interpretations of test results.

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6. Verification reports may be prepared, stating that tests and inspections specified or otherwise required for the project, have been completed and that material and workmanship comply with the Contract Drawings and Specifications.

F. Contractor Responsibilities in Inspections and Tests:

1. Advanced Notification: Refer to Article 7.8 (B) of the General Conditions.
2. Deliver adequate samples of materials proposed to be used, which require advance testing, together with proposed mix designs, to laboratory or designated location.
3. Cooperate with testing and inspection firm personnel and Engineer. Provide access to Work areas and off-site fabrication and assembly locations, including during weekends and after normal work hours.
4. Provide incidental labor and facilities to provide safe access to Work to be tested and inspected, to obtain and handle samples at the Project site or at source of products to be tested, and to store and cure test samples.

1.05 **Test Reports**

The Engineer will make available to the Contractor copies of all test reports for tests performed by the Engineer.

1.06 **Construction Quality Assurance Records Review**

The Engineer may review the Contractor's, Subcontractor's, and Supplier's quality control records and performance. The Contractor will ensure that all quality control records and places of work are open and available to the Engineer for inspection. The Engineer will give 7 calendar days notice of intention to review specific activities or installations.

1.07 **Certificates Of Compliance**

A. Materials used on the basis of a certificate of compliance may be sampled and tested by the Engineer at any time. The fact that material is used on the basis of a certificate of compliance will not relieve the Contractor of its responsibility for incorporating material in the Work which conforms to the requirements of the Contract, and any such material not conforming to such requirements will be subject to rejection, whether in place or not.
B. The City reserves the right to reject a certificate of compliance and require submittal and execution of sampling and testing procedures described herein.

Part 2 – Products

Not Used.

Part 3 – Execution

3.01 **Measurement and Payment**

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Full compensation for conforming to the provisions in this Section, **Quality Assurance**, will be considered as included in the price paid for various contract items of work and no additional compensation will be allowed.

End of Section 01 43 00

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SECTION 01 45 00 Quality Control

1.01 SITE INVESTIGATION AND CONTROL

A. The Contractor shall verify all dimensions in the field and shall check all field conditions continuously during the Work. The Contractor shall be solely responsible for any inaccuracies built into the Work.

B. The Contractor shall inspect related and appurtenant work and shall report in writing to the Engineer, any conditions which will prevent proper completion of the Work. Any required removal, repair, or replacement caused by unsuitable conditions shall be done by the Contractor at its sole cost and expense.

1.02 RELATED SECTIONS

A. Section 01 30 00 - Submittal,

B. Section 01 43 00 – Quality Assurance

1.03 SUBMITTALS

A. Refer to Sections 01 30 00 - Submittal, and include all Shop Drawings, Product Data, Mock ups, and other submittal requirements and procedures.

1.04 INSPECTION OF THE WORK

A. General: The Work shall be conducted under the general observation of the Engineer and shall be subject to inspection by representatives of the City to assure strict compliance with the requirements of the Contract Documents.

B. The authorized representative of the City City Engineer on the project site shall be those representatives or consultants designated by the City Engineer to act on behalf of the City. The presence of the Inspectors, however, shall not relieve the Contractor of the responsibility for the proper execution of the Work in accordance with all requirements of the Contract Documents. Compliance is distinctly a duty of the Contractor, and said duty shall not be avoided by any act or omission on the part of the inspector(s).

C. All materials and articles furnished by the Contractor shall be subject to rigid inspection, and no material or articles shall be used in the Work until it has been inspected and accepted by the City Engineer or the City.

D. At all times during the construction, the Contractor shall prevent the formation of any airborne dust nuisance. If the Contractor fails to remove the nuisance within 2 hours, the City may order that the work be done and all expenses incurred for the performance of this work will be deducted from payments to the Contractor.

1.05 QUALITY ASSURANCE AND QUALITY CONTROL

A. Contractor's Quality Control: Contractor shall ensure that products, services, workmanship and site conditions comply with requirements of the Drawings and Specifications by coordinating, supervising, testing and inspecting the work and by utilizing only suitably qualified personnel.

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B. Quality of Products: Unless otherwise indicated or specified, all products shall be new, free of defects and fit for the intended use.

C. Quality Requirements: Work shall be accomplished in accordance with quality requirements of the Drawings and Specifications, including, by reference, all Codes, laws, rules, regulations and standards. When no quality basis is prescribed, the quality shall be in accordance with the best accepted practices of the construction industry for the locale of the Project, for projects of this type.

D. Quality of Installation: All Work shall be produced plumb, level, square and true, or true to indicated angle, and with proper alignment and relationship between the various elements.

E. Quality Control Personnel: Contractor shall employ and assign knowledgeable and skilled personnel as necessary to perform quality control functions to ensure that the Work is provided as required.

F. Protection of Completed Work: Take all measures necessary to preserve completed Work free from damage, deterioration, soiling and staining, until Acceptance by the City.

G. Standards and Code Compliance and Manufacturer's Instructions and Recommendations: Unless more stringent requirements are indicated or specified, comply with manufacturer's instructions and recommendations, reference standards and building code research report requirements in preparing, fabricating erecting, installing, applying, connecting and finishing Work.

H. Deviations from Standards and Code Compliance and Manufacturer's Instructions and Recommendations: Document and explain all deviations from reference standards and building code research report requirements and manufacturer's product installation instructions and recommendations, including acknowledgement by the manufacturer that such deviations are acceptable and appropriate for the Project.

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1.06 SAMPLING AND TESTING SERVICES

A. Unless otherwise specified, all sampling and testing shall be in accordance with the methods prescribed in the current standards of the Caltrans Standards and ASTM, or other specified published standards, as applicable to the class and nature of the article or materials considered; however, the City reserves the right to use any generally-accepted system of sampling and testing which, in the opinion of the City Engineer will assure the City that the quality of the workmanship is in full accord with the Contract Documents.

B. Any waiver by the City of any specific testing or other quality assurance measures, whether or not such waiver is accompanied by a guarantee of substantial performance as a relief from the specified testing or other quality assurance requirements as originally specified, and whether or not such guarantee is accompanied by a "performance bond" to assure execution of any necessary corrective or remedial Work, shall not be construed as a waiver of any prescriptive or performance requirements of the Contract Documents.

C. Notwithstanding the existence of such waiver, and in addition to any testing and inspection performed by any other inspector on behalf of the City or any other public

agency having jurisdiction, the City Engineer shall have the right to make independent investigations and tests, and failure of any portion of the Work to meet any of the requirements of the Contract Documents, shall be reasonable cause for the City Engineer to require the removal or correction and reconstruction of any such work in accordance with the General Conditions.

D. Samples and test specimens required under the Contract Documents shall be furnished by the Contractor and prepared for testing in ample time for the completion of the necessary tests and analyses before the subject materials or articles are to be used. The Contractor shall furnish all required test specimens at its own expense. Except as otherwise provided in the Contract Documents, performance of the required initial test and first re-test will be by the City, and all costs therefore will be borne by the City; except, that the cost of any test after the first re-test shall be borne by the Contractor.

1.07 INDEPENDENT REFEREE LABORATORY

A. The City will retain the services of an independent certified laboratory on an "on-call" basis to act as a "referee" laboratory for resolution of disputes regarding sampling and testing results reported by the City's verification samplers and testers and the Contractor's construction QC samplers and testers.

1. The services of the "referee" laboratory may be requested by the City or by the Contractor.

2. The frequency and location of sampling and testing will be mutually agreed by the City and the Contractor prior to the referee laboratory's performing its work.

3. The sampling and testing results determined by the "referee" laboratory shall be final and binding on both parties and not subject to disputes resolution.

B. The party whose sampling and testing results are not confirmed and/or supported by the "referee" laboratory (i.e., the unsuccessful party) shall be responsible for payment for the "referee" services.

1. If the City is the unsuccessful party, it will make payment directly to the "referee" laboratory.

2. If the Contractor is the unsuccessful party, the cost of the "referee" laboratory services will be deducted from the monthly progress payment(s) otherwise due, and the City will make payments to the "referee" laboratory on behalf of the Contractor.

3. If the sampling and testing results obtained by the referee laboratory are inconclusive and do not clearly identify which party's results are correct, the cost of the referee laboratory's services will be shared equally between the Contractor and the City. The City will make full payment to the referee laboratory and the Contractor's share will be deducted from the next progress payment.

C. The "referee" laboratory will not be associated with the Contract in any capacity or be affiliated with any party to the Contract or with any Principal Participant, the Designer and/or Subcontractor. The "referee" laboratory shall not be a department, agency, or office of any stakeholder.

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1.08 DOCUMENTATION

A. Construction: The Contractor shall collect and preserve each of the following types of data in written form concurrently during the Contractor's performance of the Work, all of which shall be in a format acceptable to the City. The Contractor may use forms provided by the City or its own forms providing equivalent information. Refer to Contract Specifications Section 01 43 00, Quality Assurance for additional requirements.

1. Daily manpower and equipment reports for the Contractor and each Subcontractor for construction-related activities shall be prepared and maintained by the Contractor.

2. A daily log for construction-related activities in a narrative form recording all significant occurrences on the Contract, including, unusual weather; asserted occurrences; events and conditions causing or threatening to cause any significant delay, disruption, or interference with the progress of any of the Work; significant injuries to persons or property; and a listing of each activity depicted on the current monthly plan update which is being actively prosecuted.

3. For utility-related work such data shall be maintained separately for each utility facility.

4. For harmful/hazardous material remediation work, such data shall be maintained separately for each site.

5. Records shall document all QC operations, inspections, activities, and tests performed, including the work of Subcontractors. Such records shall include any delays encountered and work noted that does not conform to the requirements of the Contract and design together with the corrective actions taken regarding such work.

6. Records shall document the measurement of quantities for all unit priced items, if any.

B. Test Reports:

1. Within five Days after completion of testing performed by or for the Contractor, submit test results of such tests to the City of Fremont.

   a. Identify test reports with the information specified for Submittals in Contract Specifications Section 01 30 00, Submittal Procedures.

   b. Include the name and address of the organization performing the test and the date(s) of the tests.

2. Test reports shall include the following information:

   a. Actual test results compared with the Contract requirements and identification of all non-conforming items.

   b. Calibration certificates.

3. The City of Fremont will make available to the Contractor copies of all test reports of tests performed by the City of Fremont.

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C. Weekly Documentation: The Contractor shall complete and submit appropriate weekly documentation that includes factual evidence that required activities or tests have been performed, including the following:

1. The type, number, and results of QC and control activities, including reviews, inspections, tests, audits, monitoring of work performance, and materials analysis;

2. Closely-related data such as qualifications of personnel, procedures, and equipment used;

3. The identity of the QC inspector or data recorder, the type of test or observation employed, the results, the acceptability of the work, and action taken in connection with any deficiencies noted;

4. The nature of non-conforming work and causes for rejection;

5. Proposed corrective action;

6. Corrective actions taken; and

7. Results of corrective actions.

1.09 SOURCE OF MATERIALS

A. In accordance with Contract Specifications the Contractor shall notify the City of Fremont in writing of the sources from which the Contractor proposes to obtain materials requiring City approval, certification or testing.

B. The Contractor may use certificates of compliance for certain materials and products in lieu of the specified sampling and testing procedures.

1. Submit any certificates required for demonstrating proof of compliance of materials with specification requirements with each lot of material delivered to the Work. The lot so certified shall be clearly identified by the certificate. Certificates shall be signed by an authorized representative of the producer or manufacturer and shall state that the material complies in all respects with Contract requirements.

2. The Project Schedules shall indicate the date scheduled for submittal of the certificates as specified in Contract Specifications Section 01 32 16, Project Progress Schedule. In the case of multiple shipments, each of which shall be accompanied by a certificate of compliance, the scheduled date on the Project Schedules shall indicate the initial submittal only.

3. The certificate of compliance shall be accompanied by a certified copy of test results or shall state that such test results are on file with the producer or manufacturer and shall be furnished to the City on request. The certificate shall give the name and address of the organization performing the tests, the date of the tests, and the quantity of material shipped information as specified in Contract Specifications Section 01 30 00, Submittal Procedures.

4. Materials used on the basis of a certificate of compliance may be sampled and tested by the City of Fremont at any time. The fact that material is used on the basis of a certificate of compliance shall not relieve the Contractor of its responsibility for incorporating material in the Work that conforms to the requirements of the Contract, and any such

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material not conforming to such requirements will be subject to rejection, whether in place or not.

5. The City reserves the right to refuse to permit the use of certain materials on the basis of a certificate of compliance.

1.010 MANUFACTURERS' SPECIFICATIONS AND INSTRUCTIONS

A. Unless otherwise indicated or specified, manufactured materials, products, processes, equipment, systems, assemblies, and the like shall be erected, installed, or applied in accordance with the manufacturers' instructions, directions, or specifications. Said erection, installation, or application shall be in accordance with printed instructions furnished by the manufacturer of the material or equipment concerned for use under conditions similar to those at the Jobsite.

B. Any deviation from the manufacturers' printed installation instructions and recommendations shall be explained and acknowledged as correct and appropriate for the circumstances, in writing, by the particular manufacturer. The Contractor will be held responsible for installations contrary to the respective manufacturers' instructions and recommendations.

1.011 SPECIALIST APPLICATOR / INSTALLER

A. Materials, equipment, systems, and assemblies requiring special knowledge and skill for the application or installation of such materials, equipment, systems, or assemblies shall be applied or installed by the specified product manufacturer or its authorized representative or by a skilled and experienced Subcontractor qualified and specializing in the application or installation of the specified product.

B. The Contractor shall ensure that the installation Subcontractor is approved by the product manufacturer, as applicable.

1.012 MANUFACTURERS' FIELD SERVICES

A. The Contractor shall have the manufacturer of a product, system, or assembly that requires special knowledge and skill for the proper application or installation of such product, system, or assembly provide appropriate field or job service at no additional cost to the City. The Contractor shall have the manufacturer inspect and approve the application or installation work.

B. The Contractor shall make all necessary arrangements with the manufacturer of the products to be installed to provide onsite consultation and inspection services to assure the correct application or installation of the product, system, or assembly.

C. The Contractor shall ensure that the manufacturer's authorized representative is present at the time any phase of this work is started.

D. The Contractor shall have the manufacturer inspect and approve all surfaces over which, or upon which, the manufacturer's product will be applied or installed.

E. The Contractor shall have the manufacturer's representative make periodic visits to the Jobsite as the work progresses as necessary for consultation and for expediting the work in the most practical manner.

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1.013 FINISHED TOLERANCES

A. Except as specified otherwise in the individual Contract Specifications Sections, finished tolerances shall conform with the following requirements:

1. Finished surfaces: Finished surfaces shall be level to within plus or minus 1/8 inch in 10 feet. Where surfaces drains occur, slope finished surfaces to the drain at the rate of 1/8 inch per foot or as otherwise indicated on the Contract Drawings.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

A. **MEASUREMENT AND PAYMENT**

Full compensation for conforming to the provisions in this section "**Quality Control**" not otherwise provided for, shall be considered as included in prices paid for the various contract items of work involved and no additional compensation will be allowed therefor.

END OF SECTION

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SECTION 01 50 50 Construction and Demolition Debris Management

PART 1 – GENERAL

1.01 SUMMARY

A. This section specifies requirements for diversion of construction and demolition debris from the landfill and accepted hauling practices.

B. Related requirements specified elsewhere include, but are not limited to:

1. Fremont Municipal Code
2. California Building Standards Code, most current version
3. Alameda County Waste Management Authority Ordinance 2008-01

1.02 PERFORMANCE REQUIREMENT

A. Performance Requirement: The performance requirement for this project is to divert:

- 50% of remaining construction and demolition debris to be reused or recycled

B. The Performance Requirement shall be satisfied by providing all of the following:

1. An approved Waste Handling Plan within 10 days of Notice to Proceed
2. Two Debris Diversion & Disposal Reports that include:

- receipts, weigh tags or other acceptable documentation from authorized recycling facilities or vendors that clearly indicate the materials management performance requirement was met.
- the City of origin listed as Fremont
- the type and weight of material reused or recycled
- the weight of material landfilled (garbage).

1.03 DEFINITIONS

A. **"Approved Recycling Service or Facility"** means an off-site service or facility that provides processing of material for recycling, composting or other diversion from landfill and is approved by the City of Fremont.

B. "**Construction or Demolition Debris**" shall mean brick, , concrete, plaster, scrap wood, scrap metal, sheet rock, and other such bulky wastes associated with construction, demolition, refurbishing, renovation, excavation or other similar work on or related to a structure or property.

C. "**Conversion Rate**" means the rate set forth in the standardized Conversion Rate Table approved by the City of Fremont for use in estimating the weight or volume of materials identified in the Waste Handling Plan and Debris Diversion & Disposal Report.

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D. "**Divert**" means to use material for any purpose other than disposal in a landfill and includes reuse and recycling.

E. "**Generator**" means an owner or responsible party for a Commercial facility, which generates Recyclable Materials as a result of its business, facility or property activity, including construction sites.

F. "**Hauler**" means any person or entity that transports garbage, recyclables, yard waste or other discarded material.

G. "**Municipal Solid Waste**" means all putrescible and non-putrescible solid, semisolid and liquid wastes, including garbage, trash, refuse, paper, rubbish, ashes, industrial waste, Construction and Demolition Waste, and other discarded wastes.

H. "**Recyclable Materials**" mean materials which may be returned to the economic mainstream as commodities for reuse, or for processing to create new or reconstituted products, which if not segregated from garbage would otherwise become garbage. The Recyclable Materials must be segregated from garbage. Recyclable Materials include Single Commodity Construction and Demolition Debris.

I. "**Self Haul**" means Generators who transport his or her own materials by using a vehicle owned by the Generator and driven by the Generator's employees rather than using the hauling services of the City's franchise hauler or a third party hauling company.

J. "**Single Commodity Construction and Demolition Debris**" means Single Commodity Recyclable Materials from Commercial Generators which is source separated, and are a result of construction, remodeling, repair or demolition on pavement, houses, commercial buildings, multi-family dwellings and other structures, including construction job sites and may include single commodity materials such as bricks, , scrap wood, scrap metal, and sheet rock. Soil, asphalt and concrete are exempt from this definition.

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1.04 SUBMITTALS

A. The Contractor is required to submit a schedule that will describe all construction, demolition and removal procedures, sequence of activities, and schedule of activities. The schedule must be submitted within 10 calendar days after receipt of Notice to Proceed, prior to any demolition or construction activities, and must be approved by the Project Manager.

B. The Contractor is required to submit a Waste Handling Plan to indicate how materials will be diverted from landfill and which facility or service will be used. The Waste Handling Plan must be submitted within 10 calendar days after receipt of Notice to Proceed and must be approved prior to any demolition or construction activities. Submit this form to: City Project Manager (See Notice to Bidders for contact information).

C. The Contractor is required to submit a completed Debris Diversion & Disposal Report including receipts, weigh tags or other acceptable documentation at 50 percent completion of the Work. The report should be submitted within 30 calendar days of 50% completion of the Work.

D. The Contractor is required to submit a completed Debris Diversion & Disposal Report including receipts, weigh tags or other acceptable documentation at 100 percent completion of the Work. The report should be submitted within 30 calendar days of the completion of the Work. Final payment will not be issued until the documentation is approved or outstanding fines resolved.

E. Contractors who choose to self-haul construction debris instead of using Republic Services debris box will be required to submit monthly Debris Diversion & Disposal Reports.

1.05 QUALITY ASSURANCE

A. Republic Services is the only hauler authorized to haul garbage and construction debris from Fremont. The contractor must subscribe to debris box service with Republic Services for all materials, except soil, asphalt and concrete.

B. **Alternately, the contractor may self-haul the construction and demolition debris, using their own employees, equipment, and vehicles, to an approved facility, if the debris being hauled is an incidental part of construction or demolition services provided by the contractor.**

C. A City of Fremont Business tax (license) is required of all persons working in Fremont, including all contractors, subcontractors, and vendors.

1.06 WASTE HANDLING PLAN DEVELOPMENT and IMPLEMENTATION

A. The Waste Handling Plan is an estimate of the amount and type of debris that will be generated from the project. It is important to create a Waste Handling Plan prior to starting the project to identify costs, potential savings and ensure proper recycling of the materials needed to achieve the diversion requirement. Estimate the amount and type of debris generated from the project, and then develop a plan for diverting the required percentage of construction and demolition debris from the landfill.

1. Identify each type of debris item generated during the project (wood, scrap metal, etc.). Propose means and methods for collecting and separating each type of debris deemed reusable or recyclable. *Recommended Handling and Storage Procedures* with suggested actions for salvage or recycling of each type of demolition and construction debris are provided at the end of this section.

2. Estimate the weight or volume, by number of tons or cubic yards (CY), of each item that will be reused, recycled, or disposed in a landfill. Enter this number in the appropriate columns. If the materials are to be reused on site, list that in Reuse column: i.e., "wood waste chipped on site for mulch."

3. Include a good faith estimate of each type of construction debris generated by the project. Submit with calculations based upon weight of each material. Items subject to the good faith estimate and diversion requirement include:

   a. Permeable Rock
   b. Subgrade material

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c. Plastic
d. Trash/Garbage
e. Wood and Pallets (unpainted)

4. List the name of an approved recycling facility or service provider for each type of debris. Contact the facility and verify that they can accept that debris item in the proposed quantities anticipated. Schedule each debris item and list the recycling service and recycling company name, telephone number, address, and person contacted.

B. Implementation

1. Maintain a log of each load, of each debris category item diverted from landfill and materials sent to recycling facilities. Log any debris sent to a Class III landfill separately. Maintain the receipts and weigh tags from all disposal and recycling activities.

   a. Include the following information in the log: type of load, load weight, name of recycling service or facility, and date accepted by recycling service or by facility.

   b. The Project Manager reserves the right to audit the log at any time. Contractor shall retain and provide to Project Manager all weight tickets, copies of receipts, invoices, and any other documentation related to the recycling or disposal of generated debris.

   c. Units of measure: Use same units as stated in the approved plan "good faith" estimate of construction or demolition debris (tons or cubic yards).

2. Designate specific on-site area(s) to facilitate separation of materials for potential reuse, salvage, and recycling. Do not mix garbage with materials designated for reuse, recycling or composting. Loads designated for recycling may not contain more than 10% garbage by weight or volume.

   a. Keep garbage bins and pile areas neat and clean. Signage is required to clearly mark bins for each category of debris.

   b. When ordering a debris box, be sure to specify that the materials must be recycled, not landfilled. Inform the debris box vendor that you will require documentation that clearly states the city of origin as Fremont, identifies the type and weight of material reused or recycled.

   c. Landscape/plant debris: Separate plant and tree debris from other materials. The landscape debris must be composted, chipped, used for mulch or fuel. It is illegal to dispose of plant debris in an Alameda County landfill. Landscape debris shall not be taken out of county to avoid this requirement.

3. Training and Coordination

   a. Provide on-site instruction of appropriate salvage, reuse, separation, handling, and recycling methods to be used by all entities at the appropriate stages of the Project.

   b. Provide copies of the Waste Handling Plan to all on-site supervisors, each subcontractor, and the Project Manager.

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c. Include construction debris management on the agenda of meetings. At a minimum, discuss mandatory recycling requirements and debris management issues at the following meetings:

4. Pre-demolition/pre-construction meeting

a. Regularly scheduled job-site meeting

PART 2 - PRODUCTS

2.01 MATERIALS, EQUIPMENT AND FACILITIES

A. Furnish all materials, tools, equipment, devices, appurtenances, and services required for performing the salvage, demolition, and construction. Dispose of debris in a safe, acceptable manner, at approved facilities. Burying of trash and debris on the site is not permitted.

B. Republic Services is the only approved hauler for materials in Fremont. The contractor must subscribe to debris box service for garbage and recycling with Republic Services.

C. The contractor may self-haul construction and/or demolition debris to an approved recycling/disposal facility, only if they use their own equipment, vehicles and employees, as part of a total construction or demolition project. Such debris removal must be provided incidentally to construction or demolition services provided by the contractor. It is illegal to subcontract with a third party to haul garbage. Contractor can continue to self-haul construction debris off-site if all these conditions are met:

- Contractor is providing a construction or demolition service on site and the debris removal is an incidental part of the work performed; and
- Contractors use their own employees, company vehicles and equipment; and,
- Contractors deliver the construction debris to an approved facility (see list of approved facilities)
- All contractors and subcontractors must be licensed to do business in Fremont

D. The following facilities and service providers are approved to accept Construction & Demolition Debris for recycling:

1. Fremont Recycling and Transfer Station, 41149 Boyce Road, Fremont (510) 252-0500 www.fremont-recycling.com/

2. Newby Island Landfill, 1601 Dixon Landing Road, Milpitas (408) 432-1234

3. Guadalupe Landfill, 15999 Guadalupe Mines Road, San Jose (408) 268-1670

4. Zanker Material Processing Facility, 675 Los Esteros Road, San Jose (408) 263-2384

5. Davis Street Recycling and Transfer Station, 2615 Davis Street, San

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Leandro (510) 563-4257

6. Stevens Creek Quarry, 12100 Stevens Canyon Rd, Cupertino, CA (408) 253-2512

E. Services required for construction materials management:

Type of Material	***Approved Service Provider***
All Garbage / Municipal Solid Waste	• Republic Waste debris box or; • Contractor self-haul to approved facility
Source separated recyclable material (scrap wood, plant debris, sheetrock)	• Republic Waste debris box or; • Contractor self-haul to approved facility
Source separated recycling commodity (metal)	• Republic Waste debris box or; • Contractor self-haul to approved facility; or • Any approved debris box from metal recycler (Schnitzer Steel, Sims Metals, etc.)
Source separated inerts (concrete, asphalt, soil)	• Republic Waste debris box or; • Contractor self-haul to approved facility/quarry, or; • Any approved debris box from inert recycler (Vulcan Materials, etc.)

F. The following materials cannot be collected in Republic Services debris box containers: asbestos, batteries, hazardous waste. Liquids, paints, oils, medical waste, tires, televisions, monitors and appliances containing chlorofluorocarbons (CFC's)

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PART 3 - EXECUTION

3.01 GENERAL

A. Conduct construction and demolition to minimize interference with adjacent building areas.
B. Conduct operations with minimum interference to public or private access.
C. Maintain protected egress and access at all times.
D. Perform demolition work in accordance with ANSI A10.6 and the accepted demolition plan or program.
E. Remove items indicated for demolition within the limits of the work, and as required to complete the work of this contract. Do not remove anything beyond the limits of work indicated without prior written approval by the Project Manager. If in doubt whether to remove an item, obtain written approval by the Project Manager prior to proceeding.

F. Remove materials from site as work progresses, at least weekly. Remove debris from the site so that its presence will not delay the progress of the work. Debris shall be the property of the Contractor and shall be removed and disposed of in a legal manner off the City's property.

3.02 MEASUREMENT AND PAYMENT

Full compensation for conforming to the provisions in this section '**Construction and Demolition Waste Management**,' not otherwise provided for, shall be considered included in prices paid for the various contract items of work involved and no additional compensations will be allowed therefor.

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CITY OF Fremont

Waste Handling Plan - Form 1
(Pre-Demolition/Pre-Construction)

Applicant must reuse or recycle 100% of asphalt/concrete and 50% of remaining items.

Permit BLD/PWC # _____ Project Name: _____

Project Address: _____ Date: _____

Contractor: _____ Contact: _____

Phone: _____ Email: _____

Type of Project: _____

Check the box for each type of material that will be generated during the project. Place the check in the appropriate column whether the item will be reused, recycled, or landfilled. Provide the name of each approved recycling facility/service provider for each material. Allied Waste is the only approved hauler for garbage and recycling. Applicant may self-haul material.

SAVE ALL RECEIPTS FOR SUBMITTAL TO THE CITY OF FREMONT WITH A FINAL DIVERSION REPORT

Failure to provide proper documentation will result in a $1000 per ton penalty for each ton not recycled

Material	Reused	Recycled	Landfilled	Name of Recycling Facility or Vendor
Asphalt/ Concrete **(100% reuse/recycle required)**			N/A	
Plant or Tree Debris **(100% reuse/compost required)**			N/A	
Dirt/Clean Fill			N/A	
Brick				
Building Materials (doors, etc.)				
Cardboard				
Carpet/Foam/Padding				
Dry Wall/Sheetrock (scrap)				
Metal				
Mixed C&D (ie,wood, metal, drywall, film plastic)				
Plastics, including film plastic				
Wood - unpainted or pallets				
Wood - treated/painted		N/A		
Garbage	N/A	N/A		Republic Services
Other:				
TOTALS:				

For City Use: Date Approved _____ **Not Approved** _____

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Staff Signature_____ Waived_____

Waste Handling Plan Acknowledgment

The Foreman for each Subcontractor that comes on site is to receive a copy of the Construction Waste Handling Plan and complete this Acknowledgment Form.

I have read the Waste Handling Plan for the project; I understand the goals of this plan and agree to follow the procedures described in this plan.

DATE	SUBCONTRACTOR COMPANY NAME	FOREMAN NAME	SIGNATURE

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All Subcontractors shall comply with the project's Waste Handling Plan and foremen shall sign the Acknowledgment Sheet.

Subcontractors who fail to comply with the Waste Handling Plan will be subject to backcharges or withholding of payment, as deemed appropriate. For instance, Subcontractors who contaminate debris boxes that have been designated for a single material type will be subject to backcharge or withheld payment.

1. The project's debris diversion requirements are 100% of asphalt, concrete, inerts, plant debris and 50% of the remaining debris.

2. 50% of the waste that is generated on this jobsite will be diverted from the landfill and recycled for other use.

3. The Waste Handling Plan identifies the materials that will be generated on this project, and the diversion strategy for each material type.

4. Waste prevention and recycling activities will be discussed at the beginning of subcontractor meetings. As each new subcontractor comes on-site, the contractor will present him/her with a copy of the Plan and provide a tour of the jobsite to identify materials to be salvaged and the procedures for handling jobsite debris. All Subcontractor foremen will acknowledge in writing that they have read and will abide by the Plan. The Waste Handling Plan will be posted at the jobsite trailer.

5. Salvage: Excess materials that cannot be used in the project, should be returned to the vendor, the owner, or donated to charity if feasible.

6. Republic Services will provide a commingled drop box at the jobsite for most of the construction waste. These commingled drop boxes will be taken to the Fremont Recycling and Transfer Station. The average diversion rate for commingled waste will be 50%. As site conditions permit, additional drop boxes will be used for particular phases of construction (e.g., concrete and wood waste) to ensure the highest waste diversion rate possible.

7. In the event that the waste diversion rate achievable via the strategy described above, is projected to be lower than what is required, then a strategy of source-separated waste diversion and/or waste stream reduction will be implemented. Source separated waste refers to jobsite waste that is not mixed but is instead allocated to a debris box designated for a single material type, such as clean wood or metal.

8. In the event that site use constraints (such as limited space) restrict the number of debris boxes that can be used for collection of designated waste the project Superintendent will, as deemed appropriate, allocate specific areas onsite where individual material types are to be consolidated. These collection points are not to be contaminated with non-designated waste types.

CITY OF Fremont

Debris Diversion & Disposal Report

(After Demolition/Construction)

Attach copies of receipts, gate tags, or other verifying documentation.

Applicant must reuse or recycle 100% of asphalt/concrete and 50% of remaining items.

Failure to provide documentation will result in a $1000 per ton penalty for each ton not recycled.

Permit BLD/PWC: _____ Project Name: _____

Project Address: _____ Date: _____

Contractor: _____ Contact: _____

Phone: _____ Email: _____

Type of Project: _____

Material	Tons/CY Reused	Tons/CY Recycled	Tons/CY Landfilled	Name of Recycling Facility or Service
Asphalt/ Concrete **(100% reuse/recycle required)**			N/A	
Plant or Tree Debris **(100% reuse/compost required)**			N/A	
Dirt/Clean Fill			N/A	
Brick				
Building Materials (doors, etc.)				
Cardboard				
Carpet/Foam/Padding				
Dry Wall/Sheetrock (scrap)				
Film Plastic				
Metal				
Mixed Const & Demo (C&D) (ie,wood, metal, drywall, film plastic)				
Plastic				
Wood - unpainted or pallets				
Wood - treated/painted	N/A	N/A		
Garbage	N/A	N/A		Republic Services
Other:				
Totals:				

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PROJECT SUMMARY

A. Total tons of materials salvaged, reused, or recycled (except A/C): _____

B. Total tons of materials landfilled (not recycled): _____

C. Total tons of materials generated for the project (Line A+B): _____

D. Percentage of materials recycled/reused (divide A by C x100%): _____%

For City Use Only: Approved _____ Not Approved _____

Waived	_____Staff Initials_____

Instructions for Completing the Debris Diversion & Disposal Report (DDDR)

The Debris Diversion & Disposal Report lists the actual amount of debris that was generated from the construction or demolition project.

1. Identify each type of debris item generated during the project (wood, scrap metal, etc.)
2. Enter the weight or volume (by number of tons or cubic yards (CY)), of each item that was reused, recycled, or disposed in a landfill. Enter this number in the appropriate columns.
3. All the asphalt/concrete was to be reused or recycled. 50% of everything else must be reused or recycled to comply with the mandatory debris recycling ordinance. The asphalt and concrete tonnage will not count towards the 50% diversion requirement.
4. Attach receipts from each of the approved facilities or service providers who recycled/processed that material. Approved facilities are listed below. The receipts must indicate "Fremont" as the City of origin to be accepted.
5. If the materials were reused on site, list that in Reuse column: i.e., "wood waste chipped on site for mulch" with an estimate of the weight or volume.

Attach all receipts from all facilities and vendors for each type of debris item. The totals on the form should match the receipts. This report is due within 30 days of completing your project. This report and the receipts are needed to get your Final Permit Approval. Failure to provide documentation will result in a $1000 per ton penalty for each ton not recycled.

Approved Recycling Facilities

Fremont Recycling & Transfer Station:
41149 Boyce Road, Fremont 510-252-0500 www.fremont-recycling.com
Newby Island Landfill/Recycling Facility
1601 Dixon Landing Road, Milpitas 408-262-1401
Zanker Material Processing Facility
675 Los Esteros Road, San Jose 408-263-2384
Guadalupe Landfill
15999 Guadalupe Mines Road, San Jose 408-268-1670
Davis Street Transfer Station
2615 Davis Street, San Leandro 510-563-4257
Stevens Creek Quarry (concrete, asphalt, dirt only)
12100 Stevens Canyon Rd. Cupertino 408-253-2512

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Conversion Factors

Material	Lbs/cubic yard	Tons/cubic yard	Cubic yds/ton
Wood	300	0.15	6.7
Wood (chipped)	650	0.33	3
Cardboard	100	0.05	20
Drywall	700	0.35	2.9
Asphalt	1400	0.7	1.4
Concrete	2600	1.3	.77
Mixed Waste	350	0.175	5.7
Mixed C&D Debris	900	0.45	2.2

Conversion Factors

The following conversion factors are estimates. The ranges vary widely, depending on how the materials are handled (compacted, loose, chipped, etc.).

Recommended Handling & Storage Procedures

Item or Material by Division	Suggested Action
02 SITEWORK	
Aggregate Base	Recyclable - typically too large for salvage and reuse

END OF SECTION

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SECTION 01 51 00 Mobilization and Temporary Facilities

PART 1 – GENERAL

1.01 RELATED SECTIONS

A. General Conditions, Article 7.2 (E)

B. Section 01 57 00 "Temporary Construction Fencing"

1.02 DESCRIPTION

Work includes: Mobilization, temporary facilities and controls required for this work, at all sites include, but are not limited to: staging areas; temporary utilities such as water, electricity and telephone; enclosures, barricades, temporary fencing, safety equipment, and for all other work and operations which must be performed or costs incurred prior to beginning work on the various contract items on the project site. All such temporary facilities for all sites shall be located for convenience and safety and maintained in a safe and sanitary condition at all times until completion of the Contract, then removed from the site and disposed of as required or as directed.

1.03 COMPLIANCE WITH CODES AND REGULATIONS

Compliance with all requirements of pertinent safety regulations is described in the General Conditions of the Contract for Construction and shall include, but not necessarily be limited to: Federal Occupational Health Administration (OSHA) and latest edition, Uniform Building Code (with California Amendments) and ADA (American Disability Act).

1.04 PRODUCT HANDLING

Use all means necessary to maintain all temporary facilities and controls in proper and safe condition throughout progress of the work. In the event of damage or loss, immediately make all repairs and replacements necessary and at no additional cost to the Owner.

1.05 TOOLS AND SUPPLIES

Provide engineering equipment and facilities, construction tools, equipment, materials, and supplies of the types and quantities necessary to facilitate the timely execution of the Work.

PART 2- PRODUCTS

2.01 TEMPORARY WATER

A. Provide, maintain and pay for suitable quality water service required for construction operations.

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B. The Contractor shall not make connection to, or take water from, any fire hydrant or pipeline without first obtaining permission from Alameda County Water District (ACWD) or other authority having jurisdiction over the use of said fire hydrant or pipeline and from and from the Fremont Fire Department (FFD). For each such connection made, the Contractor shall first attach to the fire hydrant or pipeline a valve and a construction meter supplied by ACWD or said other authority or agency.

C. Furnish and install all necessary temporary piping and, upon completion of the work, remove all such temporary piping.

D. If necessary, extend branch piping with outlets located so water is available by hoses with threaded connections. Provide temporary pipe insulation to prevent freezing, if necessary.

E. Removal of Water Connections: Before final acceptance of the Work on the project, all temporary connections and piping installed by the Contractor shall be entirely removed, and all affected improvements shall be restored to their original condition, or better, to the satisfaction of the Engineer, the City, and/or other agency owning the affected utility.

2.02 TEMPORARY ELECTRICITY

A. Power: The Contractor shall provide all necessary temporary power required for its operations under the Contract, and shall provide and maintain all temporary power lines required to perform the Work in a safe and satisfactory manner.

B. Lighting: All work conducted at night or under conditions of deficient daylight shall be suitably lighted to insure proper Work and to afford adequate facilities for inspection and safe working conditions.

C. Approval of Electrical Connections: All temporary connections for electricity shall be subject to approval of the City, the Engineer and the power company representative, and shall be removed in like manner at the Contractor's expense prior to final acceptance of the Work by the City.

D. Wiring: All wiring for temporary electric light and power shall be properly installed and maintained and shall be securely fastened in place. All electrical facilities shall conform to the requirements of CCR: Title 8, Industrial Relations, Subchapter 5, Electrical Safety Orders, and Subpart K of OSHA Safety and Health Standards for Construction.

E. Removal of Electrical Connections: Before final acceptance of the Work on the project, all temporary connections and piping installed by the Contractor shall be entirely removed, and all affected improvements shall be restored to their original condition, or better, to the satisfaction of the Engineer, the City, and/or other agency owning the affected utility.

2.03 TEMPORARY SANITARY FACILITIES

A. Existing facilities are available for Contractor's use.

B. At the Contractor's option, provide and maintain required sanitary facilities, at no additional cost to the City, as described herein.

C. Provide adequate fixed or portable chemical toilet conveniences whenever needed for the use of employees, including, washing facilities, and drinking water for the use

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of all employees and persons engaged on or about the Work, including Subcontractors and their employees. Drinking water shall be potable, and drinking water facilities shall be clean and sanitary.

D. Provide adequate wheelchair, accessible, portable chemical toilet conveniences for the use of the public, including, hand washing facilities/stations. Portable toilet facilities shall be sized for accessibility, 100% ADA and Title 24 compliant, for the duration of the project. Five (5) toilets, required, at minimum, to offset the loss of stalls during construction.

E. Minimum dimensional requirements: Height 90”; Width 67”; Depth 86.5”; seat height: 19”; capacity 68 gallons.

F. Locate sanitary facilities where approved by City staff. To be determined in the field prior to construction and delivery

G. Maintain in a clean and sanitary condition during the course of the Work. Keep such facilities adequately supplied with toilet paper, paper toweling, paper cups, and related supplies as required. At minimum, provide a weekly service schedule for cleaning and servicing.

H. Sanitary and Other Organic Wastes: The Contractor shall establish a regular collection of all sanitary and organic wastes. All refuse from sanitary facilities provided by the Contractor or organic material wastes from any other source related to the Contractor's operations shall be disposed of away from the site in a manner satisfactory to the Engineer and in accordance with all laws and regulations pertaining thereto.

I. At completion of the Work, sanitary facilities shall be properly disinfected and all evidence of same removed from the Jobsite.

J. Comply with all minimum requirements of the Health Department or other public agency having jurisdiction. Maintain in a sanitary condition at all time – secure toilets in non-work hours from vandalism.

2.04 STAGING AREAS, STORAGE AND PARKING AREAS

A. The Contractor may utilize the existing parking lot(s) for parking of construction equipment, staging and storing materials. Parking of vehicles by construction personnel shall be limited to areas within the existing parking lot outside the limits-of-work.

B. These areas will be provided to the Contractor for the durations indicated in the Contract Specifications.

C. The Contractor shall provide a plan outlining the area required for staging and provide temporary construction fencing to secure and protect proposed area. The Contractor shall be fully responsible for the safety and security of their materials and equipment staged and stored in this area.

D. The Contractor shall provide parking facilities for the Contractor's personnel, Subcontractors, Supplier's delivery vehicles, and authorized visitors. Off the Jobsite parking facilities (if any) shall not impair or interfere with existing community parking and traffic conditions, regulations, and restrictions.

E. No parking or vehicle storage will be permitted in environmentally sensitive areas as identified on the Contract Drawings.

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2.05 PROTECTIVE BARRICADES AND SAFETY PRECAUTIONS

A. Construct and maintain barricades and warning signs as required by federal and State safety ordinances and as required to protect the District's property from damage or loss and as necessary for the protection of the public and adjacent properties. Provide walks around obstructions made in a public place for prosecuting the Work. Leave all protection in place and maintain until removal is authorized.

B. Guard and protect all workers, pedestrians, and the public from excavations, construction equipment, obstructions, and other dangers with adequate railings, guard rails, temporary walks, barricades, warning signs, directional signs, overhead protection, planking, decking, danger lights, and other suitable safeguards.

2.06 BARRIERS, ENCLOSURES AND TEMPORARY CONSTRUCTION FENCING

A. See “Temporary Construction Fencing” found herein Article 15.

B. Provide barriers to prevent unauthorized entry to construction areas and to protect existing facilities and properties from damage from construction operations and demolition in accordance with OSHA and governing authorities having jurisdiction.

2.07 TEMPORARY ACCESS FACILITIES

A. Use all means necessary to maintain all temporary facilities and controls in proper and safe condition throughout progress of the work. In the event of damage or loss, immediately make all repairs and replacements necessary and at no additional cost to the Owner.

B. All areas affected by Contractor-constructed temporary facilities shall be restored to their original condition upon removal of the temporary facilities.

2.08 SECURITY

A. The Contractor shall provide for security of the Work and the Jobsite until final inspection and Acceptance of the Work. Storage areas shall be suitably fenced and lighted.

B. The City assumes no responsibility for protection of structures and finished work or for loss of materials and equipment from the time that Contract operations have commenced until Acceptance of the Work.

C. If watchman/security service is deemed necessary by the Contractor, such protection shall be provided by the Contractor, and all costs therefore shall be paid for by the Contractor.

D. Damaged, lost, or stolen materials and equipment, whether or not stored or already installed, shall be replaced by the Contractor with new specified materials and equipment, including reinstallation where applicable, at no additional cost to the District.

2.09 PROGRESS CLEANING AND WASTE REMOVAL

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A. Collect and remove waste materials, debris, and rubbish from site as specified in Article 15, subsection 15.7, Section 01505 “Construction and Demolition Waste Management” and Section 01 74 14 “Cleaning”.

2.10 POSTING OF REGULATIONS

Comply with industry standards and applicable laws and regulations of authorities having jurisdiction in the posting of regulations.

PART 3 EXECUTION

3.01 MATERIAL STORAGE AND PROTECTION

A. During the progress of the work, products and materials shall be neatly stored in accordance with the appropriate manufacturer's recommendations and shall be properly cared for and protected from weather, vandalism and theft.

B. All installed products and materials shall be adequately protected until such time as the Owner accepts the Project.

3.02 CONDITIONS AT THE SITE

A. The Contractor shall make all necessary inspections of the job site and of the work to be fully aware of the conditions of all temporary facilities and controls at all times.

B. The Contractor shall take all steps necessary to prohibit any part of the premises to be overloaded by setting thereon any material or equipment, or performing thereon any of his work, which could cause any loss, damage, and/or injury to person or property.

C. The Contractor shall make a close inspection of all materials as delivered and shall promptly return all defective materials without waiting for their rejection by the City Engineer.

3.03 REMOVAL

Maintain all temporary facilities and controls as long as needed for the safe and proper completion of the work. Remove all such temporary facilities and controls as rapidly as progress of the work will permit.

3.04 CLOSEOUT

A. Upon completion of the Work, or prior thereto when required by the Supervising Construction Coordinator, remove temporary facilities' structures and installations from the City’s property, and all areas not otherwise improved but which were adversely affected by the Contractor's work shall be returned to their original condition.

B. Return exterior areas utilized for temporary facilities to their original, natural state or, when called for on the Contract Documents, complete such areas as indicated.

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3.05 MEASUREMENT AND PAYMENT

The lump sum contract price paid for **"Mobilization and Temporary Facilities"** and all other various items covered in this section, including set up of all temporary facilities shall be paid for as part of the lump sum cost for "General Demolition" and no separate payment will be made therefore.

END OF SECTION

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SECTION 01 55 27 **Maintenance of Traffic and Access**

PART 1GENERAL

1.01 SECTION INCLUDES

A. This Contract Specifications Section provides requirements regarding the maintenance of traffic and access.

B. Maintenance of Traffic and Access Plan.

C. Maintenance of traffic operations during construction for the Contract.

D. Maintenance of Traffic and Access Traffic Control Plans.

E. Maintenance of Traffic and Access to private and public properties adjacent to and along the Jobsite during construction of the Contract.

F. Management and supervisory personnel requirements.

G. Construction operations under traffic.

1.02 REFERENCES

A. Article 2.2 (E) “Roles and Responsibilities” of the General Conditions, and Article 7.5 (B) “Worksite and Nearby Property Protections”.

B. State of California, Department of Transportation (Caltrans), Standard Specifications, 2015

1. Section 12 – Temporary Traffic Control

1.04 MAINTAINING TRAFFIC AND TRAFFIC CONTROL

A. The provisions in this section will not relieve the Contractor from his responsibility to provide such additional devices or take such measures as may be necessary to comply with the provisions of the Standard Specifications and these special provisions.

B. The Contractor shall provide a traffic control plan for work at Central Park and Warm Spring Community Park.

C. **The traffic control plan must be certified by a licensed Civil Engineer or Traffic Engineer registered in the State of California. The traffic control plan must be reviewed and approved by the City prior to starting any work.**

D. The traffic control plan shall be submitted as one package for review by the City. Partial submittals may be rejected by the City. The traffic control measures as designed by the Contractor and identified on the traffic control plan shall be in place prior to the start of each day’s work. At the pre-construction meeting, the traffic control requirements for the project shall be reviewed with the Contractor, and at the meeting, all of the Contractor’s foremen or supervisors shall be present.

E. All signs and other warning devices shall be furnished, installed, maintained, relocated, and removed by the Contractor and shall become his property after the completion of the contract. Section 12-2.02 of the Standard Specification is revised to provide that all flagmen and guards shall be furnished by the Contractor at his expense. The Contractor shall refer to the current "Manual of Warning Signs, Lights and Devices for Use in Performance of Work Upon Highways" and the "Uniform Sign Chart," issued by the State of California, Department of Transportation, and shall

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furnish, erect, maintain, and remove all necessary signs and devices during the length of this contract.

F. Personal vehicles of the Contractor's employees shall not be parked on the traveled way or shoulders, including any section closed to public traffic.

G. All excess and unsuitable material resulting from the Contractor's operation shall be removed as it develops and before the end of each working day.

H. All hauling on City streets shall be on adopted truck routes. See Truck Routes Plan (Appendix A) following these Special Provisions. The Contractor shall contact the Engineer for approved haul routes for all material entering or leaving the site.

I. Traffic may not be routed over unpaved roadway unless authorized by the Engineer.

J. Safe bicycle accommodations shall be maintained by the Contractor at all times during construction. Appropriate warning signs designed for bicyclists shall be used by the Contractor, as necessary, so bicyclists can safely traverse the construction zone.

K. The provisions in this section may be modified or altered if, in the opinion of the Engineer, public traffic will be better served and work expedited. Said modifications or alterations shall not be adopted until approved in writing by the Engineer.

L. The Contractor shall maintain a safe workplace throughout the job including, but not limited to, providing flaggers, safety equipment, barricades, safe pedestrian and bicycle passage through the work zones, and maintenance of handicap access where applicable.

M. The Contractor shall fulfill the requirements of this section 24 hours per day, seven days per week, including holidays, from the time the Notice to Proceed is issued until the project is accepted as complete.

N. Safe pedestrian and bicycle accommodations shall be maintained by the Contractor at all times during construction. Appropriate warning signs designed for bicyclists shall be used by the Contractor, as necessary, so bicyclists can safely traverse the construction zone.

O. When entering or leaving roadways carrying public traffic, the Contractor's equipment, whether empty or loaded, shall in all cases yield to public traffic.

P. Whenever vehicles or equipment are parked on the shoulder within 6 feet of a traffic lane, the shoulder area shall be closed with fluorescent traffic cones or portable delineators placed on a taper in advance of the parked vehicles or equipment and along the edge of the pavement at 25-foot intervals to a point not less than 25 feet past the last vehicle or piece of equipment. A minimum of 9 cones or portable delineators shall be used for the taper. A W20-1 (Road Work Ahead) or W21-5 (Shoulder Work) sign shall be mounted on a portable sign stand with flags. The sign shall be placed where directed by the Engineer.

1.05 PUBLIC SAFETY

A. The Contractor shall provide for the safety of traffic and the public in conformance with the provisions in the Standard Specifications and these special provisions.

B. The contractor shall provide safe access around the perimeter sidewalk of the park and project site at all times. If pedestrian traffic needs to be redirected, the contractor shall provide all necessary temporary barricades, traffic cones, warning signs, lights,

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directional signs, and other safety devices required to redirect pedestrians along the appropriate route.

C. If the accessible parking stalls are to be temporarily removed due to construction, temporary stripping, signage and a temporary ramp with access to the path of travel shall be installed.

D. Except for temporary interruptions approved by the Engineer, property owners shall be provided access to their properties over both walkways and driveways at all times, with a zone 48" clear. The Contractor shall perform his work to allow such access. Temporary interruptions in driveway and or walkway access, if approved by the Engineer and the property owners, shall not exceed a continuous 48-hour period.

1.06 MAINTENANCE OF VEHICULAR AND PEDESTRIAN TRAFFIC AND ACCESS PLAN

A. The Contractor shall prepare and submit a MOTA Plan that provides an overall Plan of general traffic operations during construction prior to the start of construction, for the Supervising Construction Coordinator's written approval. The MOTA Plan shall identify stages and phases and provide appropriate operating procedures. The MOTA Plan shall address, at a minimum, the issues specified herein. The Plan shall be organized into five sections.

B. Section 1 - Construction Staging Plan:

1. The Contractor shall identify the general sequencing for construction and staging of construction. The Construction Staging Plan shall include contingency Plans for weather, utility issues, and other unforeseen interruptions.

2. The Construction Staging Plan shall address detours, warning devices, major special events, impact on park users, deployment of construction equipment, trailers, supplies, materials and other items for the Contract, noise abatement, time of construction and public information requirements.

3. The Construction-Staging Plan shall be updated as necessary throughout the Contract.

C. Section 2 - Traffic Mitigation Plan:

1. The Contractor shall analyze and provide detailed mitigation measures that include various methods of detouring and minimizing the loss of traffic capacity on existing roads adjacent to the Jobsite.

2. The Traffic Mitigation Plan shall be updated as necessary throughout the Contract.

D. Section 3 - Emergency Vehicle Access Plan:

1. The Emergency Vehicle Access Plan shall address MOTA for emergency vehicles to all area of the park affected by construction adjacent to the Jobsite from the time that construction starts until construction is completed. Emergency service vehicles shall include the following:

a. Emergency medical vehicles;

b. Utility maintenance vehicles for emergency purposes (such as gas or electric);

c. Fire protection vehicles; and

d. Police vehicles.

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2. The Emergency Vehicle Access Plan shall address the special needs of facilities, such as, police, and fire. The Emergency Vehicle Access Plan shall define routes through and around construction sites.

3. The Contractor shall develop and maintain a contact list of emergency service providers.

E. Section 5 - Emergency Response Plan:

1. The Emergency Response Plan shall address Plans for responding to incidents (caused by the Contractor or others) along the Contract, such as, inadvertent traffic stoppages or delays, traffic accidents, on-site emergencies, and/or emergencies requiring police or emergency vehicles.

2. The Emergency Response Plan shall identify how the Contractor will determine where and when incidents occur and how the Contractor will facilitate movement of traffic through work zones once the cause of the incident has been cleared.

3. The Contractor shall designate point(s) of contact who shall be accessible to the emergency service providers 24 hours per day. An updated Emergency Response Plan, including the 24 hour per day contacts with phone and/or pager numbers, shall be submitted to the Supervising Construction Coordinator for written acceptance at least 30 Days prior to the start of construction.

4. The Contractor shall coordinate this section of the MOTA Plan with the Health and Safety Program.

1.07 VEHICULAR AND PEDESTRIAN TRAFFIC CONTROL PLANS

A. Responsibilities, Review and Approvals:

1. The Contractor shall have full responsibility for developing and implementing Traffic Control Plans (TCPs).

2. TCP's shall be required for the Work for each stage of construction on public right-of-way and Fremont Central Park property.

3. The TCPs shall be submitted to and receive the Supervising Construction Coordinator's and jurisdictional authority's written approval and permits to work in the public right-of-way shall be obtained prior to release of design for construction.

4. Any revisions to the TCPs shall be submitted to the Supervising Construction Coordinator and the jurisdictional agency for review and written approval as far in advance as possible of construction covered by the TCP update or revision.

5. The Contractor will be responsible for delays caused by revisions to (and subsequent reviews of) the TCPs that the Contractor initiates.

B. Requirements of the Traffic Control Plans:

1. The TCPs shall include detailed Construction Drawings to maintain traffic operations, show construction equipment traffic and routing plans, and identify the location and type of all temporary traffic control devices affecting vehicular traffic during each stage of construction.

2. Traffic maintenance under the jurisdiction of the City of Fremont shall comply with Section 33 of the City of Fremont Standard Specifications.

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3. The TCPs shall identify the duration of construction, sequencing of construction, and detouring required for each construction stage and provide detailed emergency response procedures in accordance with Part 1.05F herein.

4. The TCPs shall address coordination of timing with other projects in the area.

C. Elements of the Traffic Control Plans: The TCPs shall contain at a minimum the following:

1. Location and scheduled dates of use for all traffic control devices, including, but not limited to, traffic channelization devices, barriers, impact attenuators, signs, pavement markings, and variable message signs;

2. Detailed emergency response procedures in accordance with the Emergency Response Plan;

3. TCP detail sheets;

4. Location and schedule of flaggers;

5. Identification of intersection(s) to be closed and duration of closure(s), if any; and

6. Duration of construction, sequencing of construction, and detouring/alternate routing required for each construction stage.

D. Changes to the Traffic Control Plans:

1. Changes to the TCPs necessitated by unforeseen circumstances as determined by either the Contractor or Supervising Construction Coordinator shall be submitted to the Supervising Construction Coordinator and the jurisdictional agency for review and written approval at least 48 hours prior to implementation, unless the Supervising Construction Coordinator determines an emergency situation exists requiring immediate traffic control adjustments.

2. The Contractor shall also obtain comments from affected third parties as necessary for the changed TCPs necessitated by unforeseen circumstances.

E. TCP Implementation:

1. The Contractor shall notify the Supervising Construction Coordinator and the jurisdictional agency and have received their approvals at least ten Working Days prior to the beginning of construction and/or the implementation of the TCP in any construction phase including for temporary closing to traffic of any street, sidewalk, or other access, or to changing traffic patterns from those indicated in the Construction Drawings.

2. Each vehicle used to place, maintain and remove components of a traffic control system on multilane roads shall be equipped with a Type II flashing arrow sign which shall be in operation when the vehicle is being used for placing, maintaining, or removing the components. Vehicles equipped with a Type II flashing arrow sign not involved in placing, maintaining, or removing the components when operated within a stationary type lane closure shall only display the caution display mode. The sign shall be controllable by the operator of the vehicle while the vehicle is in motion.

3. If any component in the traffic control system is displayed or ceases to operate or function as specified, for any cause, during the progress of the work, the Contractor shall immediately repair said component to its original condition or replace said component and shall restore the component to its original location.

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4. When closures are made for work periods only, at the end of each work period all components of the traffic control system, except portable delineators placed along open trenches or excavation adjacent to the traveled way, shall be removed from the traveled way and shoulder. If the Contractor so elects, said components may be stored at selected central locations, approved by the Engineer, within the limits of public right of way.

5. The Contractor shall have signs in place advising the public of detours, closures, and alternate routes prior to implementing the provisions of the TCP. Each detour, closure, and alternate route shall have signs with the dates of work as well as the Contract Sections involved. Signing shall be sufficient to inform the traveling public.

F. Pre-Construction Requirements: The Contractor shall not begin construction or close any traffic lanes until the following has occurred:

1. Submit TCP at Pre-construction meeting for approval, or prior to meeting.

2. The Contractor has obtained appropriate permits;

3. Required notices have been given regarding closures, alternate routes and detours; and

4. The Contractor has received the Supervising Construction Coordinator's and the jurisdictional agency's written approval of the TCPs.

G. Control Devices and Facilities:

1. Furnish, install, operate, maintain, and remove when no longer required, all traffic control and protective devices required for the approved Traffic Plan.

2. Traffic control and protective devices shall include portable changeable message signs, detour signs, temporary signs, and danger signals; temporary barricades and concrete barriers; non-redirective crash cushions; traffic cones; tubular markers, channelizers, delineators, temporary lighting, overhead warning lights, flashing arrow boards and flashing lights; temporary pavement markings, and removal of permanent and temporary pavement markings; and the services of qualified flaggers.

3. Maintain communication with the Supervising Construction Coordinator and jurisdictional agency(s) regarding the Contractor's operations in maintaining and controlling traffic.

H. Traffic Control Signs: Each change in location of traffic shall be adequately posted with signs mounted on barricades or standard posts in accordance with requirements of Caltrans Standard Specifications, Section 12 and the MUTCD. Temporary "No Parking" signs that are to be used for short periods shall be provided by the Contractor.

I. Flaggers: All flaggers and guards shall be furnished by the Contractor at his expense. The Contractor shall furnish, place, maintain, and remove all required traffic control signs and devices during the length of this contract.

J. All signs and other warning devices shall be furnished, installed, maintained, relocated, and removed by the Contractor and shall become his property after the completion of the contract. Section 12-2.02 of the Standard Specification is revised to provide that all flagmen and guards shall be furnished by the Contractor at his expense. The Contractor shall refer to the current "Manual of Warning Signs, Lights and Devices for Use in Performance of Work Upon Highways" and the "Uniform Sign

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Chart," issued by the State of California, Department of Transportation, and shall furnish, erect, maintain, and remove all necessary signs and devices during the length of this contract

K. Redirecting Traffic

1. All channelizing, shifting of traffic lanes, and barricading of traffic in connection with the Work will be subject to approval of the Supervising Construction Coordinator and the appropriate jurisdictional agency. Existing local standards for signing and marking of construction areas will apply in addition to the requirements of Caltrans Standard Specifications, Section 12.

2. When required by the Contract Specifications, or indicated on the Contract Drawings, or required by responsible public agencies, the Contractor shall construct, maintain, and remove detours and detour bridges for the use of public traffic.

3. Failure or refusal of the Contractor to construct and maintain detours at the time specified in the TCP shall be sufficient cause for suspending the Work, at no extra expense to the City, until such detours are in satisfactory condition for use by public traffic.

L. Lane Closures

1. Lane closures shall conform to the provisions of Section 10-1.08, "Traffic Control System for Lane Closures" of these Special Provisions. Electronic arrow boards shall be used for all lane closures. The Contractor shall check with the Engineer to confirm any lane closure restrictions that may be in effect before closing any lanes.

2. Work that interferes with public traffic shall not be performed prior to 8:30 am or after 4:00 pm, except for work required at night during hours specified on the plans, or work approved by the Engineer.

3. A minimum of one paved traffic lane, not less than ten (10) feet wide, shall be open for use by public traffic in each direction of travel at all times. Traffic shall not be routed over any surface not paved with asphalt concrete unless authorized by the Engineer. All lanes shall be open to traffic between the hours of 4:00 pm and 8:30 am. In addition, the full width of the traveled way on each street shall be open for public use on Saturdays, Sundays and designated legal holidays; after 3:00 pm on Fridays and the day preceding designated legal holidays; and when construction operations are not actively in progress.

4. Designated legal holidays are: January 1st, the third Monday in January, the third Monday in February, the last Monday in May, July 4th, the first Monday in September, November 11th, Thanksgiving Day, the day after Thanksgiving Day, the day preceding Christmas Day (Observed) and Christmas Day (Observed). When a designated legal holiday falls on a Sunday, the following Monday shall be a designated legal holiday. When a designated legal holiday falls on a Saturday, the preceding Friday shall be a designated legal holiday.

5. Deviations from the requirements of this section concerning hours of work and lane closure hours, which do not change the cost of the work, may be permitted upon the written request of the Contractor if, in the opinion of the Engineer, public traffic will be better served and the work expedited. Such deviations shall not be implemented until the Engineer has provided the Contractor with written approval to do so. All other modifications will be made by contract change order.

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M. Temporary Walkways: In areas where removal of existing sidewalks is necessary, access to adjacent businesses, entrances, and properties shall be maintained by temporary walkways having a width of not less than 4 feet.

N. Intersections and Street Crossings: Intersections and street crossings shall be excavated and decked in stages. Construction shall be phased so that the required number of traffic lanes on each street will be provided at all times during these operations. Upon completion of decking installation, traffic in all directions shall be fully maintained. Trenches or open excavations shall be properly bridged where traffic lanes are to be open to traffic.

O. Temporary Paving and Patching:

Construct, maintain, and remove temporary pavement and patching required to safely and expeditiously handle vehicle and pedestrian traffic, within or adjacent to the Jobsite. Temporary pavement and patching composition shall conform to the specifications of the local jurisdictional authority. Any construction, maintenance, or removal required by the Contractor's operations off the Jobsite shall conform to the requirements specified herein.

P. New and Existing Traffic Control Devices:

1. Contractor shall arrange with the respective county and municipal authorities to provide governmental services as required for salvaging reusable street-name and traffic signs, removal of parking meters, and for removal, relocation, and adjustment of traffic signals.

2. Contractor shall provide such work and construction services as may be required by county and municipal authorities to assist in salvaging reusable street-name and traffic signs, removing of parking meter posts and bases, and removing, relocating, and adjusting of traffic signals, all in accordance

Q. Parking of Vehicles and Equipment:

The following restrictions apply to the parking of personal vehicles of Contractor's and Subcontractor's personnel, Contractor's, Subcontractor's and Supplier's vehicles or equipment:

1. During non-working hours, vehicles or equipment shall not be parked within the roadway clear zone or railroad right-of way;

2. Neither personal vehicles nor equipment shall be parked on accesses to businesses, residences, or public or private land where such parking blocks access; and

3. Private or public land, including parking areas at businesses, shall not be used to park personal vehicles of Contractor's employees or Contractor's or Subcontractor's vehicles or equipment.

R. Hauling on City Streets:

All hauling on City streets shall be on adopted truck routes. See Truck Routes Plan (Appendix A) following these Special Provisions. The Contractor should contact the Engineer for approved haul routes for all material entering or leaving the site.

1. When entering or leaving roadways carrying public traffic, the Contractor's equipment, whether empty or loaded, shall in all cases yield to public traffic

1.08 COMPLIANCE AND SUSPENSION

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A. Failure to comply:

1. The Supervising Construction Coordinator may suspend all or part of the Contractor's construction operations or suspend payment for failure to comply with the approved MOTA Plan and/or approved TCPs or failure to correct unsafe traffic conditions within a reasonable period of time after such unsafe condition is known by the Contractor or notification is given to the Contractor in writing. The Contractor shall not wait for the City's written direction to take corrective action.

2. If the Contractor does not take appropriate action to bring the deficient MOTA condition into compliance with the approved MOTA Plan and approved TCPs or to correct the unsafe traffic conditions the City may proceed with the corrective action using its own forces or forces retained by the City. If the City must take action on its own, the cost of such will be documented and deducted from moneys owed the Contractor.

3. If the Contractor's operations are suspended due to failure to comply with the approved MOTA Plan or approved TCP or to make timely correction of an unsafe traffic condition, no change in the Contract time for construction will be granted for the period required to correct the unsafe conditions and MOTA details deficiencies.

B. Suspension:

1. The Contractor shall not be relieved of the responsibility to provide MOTA to the traveling public, landowners, and residents when the Contract is under full or partial Contract suspension.

2. When the Contract is under suspension due to the Contractor's failure to comply with this Section, the Contractor shall continue to provide MOTA at no additional cost to the City.

3. If suspensions or partial suspensions are requested by the Contractor, any MOTA work will be at the Contractor's expense.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

3.01 GENERAL

The Contractor shall fulfill the requirements of this section 24 hours per day, seven days per week, including holidays, from the time the Notice to Proceed is issued until the project is accepted as complete.

3.02 MEASUREMENT AND PAYMENT

Full compensation for conforming to the provision in this section "**Maintenance of Traffic and Access**", not otherwise provided for, shall be considered as included in the lump sum price paid for "**Traffic Control Plan**" in the Unit Price Schedule and shall include full compensation for various items, including but not limited to Traffic Control Devices, Signs, traffic cones, flaggers, detour signs etc. as covered by this section, and shall include furnishing all labor, materials, tools, equipment, and incidentals and doing all the work, complete in place as shown on the plans, as required by these Special Provisions, and as directed by the City Engineer.

END OF SECTION 01 55 27

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SECTION 01 56 00 Protection of Existing Facilities

1.01 GENERAL

A. The Contractor shall protect all existing utilities, trees, shrubbery, lawn, landscaping, irrigation facilities, wells, buildings, fences, roadside signs, poles, and all other improvements not designated for demolition and removal, and shall restore damaged or temporarily relocated utilities and other improvements as listed above to a condition equal to or better than they were prior to such damage or temporary relocation, all in accordance with requirements of the Contract Documents.

B. The Contractor is responsible for any and all damages resulting from insufficient weather protection. Contractor is to coordinate exterior work to avoid damage.

C. The Contractor shall be completely responsible for the care and condition of the project improvements in their entirety until completion of the maintenance period and acceptance by the City. The Contractor shall provide such watchmen, guards, and security devices as deemed necessary to prevent destruction of property and vandalism.

1.02 QUALITY ASSURANCE

A. Tree Protection General Responsibility: The Contractor shall be directly responsible for protection and welfare of existing trees, which are noted to remain. This responsibility shall continue throughout all phases of work until the entire project is completed and accepted by the City and through completion of the maintenance period.

B. Reference Standards: Published specification, standards, tests, or recommended methods of trade industry apply to work of this section.

1.03 PROTECTION OF SURVEY MARKS

A. The Contractor shall not destroy, remove, or otherwise disturb existing survey markers without proper authorization. No pavement breaking or excavation shall be started until all survey or other permanent marker points that will be disturbed by the Work have been properly referenced for easy and accurate restoration. It shall be the Contractor's responsibility to notify the proper representative of the City of the time and location that work will be done. Such notification shall be sufficiently in advance of demolition so that there will be no delay due to waiting for survey points to be satisfactorily referenced for restoration. All survey markers or point disturbed by the Contractor without proper authorization of the Engineer, will be accurately restored by the City at the Contractor's expense after all contract work has been completed.

1.03 PROTECTION OF INSTALLED WORK

A. All work installed, completed and accepted per the direction herein to phase construction, shall be protected from damage by other phases of construction work.

B. Contractor shall control activity in immediate work area to prevent damage.

C. Provide temporary and removable protection for installed Products, as needed.

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D. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.

E. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.

1.04 EXISTING UTILITIES AND IMPROVEMENTS

A. General: The Contractor shall protect all underground utilities and other improvements, which may be impaired during the Work. It shall be the Contractor's responsibility to ascertain the actual location of all existing utilities and other improvements that will be encountered in its demolition operations, and to see that such utilities and other improvements are adequately protected from damage due to such operations. The Contractor shall take all possible precautions for the protection of unforeseen utility lines to provide for uninterrupted service and to provide such special protection as may be necessary.

B. Utilities to be Moved: In case it shall be necessary to remove from the property any public utility or franchise holder, such utility or franchise holder, will, upon the request of the Contractor, be notified by the City to move such property within a specified reasonable time. When utility lines are to be removed are encountered within the area of operations, the Contractor shall notify the Engineer a sufficient time in advance for the necessary measures to be taken to prevent interruption of service.

C. Where proper completion of the Work requires the temporary or permanent removal and/or relocation of an existing utility or other improvement, which is shown the Contractor shall remove, and, without unnecessary delay, temporarily replace or relocate such utility or the facility. In all cases of such temporary removal or relocation, restoration to former location shall be accomplished by the Contractor in a manner that will restore or replace the utility or improvement as nearly as possible to its former locations and to as good or better condition than found prior to removal.

D. City's Right of Access: The right is reserved to the City and to the owners of public utilities and franchises to enter at any time upon any public property, right-of-way, or easement for the purpose of making changes in their facilities made necessary by the Work of this contract.

E. Underground Utilities Shown or Indicated: Existing utility lines that are shown or the locations of which are made known to the Contractor prior to excavation and that are to be retained, and all utility lines that are constructed during excavation operations shall be protected from damage during excavation and backfilling and, if damaged, shall be immediately repaired by the Contractor.

F. Underground Utilities Not Shown or Indicated: In the event that the Contractor damages any existing utility lines that are not shown or the locations of which are not made known to the Contractor prior to excavation, a written report thereof shall be made immediately to the City. If directed by the City, repairs shall be made by the Contractor under the provisions for changes and extra work.

G. Approval of Repairs: All repairs to a damaged improvement are subject to inspection and approval by an authorized representative of the improvement owner before being concealed by backfill or other work.

H. Maintaining Service: All oil and gas pipelines, power, and telephone or other communication cable ducts, gas and water mains, irrigation lines, wells, sewer lines, storm drain lines, poles, and overhead power and communication wires and cables

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encountered along the line of the Work shall remain continuously in service during all operations under the Contract, unless other arrangements satisfactory to the City are made with the owner of said pipelines, duct, main, irrigation line, sewer, storm drain, pole, wire or cable. The Contractor shall be responsible for and shall repair all damage due to its operations, and the provisions of this Section shall not be abated even in the event such damage occurs after backfilling or is not discovered until after completion of the backfilling.

1.05 REPAIR COMPENSATION

A. Damage to existing tree crown or roots over 1-inch in diameter shall be immediately reported to the Engineer in writing, and, at the direction of the Engineer, with recommendations from the City's Assigned Arborist, repair damage immediately at the Contractor's expense and monitored by a the City's Assigned Arborist.

B. The City's Assigned Arborist shall direct repair of trees damaged by construction operations. Repairs shall be made promptly after damage occurs to prevent progressive deterioration of damaged tree.

C. Damaged tree limbs or trees which have died as a result of injury during construction shall remain the property of the City and shall remain or be removed by the Contractor as directed by the Engineer, with recommendations from the City's Assigned Arborist.

D. Any tree to remain which is damaged or destroyed owing to the Contractor's negligence or failure to provide adequate protection shall be compensated for according to the full appraisal value using the "trunk formula" method in accordance with the latest edition of The Guide for Plant Appraisal, 9th edition (published in 2000 by the International Society of Arboriculture, Savoy IL) and the Species Classification and Group Assignment (2004), a publication of the Western Chapter of the International Society of Arboriculture.

E. Replacement: The Contractor shall immediately notify the City and/or other jurisdictional agency if any tree is damaged by the Contractor's operations. If, in the opinion of the City, the City's Assigned Arborist, or other said agency, the damage is such that tree replacement is necessary, the Contractor shall replace the tree at their expense. The tree shall be of a like size and variety as the tree damaged, or, if of a smaller size, the Contractor shall pay the owner of said tree a compensatory payment acceptable to the tree owner, subject to the approval of the City or other jurisdictional agency. The size of the trees shall not be less than 1-inch diameter nor less than 6 feet in height. Fines will be assessed against the Contractor for removal of trees without the prior written approval of the City. The minimum amount of the fine or restitution to the City will be the replacement of the tree removed, with a tree of equal or greater size and maturity and as approved by the City. Larger fines may be assessed against the Contractor depending on the circumstances and type of tree removed, especially in the case of trees listed in the City's Landmark Tree List. The value of such a tree shall be based, at minimum, on the full appraised value using the "trunk formula" method in accordance with the latest edition of The Guide for Plant Appraisal, 9th edition (published in 2000 by the International Society of Arboriculture, Savoy IL) and the Species Classification and Group Assignment (2004), a publication of the Western Chapter of the International Society of Arboriculture).

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1.06 PROTECTION OF ADJACENT STRUCTURES

A. The Contractor shall take steps to protect adjacent structures from damage during all project activities, including, but not limited to, building and construction, hazardous materials removal, salvage/recycling, demolition, basement demolition, backfilling, grading and landscaping operations.

B. Any and all damage to adjacent structures shall be the responsibility of the Contractor.

C. If damage occurs, the Contractor will take immediate steps to remedy the situation in the field.

1.07 NOTIFICATION BY THE CONTRACTOR

A. Prior to any excavation in the vicinity of any existing underground facilities, including all water, sewer, storm drain, gas petroleum products, or other pipelines; all buried electrical power, communications, or television cables; all traffic signal and street lighting facilities; and all roadway and state highway right-of-ways the Contractor shall notify the Underground Service Alert Agency (800.227.2600) and the respective authorities representing the owners or agencies responsible for such underground facilities not less than 48 hours prior to excavation so that a representative of said owners or agencies can mark the utility alignment or be present during such work if they so desire.

1.08 MEASUREMENT AND PAYMENT

A. Full compensation for conforming to the provisions in this section "**Protection of Existing Facilities,"** not otherwise provided for, shall be considered as included in prices paid for the various contract items of work involved, and no additional compensation will be allowed therefor**.**

END OF SECTION

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SECTION 01 57 19 Temporary Environmental Controls

PART 1 GENERAL

1.01 REFERENCES

A. Refer to Article 7.9 for Worksite Maintenance and Operation

B. Water Pollution Control shall conform to the provisions of Section 7.19 "Environmental Control" of these General Conditions and the following Special Conditions herein.

C. American National Standards Institute (ANSI) S1.4: Specification for Sound Level Meters.

1.02 SECTION INCLUDES

A. Pollution abatement.

B. Erosion and Sediment Control

C. Dust control.

D. Rubbish control.

E. Noise and vibration control.

F. Federal Water Pollution Control Act.

G. Chemicals.

1.03 RELATED SECTIONS

A. California State Water Resources Control Board (SWRCB): Order No. 2009-0009-DWQ.

B. Section 401 of the Clean Water Act Section, Water Quality Certification issued by the Regional Water Quality Control Board (RWQCB).

C. Section 402 of the Clean Water Act, National Pollutant Discharge Elimination System - General Permit for Stormwater Discharges Associated with Construction issued by the State Water Resources Control Board (SWRCB) located at the following website: http://www.waterboards.ca.gov/water_issues/programs/npdes/.

D. Land Disturbance Activities Order No. 2009-0009-DWQ, NPDES NO. CAS000002.

E. Fremont Municipal Code (FMC) Chapter 11 - "Storm Water Management and Discharge Control Ordinance."

F. City's Stormwater NPDES (National Pollutant Discharge Elimination System) Permit No. CAS612008.

G. Construction General Permit, 99-08-DWQ.

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1.04 REGULATORY REQUIREMENTS

A. Comply with all applicable Federal, State, and local laws, orders, and regulations concerning the prevention, control, and abatement of water pollution.

B. California State Water Resources Control Board (SWRCB): Order No. 2009-0009-DWQ.

C. Section 401 of the Clean Water Act Section, Water Quality Certification issued by the Regional Water Quality Control Board (RWQCB).

D. Section 402 of the Clean Water Act, National Pollutant Discharge Elimination System - General Permit for Stormwater Discharges Associated with Construction issued by the State Water Resources Control Board (SWRCB) located at the following website: http://www.waterboards.ca.gov/water_issues/programs/npdes/

1.05 SUBMITTALS

A. General: Refer to Contract Specifications Section 01 30 00, Submittals.

B. Water Pollution Control Plan

C. Noise and Vibration Monitoring Plan as described in Part 1.12, herein.

1.06 POLLUTION ABATEMENT - GENERAL REQUIREMENTS

A. Conduct construction operations in a manner that will minimize pollution of the environment surrounding the area of the Work by all practicable means and methods. Apply specific controls as specified in the Contract Specifications and as follows:

1. Waste Materials: No waste or eroded materials shall be allowed to enter natural or man-made water or sewage removal systems. Eroded materials from excavations, borrow areas, or stockpiled fill shall be contained within the Jobsite. The Contractor shall develop methods for control of erosion as specified in Part 1.07, herein.

2. Burning: No burning of waste materials or debris will be permitted.

3. Burying: No burying of waste materials and debris will be permitted within the limits of the City's property.

B. Provide for and maintain the flow of all sewers, drains, building or inlet connections, and all water courses which may be encountered during progress of the Work. Do not allow the contents of any sewer, drain, or building or inlet connection to flow into trenches. Immediately remove from proximity of the Work all offensive matter, using such precautions as are required by local authorities having jurisdiction.

1.07 WATER POLLUTION CONTROL

A. This project requires a Water Pollution Control Plan, but does not require submission to SMARTS.

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B. Water Pollution Control Plan shall implement Best Management Practices (BMP) as required and described in Section 7.19, and in compliance with all elements outlined in "Related Sections." Water Pollution Control Plan shall be submitted by the Contractor to the City Engineer for approval prior to proceeding with any work on this project, as required by Section 2.5 of the General Conditions and Section 01 30 00, Submittals, of the Project Specifications.

C. This plan shall be designed to implement the BMP's necessary to keep dirt, debris, and construction waste away from storm drains and local waterways. Contractor shall implement and maintain a plan, and update the plan to provide for the duration of the project.

D. Contractor shall implement and maintain BMP's as detailed in the most recent version of the Erosion Control and Sediment Control Field Manual for California, the most recent California Storm Water Quality Association (CASQA) BMP Handbook, Construction, and as published by the Alameda Countywide Clean Water Program, for the entire duration of the project.

E. Contractor shall implement and maintain all Water Pollution Control Plan work for the project that shall include:

1. Construction of any and all necessary systems to eliminate contaminants from entering the storm system.
2. Clean up and control of the work site materials, spoils and debris.
3. Removal of contaminants produced by equipment used for the construction of the project.
4. Prohibition of illicit discharge (non-rain water) into the storm system.
5. Provision of all labor, materials, equipment and apparatus not specifically mentioned herein or noted on the plans, but which are incidental and necessary to complete the work specified.

F. Contractor shall be responsible for ensuring that all sub-contractors and suppliers are aware of all water pollution control measures and that they implement such measures. Failure to comply with the storm water quality regulations and specifications will result in the issuance of verbal or written corrective notices, citations, fines, and/or a project stop order.

G. Contractor shall maintain erosion and sediment control measures daily. The name of the person responsible for the daily maintenance of these facilities shall be on record with the Engineer and Project Inspector, along with a phone number where they can be reached twenty-four (24) hours a day.

H. Temporary erosion and sediment control work shall consist of applying erosion control materials to embankment slopes, excavation slopes and other areas designated on the Water Pollution Control Plan, and installing sediment control such as, but not limited to, fiber roll, silt fence, inlet protection, gravel bags, headwall protection and stabilized construction entrances and exits, or other measures as specified in the Water Pollution Control Plan.

I. Removal of Temporary Structures: Erosion and sediment control structures and facilities shall be removed from the Jobsite upon completion of the affected work.

1.08 DUST CONTROL

A. Refer to Article 7.9 of the General Conditions

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B. The Contractor shall furnish all labor, equipment, and means required and shall carry out effective measures wherever and as often as necessary to prevent its operation from producing dust in amounts damaging to property, cultivated vegetation, or domestic animals, or causing a nuisance to persons living in or occupying buildings in the vicinity. The Contractor shall be responsible for any damage resulting from any dust originating from its operations. The dust abatement measures shall be continued until the Contractor is relieved of further responsibility by the City.

C. The City Inspector, City Engineer or Project Manager shall have authority to order dust control work whenever conditions warrant, and there shall be no additional cost to the City therefor. Dust control shall be effectively maintained whether or not the City Inspector, City Engineer or Project Manager orders such work.

D. Complaints from the public shall be reported to the City Inspector, City Engineer or Project Manager and shall be acted on immediately.

E. Dust Control Measures:

1. Dust control shall be by means of sprinklered water or by other approved methods, except that chemicals, oil, or similar palliative shall not be used. Water all active construction areas at least twice daily, or more as required to control dust.

2. Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least 2 feet of freeboard.

3. Pave, apply water three times daily, or apply (nontoxic) soil stabilizers on all unpaved access roads, parking areas, and staging areas at the Jobsite.

4. Sweep daily (with water sweepers) all paved access roads, parking areas, and staging areas at the Jobsite, or more as needed.

5. Sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent public streets, or more as needed.

6. Reduce idling of internal combustion engines to an absolute minimum to the greatest extent possible.

7. Maintain construction equipment properly and tune engines to minimize exhaust emissions.

8. Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas (previously graded areas inactive for 10 Days or more).

9. Enclose, cover, water twice daily, or apply (non-toxic) soil binders to exposed stockpiles (such as dirt and sand).

10. Limit traffic speeds on unpaved roads to 15 mph.

11. Install sandbags or other erosion control measures to prevent silt runoff to public roadways.

12. Replant vegetation in disturbed areas as quickly as possible.

13. Install wheel washers for all exiting trucks, or wash off the tires or tracks of all trucks and equipment leaving the Jobsite.

14. Install wind breaks, or plant trees/vegetative wind breaks at windward

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side(s) of construction areas.

15. Suspend excavation and grading activity when winds (instantaneous gusts) exceed 25 mph.

16. Limit the area subject to excavation, grading, and other construction activity at any one time.

F. Where earthwork operations are in progress, keep exposed earth surfaces dampened continuously. Also, keep dirt accessways and roads dampened continuously.

G. If portions of the Jobsite are temporarily inactive or abandoned for whatever reason, provide dust control and abatement continuously during such periods of inactivity.

H. Where dust resulting from construction activities has collected on public sidewalks and streets, hose down such sidewalks and streets to abate flying dust parts. Clean all sidewalks and streets from accumulated dirt and dust.

1.09 RUBBISH CONTROL

During the progress of the Work, the Contractor shall keep the site of the Work and other areas used by it in a neat and clean condition, and free from any accumulation of rubbish. The Contractor shall dispose of all rubbish and waste materials of any nature occurring at the Work site, and shall establish regular intervals of collection and disposal of such materials and waste. The Contractor shall also keep its haul roads free from dirt, rubbish, and unnecessary obstructions resulting from its operations. Disposal of all rubbish and surplus materials shall be off the site of construction in accordance with local codes and ordinances governing locations and methods of disposal, and in conformance with all applicable laws and regulations.

1.10 MUD CONTROL

A. Contractor shall take proper measures to prevent tracking of mud onto public streets, drives, and sidewalks. Such measures shall include, but are not limited to, covering muddy areas on the Jobsite with clean, dry sand.

B. All egress from the Jobsite shall be maintained in a dry condition, and any mud tracked onto streets, sidewalks, or drives shall be immediately removed, and the affected area shall be cleaned. The City Inspector, City Engineer or Project Manager may order such work at any time the conditions warrant.

C. Contractor shall provide and maintain truck wheel washes and cleaning stations either at all points of haul route ingress and egress to public right-of-way or at a central location within the Jobsite. Washwater sedimentation removal and discharge quality shall be in accordance with regulatory requirements for discharge into receiving utilities or bodies of water. All trucks, or other vehicles leaving the Jobsite, shall be cleaned of mud and dirt, including mud and dirt clinging to exterior body surfaces of vehicles.

D. All trucks coming to the Jobsite or leaving the Jobsite with materials or loose debris shall be loaded in a manner that will prevent dropping of materials or debris on streets. Spillage resulting from hauling operations along or across any public traveled way shall be removed immediately.

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E. Contractor shall engage a street sweeping and cleaning service or otherwise provide for the sweeping and cleaning of haul routes and work areas within public right-of-way. Street sweeping and cleaning operations shall comply with City of Fremont requirements. The duration of this activity shall be concurrent with excavation, hauling, and stockpiling operations. The minimum cleaning and sweeping frequency shall be continuous during continuous hauling operations and as needed during intermittent operations. The City Inspector, City Engineer or Project Manager may order additional street sweeping and cleaning at no additional expense to the City as conditions warrant.

F. The applicable requirements for mud control shall be included in the Contractor's SWPPP.

1.11 NOISE AND VIBRATION CONTROL

A. Refer to Article 7.20 "Noise Control" of the General Conditions.

B. Definitions:

1. Daytime refers to the period from 7:00 a.m. to 7:00 p.m. local time daily except Sundays and legal holidays.

2. Nighttime refers to all other times including all day Sunday and legal holidays.

3. Construction Limits are defined for the purpose of these noise and vibration control requirements as the City right-of-way lines, construction easement boundaries, or property lines as shown in the Contract Drawings.

C. Contractor shall submit a Noise and Vibration Monitoring Plan describing proposed noise and vibration monitoring and recording equipment and positioning.

D. Noise Control Requirements: Contractor shall employ noise-reducing construction practices such that construction noise does not exceed the limits specified herein. Employ other noise abatement measures as necessary for protection of employees and the public. Measures to be employed may include but are not limited to the following:

1. Restrict working hours and schedule operations in a manner that will minimize, to the greatest extent feasible, disturbance to residents in the vicinity of the Work.

2. Use equipment with enclosed engines and/or high performance mufflers.

3. Locate stationary equipment as far as possible from noise-sensitive uses.

4. Construct noise barriers, such as temporary walls or piles of excavated material between noise activities and noise sensitive uses.

5. Re-route construction-related traffic along roads that will result in the least amount of disturbance to residences.

E. Vibration Control Requirements: Contractor will employ vibration-reducing construction practices such that construction vibration does not exceed 80 VdB (more than 1 hour per Day), 90 VdB (less than 1 hour per day), or 100 VdB (less

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than 10 minutes per Day), or a peak particle velocity damage threshold of 0.20 inch per second for fragile buildings or structures. Measures to be employed may include but are not limited to the following.

1. Locate vibration-generating equipment as far as possible from vibration-sensitive land uses.
2. Avoid simultaneous operation of multiple pieces of vibration-generating equipment.
3. Avoid nighttime construction in residential areas.
4. Avoid construction processes that generate high vibration levels
5. Avoid the use of vibratory rollers near vibration-sensitive uses.

F. Monitoring:

1. Monitor noise and vibration levels of work operations to assure compliance with the noise limitations specified herein. Retain record of noise measurements for inspection by the City Inspector, City Engineer or Project Manager.
2. Promptly inform the City Inspector, City Engineer or Project Manager of any complaints received from the public regarding noise and vibration. Describe the action proposed and the schedule for implementation, and subsequently inform the City Inspector, City Engineer or Project Manager of the results of the action.
3. Monitor noise and vibration levels day and night and for each new activity or piece of equipment. Start by measuring three times a Day that work operations occur plus once a night for 3 consecutive Days that work operations occur. Monitor noise and vibration levels at least once a week thereafter.

G. Measurement Procedure:

1. Except where otherwise indicated, perform all noise measurements using the A-weight network and "slow" response of an instrument complying with the criteria for a Type 2 General Purpose sound level meter as described in ANSI S1.4.
2. Measure impulsive or impact noises with an impulse sound level meter complying with the criteria of IEC 179 for impulse sound level meters. As an alternative procedure, a Type 2 General Purpose sound level meter on C-weighting and "fast" response may be used to estimate peak values of impulsive or impact noises. Transient meter indications of 125 dbC "fast" or higher will be considered as indications of impulsive noise levels of 140 dBA or greater.
3. Measure noise levels at buildings affected acoustically by the Contractor's operations at points between 3 feet and 6 feet from the building face to minimize the effect of reflections.
4. Measure noise levels at points on the outer boundaries of Construction Limits for noise emanating from within.
5. Where more than one criterion of noise limits is applicable, use the more restrictive requirement for determining compliance.

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H. Continuous Construction Noise: Prevent noise from stationary sources, parked mobile sources, or any source or combination of sources producing repetitive or long-term noise lasting more than a few hours from exceeding the following limits:

1. Maximum Allowable Continuous Noise Level, dBA:

Affected Residential Areas	Daytime	Nighttime
Single family residences	60	50
Arterials or in multi-family residential areas, including hospitals	65	55
Semi-residential/commercial areas, including hotels	70	60

Affected Commercial Areas	At All Times
Semi-residential/commercial areas, including schools	65
Commercial areas with no nighttime residency	70
Affected Industrial Areas	
All locations	80

I. Intermittent Construction Noise: Prevent noises from non-stationary mobile equipment operated by a driver or from any source of non-scheduled, intermittent, non-repetitive, short term noises not lasting more than a few hours from exceeding the following limits:

1. Maximum Allowable Intermittent Noise Level, dBA:

Affected Residential Areas	Daytime	Nighttime
Single family residences	75	60
Arterials or in multi-family residential areas, including hospitals	75	65
Semi-residential/commercial areas, including hotels	80	70

Affected Commercial Areas	At All Times
Semi-residential/commercial areas, including schools	80
Commercial areas with no nighttime residency	85

2 FEDERAL WATER POLLUTION CONTROL ACT

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The Contractor's attention is directed to the Federal Water Pollution Control Act amendments of 1972 (Public Law 92-500) which requires a Corps of Engineers permit under Section 404 of the Act, for the discharge of one cubic yard or more of any dredged or fill material into "navigable waters" as defined in "Permits for Activities in Navigable Waters or Ocean Waters," Paragraph (d) (2), Federal Register of 25 July 1975, page 3134.

3 CHEMICALS

All chemicals used during project construction or furnished for project operation, whether defoliant, soil-sterilant, herbicide, pesticide, disinfectant, polymer, reactant or of other classification, shall show approval of either the U.S. Environmental Protection Agency or the U.S. Department of Agriculture. Use of all such chemicals and disposal of residues shall be in strict accordance with the printed instructions of the manufacturer.

4 MEASUREMENT AND PAYMENT

A. Full compensation for conforming to the provisions in this section "**Temporary Environmental Controls**" not otherwise provided for, shall be considered as included in prices paid for the various contract items of work involved and no additional compensation will be allowed therefor.

B. Full compensation for the adherence and implementation of Best Management Practices shall be considered as included in prices paid for the various contract items of work involved and no additional compensation will be allowed therefor.

END OF SECTION

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SECTION 01 60 00 Product Requirements

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Administrative and procedural requirements governing Contractor's selection of products for use in Project.

1.02 RELATED SECTIONS

A. Section 01 30 00 "Submittals"

B. Section 01 63 00 "Product Substitutions"

1.03 DEFINITIONS

A. Definitions used in this Article are not intended to change meaning of other terms used in Contract Documents, such as "specialties," "systems," "structure," "finishes," "accessories," and similar terms. Such terms are self-explanatory and have well-recognized meanings tin construction industry.

1. Products: Items purchased for incorporation in Work, whether purchased for Project or taken previously purchased stock. Term "product" includes terms "material," "equipment," "system," and terms of similar intent.

a. Names Products: Items identified by manufacturer's product name, including make or model number or other designation, shown or lists in manufacturer's published product literature, that is current as of date of Contract Documents.

2. Materials: Products substantially shaped, cut, worked, missed, finished, refined or otherwise fabricated, processed, or installed to form part of Work.

3. Equipment: Product with operational parts, whether motorized or manually operated, that requires service connections, such as wiring or piping.

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1.04 SUBMITTALS

A. Product List: Prepare list showing products specified in tabular form acceptable to Construction Manager and Project Landscape Architect. Include generic names of products required. Include manufacturer's name and proprietary product names for each item listed.

B. Refer to Section 01 30 00 "Submittals"

1.05 QUALITY ASSURANCE

A. Source Limitations: To fullest extent possible, provide products of same kind from single source.

B. Compatibility of Options: When given option of selecting between two (2) or more products for use on Project, product selected shall be compatible with products previously selected, even if previously selected products were also options.

C. Nameplates: Except for required labels and operating data, do not attach or imprint manufacturer's or producer's nameplates or trademarks on exposed surfaces of products that will be exposed to view in occupied spaces or on exterior.

1. Labels: Locate required product labels and stamps on concealed surfaces or, where required for observation after installation, on accessible surfaces that are not conspicuous.

2. Equipment Nameplates: Provide permanent nameplate on each item of service-connected or power-operated equipment. Locate on easily accessible surface that is inconspicuous in occupied spaces. Nameplate shall contain following information and other essential operating data:

a. Name of product and manufacturer

b. Model and serial number

c. Capacity

d. Speed

e. Ratings

1.06 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. Deliver, store, and handle products according to manufacturer's recommendations, using means and methods that will prevent damage, deterioration, and loss, including theft.

1. Schedule delivery to minimize long-term storage at site and to prevent overcrowding of construction spaces.

2. Coordinate delivery with installation time to assure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.

3. Deliver products to site in undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.

4. Inspect products upon delivery to ensure compliance with Contract Documents and to ensure that products are undamaged and property protected.

5. Store products at site in manner that will facilitate inspection and measurement of quantity or counting of units.

6. Store heavy materials away from Project structure in manner that will not endanger supporting construction.

7. Store products subject to damage by elements above ground, under cover in weather-tight enclosure, with ventilation adequate to prevent

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condensation. Maintain temperature and humidity within range required by manufacturer's instructions.

PART 2 – PRODUCTS

2.01 PRODUCT SELECTION

A. General Product Requirements: Provide products that comply with Contract Documents, that are undamaged and, unless otherwise, indicated, new at time of installation.

1. Provide products complete with accessories, trim, finish, safety guards, and other devised and details needed for complete installation and intended use and effect.

2. Standard Products: Where available, provide standard products of types that have been produced and used successfully in similar situations on other projects.

B. Product Selection Procedures: Contract Documents and governing regulations govern product selection. Procedures governing product selection include following:

1. Nonproprietary Specifications: When Specifications list products or manufacturers that are available and may be incorporated in Work, but do not restrict Contractor to use of these products only, Contractor may propose any available product that complies with Contract requirements. Comply with Section 01 63 00 to obtain approval for use of unnamed product.

2. Products Specified by Indicating Basis for Design: Design and approval is based on Systems, products, and assemblies of manufacturer indicated. Equivalent systems, products, and assemblies of other named manufacturers may be used; however, Contractor is responsible for additional approvals required, for coordination with remainder of Contract Documents, and for costs of redesign or recalculation required. Comply with Section 01 63 00 to obtain approval for use of unnamed product.

3. Descriptive Specification Requirements. Where Specifications describe product or assembly, listing exact characteristics required, with or without use of brand or trade name, provide product or assembly that provides characteristics and otherwise complies with Contract requirements.

4. Performance Specification Requirements. Where Specifications require compliance with performance requirements, provide products that comply with these requirements and are recommended by manufacturer for application indicated.

a. Manufacturer's recommendations may be contained in published product literature or by manufacturer's certification of performance.

5. Compliance with Standards, Codes, and Regulations: Where Specifications only require compliance with imposed code, standard, or regulation, select product that complies with standards, codes, or regulations specified.

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6. Visual Matching: Where Specifications require matching established Sample, Architect's decision will be final on whether proposed product matches satisfactorily.

   a. Where no product available within specified category matches satisfactorily and complies with other specified requirements, comply with provisions of Section 01 63 00 for selection of matching product in another product category.

7. Visual Selection: Where specified product requirements include phase "as selected from manufacturer's standard colors, patterns, textures"or similar phase, select product and manufacturer that complies with other specified requirements. Architect will select color, pattern, and texture from product line selected.

PART 3 – EXECUTION

3.01 INSTALLATION OF PRODUCTS

A. Comply with manufacturer's instructions and recommendations for installation of products in applications indicated. Anchor each product securely in place accurately located and aligned and other Work.

   1. Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.

3.02 MEASUREMENT AND PAYMENT

Full compensation for conforming to the provisions in this section "**Product Requirements**", not otherwise provided for, shall be considered as included in prices paid for the various contract items of work involved and no additional compensation will be allowed therefor.

END OF SECTION

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SECTION 01 63 00 Product Substitution Procedures

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Administrative and procedural requirements for handling requests for substitution made after Intent to Award of Contract.

1.02 DEFINITIONS

A. Substitutions: Changes in products, materials, equipment, and methods of construction required by Contract Documents proposed by Contractor after Intent to Award of Contract are considered to be requests for substitutions. Following are not considered to be requests for substitutions:

1. Revisions to Contract Documents requested by Owner, Supervising Construction Coordinator, Project Manager, or Project Landscape Architect.

B. Specified options of products and construction methods included in Contract Documents.

C. Contractor's determination of and compliance with governing regulations and orders issued by governing authorities.

D. Substitutions requested during bidding period, and accepted by Addendum prior to Intent to Award of Contract, are included in Contract Documents and are not subject to requirements specified in this Section for Substitutions.

1.03 SUBMITTALS

A. Requests for substitutions will not be considered before selection of Contractor. Substitutions will not be considered when:

1. Indicated on shop drawings or product data submittals without separate formal request.

2. Requested directly by subcontractor or supplier.

3. Acceptance will require substantial revision of Contract Documents.

4. Proposed changes are not in keeping with general intent of Contract Documents.

B. Requests for substitution will be considered only within thirty-five (35) working days after Contractor selection and Intent to Award to the Contractor. The Contractor hereby agrees that failure to submit alternative product requests within the stipulated time period shall act as a waiver of any future rights to offer such substitutes, and the Contractor hereby agrees to provide one of the specific products called for in the Contract Documents. Other requests will be considered only when:

1. Specified product or method of construction cannot be provided within Contract Time. Supervising Construction Coordinator will not consider request if product or method cannot be provided as result of failure to pursue Work promptly or coordinate activities properly.

2. Subsequent information or changes indicate specified product will not perform as intended.

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3. Requested substitution offers Owner substantial advantage, in cost, time, energy conservation, or other considerations, after deducting additionally responsibilities Owner must assume. Owner's additional responsibilities include compensation to Architect for redesign and evaluation services, compensation to Supervising Construction Coordinator for additional processing and evaluation services, increase costs of other construction by Owner, and similar considerations.

    i. Supervising Construction Coordinator's time shall be compensated a specified for compensation of time in subsequent article titled Modification of Documents.

4. Specified product or method of construction cannot receive necessary approval by governing authority, and requested substitution can be approved.

5. Specified product or method of construction cannot be provided in manner that is compatible with other materials and where Contractor certified that substitution will overcome incompatibility.

6. Specified product or method of construction cannot be coordinated with other materials and where Contractor certifies that proposed substitution can be coordinated.

7. Specified product or method of construction cannot provide warranty required by Contract Documents and where Contractor certifies that proposed substitution provides required warranty.

C. Do not order or install substitute products without written acceptance.

D. Only one (1) request for substitution for each product will be considered. When substitution is not accepted, provide specified product.

E. Project Manager, or Landscape Architect, will determine acceptability of substitutions.

F. Submit two (2) copies of each request to the Project Manager, or Landscape Architect, through the Supervising Construction Coordinator. Requests should be on a form entitled "Substitution Request Form". Submit separate form for each substitution, and include the following information, at minimum:

1. Identify products by Specification Section and Article numbers.

2. Provide manufacturer's name and address, trade name of products, and model or catalog number.

3. List fabricators and suppliers as appropriate.

4. Document each request with complete data substantiating compliance of proposed substitution with requirements of Contract Documents including independent laboratory testing reports, approval numbers, listings, and approved assembly descriptions as requested by Supervising Construction Coordinator, Project Manager, or Project Landscape Architect, or as required by agencies having jurisdiction.

5. Attach product data as specified in Section 01 30 00.

6. Give itemized comparison of proposed substitution with specified product, listing variation, and reference to Specification Section and Article numbers.

7. Give quality and performance comparison between proposed substitution and specified product.

8. Submit written certification from manufacturer that proposed substitution is appropriate for this application.

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9. List availability of maintenance services and replacement materials.
10. State effect of substitution on construction schedule, and changes required in other Work or products.

G. By making request for substitutions, Contractor

1. Represents that Contractor has personally investigated proposed substitute product and determined that it is equal to or superior in all respects to that specified.
2. Represents that Contractor will provide same warranty for substitution that Contractor would for that specified.
3. Will coordinate installation of accepted substitute, making such changes as may be required for Work to be compatible with substrates and adjacent materials, and complete in all respects.
4. Waive claims for additional time related to substitution which may later become apparent.
5. Certifies that cost data presented is complete and includes related costs under this Contract, including redesign costs, and waives claims for additional costs related to substitution which may later become apparent.

H. Modification of Documents: Where substitution required, for proper installation, changes to design of Work as indicated on accepted Shop Drawings, furnish drawings and specifications prepared by and bearing seal of licensed architect and engineers as appropriate, revising Contract Documents.

1. Submit revised Documents for acceptance in accordance with Section 01 30 00.
2. Revised Drawings: Sufficiently complete for proper installation of substitution and related Work.
3. If, in the Project Manager, or Landscape Architect's, sole judgment, proposed substitution is of such significance or deals with product or system affecting basic design or aesthetics, Contractor shall pay the Project Manager, or Project Landscape Architect, for changes required to Contract Documents as follows:
   i. Reimburse Owner for time spent in changing Contract Documents at rate of 3.25 times rate of Direct Personnel Expense (DPE). DPE is defined as direct salaries of personnel engaged on Project and portion of costs of mandatory, and customary contributions and benefits related thereto, including employment taxes and other statutory employee benefits, insurance, sick leave, holidays, vacations, pensions, and similar contribution and benefits.
4. Contractor: Responsible for cost of revised Documents, obtaining and paying for review and plan check by authorities having jurisdiction, and cost of revised construction.
5. Revised drawings: Submit with Record Documents.

1.04 SUBMITTAL PROCEDURES

A. Supervising Construction Coordinator's Action: If necessary, Project Manager, or Project Landscape Architect, through Supervising Construction Coordinator, will request additional information or documentation for evaluation within one (1) week of receipt of request for substitution. Supervising Construction Coordinator will notify

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Contractor of acceptance or rejection of substitution within two (2) weeks of receipt of request of additional information or documentation, whichever is later. Acceptance will be in form of a Field Order or Field Change Order.

1. Supervising Construction Coordinator, Project Manager, or Landscape Architect, will not make exhaustive attempt to determine products proposed for substitution are equivalent to, or can be modified in order to be equivalent to specified products.
    i. Where extensive investigation is required by Project Manager, or Landscape Architect, as determined by Supervising Construction Coordinator, Contractor shall reimburse Owner for Supervising Construction Coordinator, Project Manager, or Landscape Architect's time spent in processing additional re-submittals at rate of 3.25 times rate of Direct Personnel Expense (DPE).
2. Use product specified if the Project Manager, Landscape Architect, or Supervising Construction Coordinator cannot make decision on use of proposed substitute with time allocated.
3. If accepted by the Project Manager, or Landscape Architect, products proposed for substitution are accepted subject to modifications by manufacturer, if necessary, to meet detailed requirements of Drawings, and Specifications.

B. For Accepted Products: Submit shop drawings, product data, and samples in accordance with Section 01 30 00.

C. Contractor's submittal, and Architect's and Supervising Construction Coordinator's acceptance of Shop Drawings, Product Data, or Samples for construction activities not complying with Contract Documents to not constitute acceptable or valid request of substitution, nor do they constitute approval.

PART 2 PRODUCTS

Not applicable to this section.

PART 3 – EXECUTION

3.01 MEASUREMENT AND PAYMENT

A. Full compensation for conforming to the provisions in this section **"Product Substitutions"** not otherwise provided for, shall be considered as included in prices paid for the various contract items of work involved and no additional compensation will be allowed therefor.

B. No additional payment over the original bid prices will be allowed when approved substitutes are used in lieu of the originally specified materials.

END OF SECTION

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SECTION 01 74 14 Cleaning

Part 1 - General

1.01 **Section Includes**

A. Cleaning and cleanup during construction.

B. Disposal of debris.

C. Final cleaning of station facilities and ancillary buildings.

D. Final site cleanup.

1.02 **Related Sections**

Refer to Section 01 57 00, Temporary Controls, for basic mud control and dust abatement requirements.

1.03 **Cleaning and Cleanup During Construction**

A. The entire site of the Work, including the Contractor's work and storage areas, shall be kept in a neat, clean, and orderly condition at all times during the course of this Contract. The Engineer may, at any time during construction, order a general cleanup of the site as a part of the Work, and there shall be no additional cost to the City therefore. The Contractor shall provide general daily clean-up and disposal service for removal of waste, rubbish, trash, and debris away from the Worksite.

B. Perform cleaning of all facilities, as required during construction, to prevent accumulations of dust, dirt, soil, trash, and debris, so that a clean and safe working environment will be present at all times.

C. Walkways shall also be kept neat and free of pebbles and other obstacles to walking comfortably, equivalent to broom clean of paved surfaces.

D. The Contractor shall remove all graffiti placed during the course of the Work within the Contractor’s enclosed secured areas at the work site. The Contractor shall remove the graffiti within 24 hours after its detection in these areas.

1.04 **Disposal of Debris**

A. Dispose of waste, trash, and debris in a safe, acceptable manner, in accordance with applicable laws and ordinances and as prescribed by authorities having jurisdiction. Bury no waste material and debris on the site. Burning of trash and debris on the site will not be permitted.

B. Location of disposal site for trash and debris and length of haul are the Contractor's responsibility.

1.05 **Final Site Cleanup**

A. Prior to Final Inspection, thoroughly clean the entire site and put it into a clean and neat, acceptable condition. Remove from the site all construction waste and unused materials, dunnage, loose rock and stones, excess earth, and debris of any description resulting from the Work.

B. Hose down and scrub clean where necessary all pavement and paved walks. Any runoff from this activity must be vacuumed or diverted as necessary away from the underground storm drain system.

C. Thoroughly remove droppings from concrete slabs and pavement where they occur. Hose down and scrub clean all concrete flatwork and exposed vertical surfaces of

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concrete and masonry. Any runoff from this activity must be vacuumed or diverted as necessary away from the underground storm drain system.

D. Free and clear all new and existing drainage systems.

E. Clean and protect all conduit openings.

F. Prior to Final Inspection, the Contractor shall remove all markings from streets, sidewalks, walls and other City infrastructure within the work site and staging areas.

Part 2 - Products

2.01 **Cleaning Products**

A. Utilize cleaning products that meet the requirements of the Green Seal GS-37 standard or comply with the requirements and maximum VOC limits of Title 17, California Code of Regulations, Division 3, Chapter 1, Subchapter 8.5, Article 2, Regulation for Reducing VOC Emissions from Consumer Products (September 2001).

B. Utilize janitorial paper products and trash bags that meet the minimum percentages of post- consumer recycled content and recovered content requirements of EPA's Comprehensive Procurements Guidelines.

Part 3 - Execution

3.01 Measurement And Payment

Full compensation for conforming to the provisions in this Section, **Cleaning**, will be considered as included in the price paid for various contract items of work and no additional compensation will be allowed.

End of Section 01 74 14

END OF SPECIAL CONDITION

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10-5 LANDSCAPE

SECTION 02 41 00 GENERAL DEMOLITION

PART 1 GENERAL

1.01 SCOPE

The work includes the furnishing of labor, materials of any kind, tools, equipment, implements, machinery, methods of process, and services necessary to clear the site as shown on the plans, described by these Special Provisions, and as directed by the Engineer. The work shall include, but shall not necessarily be limited to, the following (not necessarily in order of work):

A. Submittal of Staging Plans. Refer to Section 01 55 00 Site “Access and Storage”.

B. Photographically document existing site. Refer to Section 01 32 03 “Photographic Documentation”.

C. Remove and dispose of existing concrete paving as indicated on plans.

D. Clearing and grubbing of site.

E. Remove existing tree and stump grinding. See Section 01 56 30 “Tree Removal and Stump Grinding.”

F. Refer to Section 31 00 00 “Earthwork” for the removal and disposal of excavated materials. All excavated material shall be stockpiled in the undeveloped area adjacent to the project site for future spreading and grading of that area.

G. Potholing: Pothole to verify the locations, depth and alignment of all underground utilities to be protected and utilized in locations where demolition will occur.

H. Cap irrigation main lines.

I. Refer to “Sawcutting” found elsewhere in this Section.

J. Coordinate with City for installation of construction signs.

1.02 RELATED SECTIONS

A. Section 01 00 00 “General Requirements”

B. Section 01 50 50 “Construction and Demolition Debris Management”

C. Section 01 56 00 “Protection of Existing Facilities”

D. Section 01 56 30 “Tree Removal and Stump Grinding”

E. Section 31 00 00 “Earthwork”

F. Section 32 30 00 “Concrete Forming”

G. Section 32 32 00 “Cast in Place Concrete”

H. Section 32 80 00 “Irrigation”

I. Section 11A and 11B, City Of Fremont Standard Trench Backfill Specification, Standard Specifications, dated January 1995 (amended).

J. City of Fremont Standard detail (LSD-9)

K. Bay Friendly Guidelines for demolition and re-use of on-site materials

L. Clearing and grubbing shall conform to provisions of Section 15 "Existing Facilities," Section 17 "Clearing and Grubbing," and Section 19-1.03D, "Buried Man-Made Objects," of the Standard Specifications and these Special Provisions.

M. Public Safety: Refer to the Special Provisions herein, Section 01 00 00 “General Conditions - Supplemental” and Caltrans Standard Specifications, 2015.

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1.03 CODES AND STANDARDS

A. “Clearing and Grubbing” shall conform to the provisions of Section 15, “Existing Facilities,” and Section 17, “Clearing and Grubbing,” of the Standard Specifications and these Special Provisions.

1.04 SUBMITTALS

A. Detailed information on methods and sequencing for accomplishing this Work shall be submitted to Project Landscape Architect no later than 10 days prior to commencement.

B. Waste Handling Plan shall be on file with the City’s Senior Construction Supervisor and Project Inspector prior to beginning demolition. See Section 01 50 50 “Construction and Demolition Debris Management”.

1.05 JOB CONDITIONS

A. Underground utilities exist in work areas; use extreme caution.

B. Pothole to verify actual depth/ location of utilities. Notify City Engineer in writing if existing conditions interfere with any construction. Locations shown on the plan are approximate and for general information only. Notify underground service alert (USA) at least 48 hours prior to an excavation on this project (phone: 800-227-2600). Locate and mark all utilities prior to start of construction.

C. For utilities within the project site, a private utility locating firm may be required, at the option of the contractor, to identified underground utilities which may not be identified through USA.

D. Remove materials carefully, to extent shown or required. Provide neat and orderly junctions between existing and new materials.

E. Protect existing structures and facilities that are to remain, from damage due to contractor’s operations and negligence.

F. Perform Work so as to provide the least interference and most protection to existing facilities and improvements to remain.

G. The Contractor is responsible for locating and field verifying the location of all existing utilities prior to the removal of any or all demolition and protecting all facilities to remain. All damage caused by the Contractor must be repaired at the sole expense of the Contractor to the satisfaction of the City Engineer or utility in question.

H. Full compensation for furnishing all labor, materials, tools, equipment and incidentals and for doing all the work involved in hiring a private utility locating firm and locating underground utilities, as required by these special provisions, as directed by the City Engineer, or as determined by the contractor, shall be included in the various contract bid prices for items of work requiring utility locating and no separate payment will be made therefor.

1.06 PROTECTION

A. Provide as necessary to protect public, the Owner's employees, existing finishes, improvements to remain, existing utilities, landscape, plants, irrigation, and adjoining property from damage, all in accordance with applicable regulations.

B. Explosives: Use of explosives will not be permitted.

PART 2 MATERIALS

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2.01 SAWCUTTING

A. All existing pavement edges shall be saw cut as noted on the plans and as directed by the Engineer.

B. Where a portion of the existing pavement surfacing is to be removed, the outline of the area to be removed shall be cut on a neat line with a power driven saw to a minimum depth of one third foot (0.33 foot) before removing the surfacing. Surfacing and base shall be removed without damage to surfacing that is to remain in place. At the Contractor's expense, damage to the surfacing which is to remain in place shall be repaired or replaced if ordered by the Engineer to a condition satisfactory to the City's Engineer or their designee.

2.02 CONSTRUCTION SIGN

a. Coordinate with City within 5 days of Notice to Proceed for City-supplied construction signs to be hung at work site.

b. Contractor to install signage on construction fencing.

PART 3 EXECUTION

3.01 REGULATIONS

A. Comply with all Federal, State, and Local Agency hauling and disposal regulations.

3.02 GENERAL DEMOLITION

A. Inspection

1. Examine areas affected by Work of this Section. Where existing conditions conflict with representations of the Contract Documents, notify the Engineer and obtain written clarification prior to commencement of demolition.
2. Do not commence Demolition Work until unsatisfactory conditions have been corrected.

B. Potholing

1. Prior to rough grading, excavation and trenching for utilities, and any removal of vegetation, the Contractor shall locate all underground utility facilities so that proper precautions may be taken to not damage such facilities. Failure to follow this procedure places the responsibility for repairing any damage resulting from work upon the Contractor, and all repairs shall be done at the Contractor's expense.
2. The Contractor shall backfill all voids created by clearing and grubbing work with on site native material, backfilled in a slightly convex mound to compensate for settling. Backfill material in all non-paved areas may be selected from the on-site excavations to be performed and shall be clean, free of lumps and debris greater than one inch and shall be cohesive.
3. Notify the Project Inspector of any conflicts regarding the depth of existing underground utilities that may be affected by, or come into contact with new work.
4. Any underground utilities damaged by the contractor due to not adequately potholing to determine depth, and not adequately protected shall be repaired at the contractor's expense.

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C. Protect Existing Drainage Structures and Confirm Functionality

1. Protect all existing drainage structures in the limit of work, including, but not limited to, perforated and solid pipes, asbestos concrete piping to remain, reinforced concrete piping to remain, drain inlets, etc.
2. Confirm functionality by flooding the piping to confirm positive drainage.
3. If system does not drain, determine if the type of blockage with a camera or probe
4. If blockage is due to build-up of debris, flush with high pressure water, or other manner.

D. Cap Irrigation Main Lines

1. Cap existing irrigation main lines downstream from existing backflow preventers..

E. Utilities and Facilities to Remain and Be Protected

1. Protect all utility boxes to remain, and adjust the boxes as necessary to sit above finished grade, or to be flush with the adjacent finished surfaces.
2. Utility boxes not clearly identified on the plans, but affected by work, shall be considered as included in the various contract items that affect the boxes.

F. Clean-Up

1. Debris and Rubbish: Remove and transport debris and rubbish in a manner that will prevent spillage on streets or adjacent areas. Clean-up spillage from streets and adjacent areas to best of ability. Remove ALL debris that may cause incident to vehicular/pedestrian traffic. Remove ALL debris from site.

G. Disposal

1. All materials removed shall be disposed of in accordance with the provisions in Section 7-1.13, "Disposal of Material Outside of the Highway Right-of-Way," of the Standard Specifications.

3.03 CLEARING AND GRUBBING

A. All debris, including chunks of concrete paving and other debris greater than 3 inches in diameter, shall be cleared and disposed of off-site.

B. All vegetation and soil shall be cleared and removed as part of the rough grading work.

C. Refer to Section 31 00 00 Earthwork.

3.04 PRESERVE EXISTING BACKFLOW PREVENTION DEVICES

A. Preserve in place existing Backflow Prevention Devices as indicated on plans.

3.01 PRESERVE EXISTING WATER METERS

A. Preserve in place existing Water Meters as indicated on plans.

3.02 PRESERVE EXISTING TRAFFIC SIGNS

A. Preserve in place all existing traffic signs as indicated on plans

3.03 CONCRETE SURFACING REMOVAL (IN MEDIAN)

A. The general area of concrete paving removal is shown on the Plans.
B. Remove aggregate base rock layer as well, down to the subgrade.
C. Concrete curb to remain shall be protected from damage. Damage to concrete curb to remain in place shall be repaired or replaced to the satisfactory to the Engineer at the Contractor's expense and will not be measured or paid for.

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3.04 REGULATIONS

A. Comply with all Federal, State, and Local Agency hauling and disposal regulations.

3.05 MEASUREMENT AND PAYMENT

A. The lump sum price paid for "**General Demolition**" shall include full compensation for the demolition of various items, including "Clearing and Grubbing", preservation of backflow preventers, water meters and traffic signs, "Cap Irrigation Main Lines" "Inspection", Dust Control", "Utility and Facilities to Remain and be Protected", "Clean-up", "Disposal", "Regulations, and as covered by this section, and shall include furnishing all labor, materials, tools, equipment, and incidentals and doing all the work, complete in place as shown on the plans, as required by these Special Provisions, and as directed by the City Engineer.

B. The square foot unit price paid for "**Concrete Surfacing Removal**" shall include full compensation for the demolition of all median concrete surfacing as covered by this section, and shall include furnishing all labor, materials, tools, equipment, and incidentals and doing all the work, complete in place as shown on the plans, as required by these Special Provisions, and as directed by the City Engineer.

C. Full compensation for doing all the work involved in **"Potholing"** shall be included in the various line items requiring saw cutting and no separate payment will be made therefor.

D. Full compensation for doing all the work involved in **"Saw Cutting"** shall be included in the various line items requiring saw cutting and no separate payment will be made therefor.

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END OF SECTION

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10-5.01 Tree Removal and Stump Grinding, (01530)

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. Refer to all other sections, determine the extent and character of related work, and coordinate all work so that all work associated with this section is complete.

B. This section is complete in its entirety and is not supplemental to the standard specifications for Caltrans except where specifically noted.

1.02 RELATED SECTIONS

A. Section 01535 – Tree Protection

1.03 DESCRIPTION OF WORK

A. The work in this section includes furnishing all labor, materials, equipment and services necessary to complete the work as specified herein but is not limited to:

1. Tree Removal

2. Coordination: The contractor shall be required to coordinate directly with the City's Arborist, and take direction so to remove trees, salvage trees, or root prune if field conditions, upon excavation, differ from the conditions delineated on the plans.

3. Scheduling: The contractor shall include in their working day schedule enough time to adequately contact the City's arborist, have the City's arborist make determinations in the field, mobilize the Certified Tree Workers to do the appropriate work at the direction of the City's Arborist, and reinstall curb and gutter and paving per the requirements found elsewhere in these specifications.

1.04 DEFINITIONS

A. DBH – Diameter at Breast Height

B. "Drip line" is defined as outermost extent of tree canopy, encompassing tree canopy, trunk, roots and soil. In no case shall drip line encompass an area less than a 10 foot diameter circle.

C. "Injury" is defined, without limitation, as any bruising, scarring, tearing, or breaking of roots, branches or trunk; or soil compaction or contamination resulting in decline of health of tree.

D. Consulting Arborist: Referred to from here on as City's Arborist shall be retained by the City through an existing Master Service Agreement, specifically for this project work. The Contractor shall be required to coordinate and take direction from the City's Arborist to maintain the health and structure of trees affected by overlay, curb, and gutter work within the

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scope of this project. The City's Arborist is Hortscience, attn: John Leffingwell, 925-484-0211.

E. Infrastructure: The limits of work of the project as delineated on the plans, described in the special provisions, and as described by the Standard Specifications herein.

1.05 SUBMITTALS

A. Product data: Submit complete materials list of items to be provided under this Section. Include manufacturer's literature.

B. Submit detailed schedule and description of work to be done at each tree location

1.06 SCHEDULE

A. Work shall be done according to an approved schedule submitted in "Submittals".

1.07 WARRANTY

A. Contractor shall warrant that all trees other than those slated for removal covered by the provisions of this Section will be healthy and in flourishing condition of active growth one year from the date of Substantial Completion.

B. Requirements of the warranty shall apply if failure of Contractor to take specified precautions and work within restrictions of this Section contributes to destruction of or injury to a tree, in the judgment of the Construction Inspector.

C. If a tree is destroyed, or injured so that in the judgment of the Urban Forestry Supervisor it should be replaced, it shall be removed at Contractor's expense. The Contractor shall replace in kind up to the appraised value of the tree lost.

PART 2 – PRODUCTS

2.01 EQUIPMENT

A. Stump Removal: Vermeer Stump Cutter, or approved equal.

B. All equipment used for completing the work covered in this section shall conform to the requirements of CAL-OSHA Tree Work Safety Regulations Title 8: Article 12.

2.02 HERBICIDE

A. Herbicide shall be Garlon 4, Round Up with 41% active ingredient or approved equal.

PART 3 - EXECUTION

3.01 TREE REMOVAL AND STUMP GRINDING

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A. Remove and completely dispose of each tree at all locations designated on the plans leaving a stump with a height of no less than three feet (3') prior to stump removal.

B. Apply herbicide in accordance with the manufacturer's specification to the stumps of designated trees indicated as Garlon 4 on the plans. Add tracer dye. After herbicide application stumps must be left for a minimum period of 2 weeks and a maximum of 3 weeks prior to removal.

C. Contractor shall grind remaining stump to a minimum depth of twenty-four inches (24"). All lateral roots within a three-foot (3') distance from the edge of the trunk and to a depth of eight inches (8") shall also be removed. All woodchips left by stump removal process must be removed by contractor.

D. Contractor shall remove all debris including chips, brush and other debris resulting from tree removal and stump removal work daily. Logs shall be removed within 2 weeks.

E. All voids left after stump removal shall be immediately filled with Backfill Mix and compacted to 3" above finished grade to allow for settling. Compaction shall be to 85% relative compaction.

3.02 MEASUREMENT AND PAYMENT

A. The contract unit price paid per each for "**Tree Removal**," shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals and for doing all the work covered in this Section, including "Tree and Stump Grinding", complete in place as shown on the plans, as required by the Special Provisions, and as required by the Engineer or Certified Arborist, and no separate payment will be made therefore.

END OF SECTION

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SECTION 02200 EARTHWORK

PART I GENERAL

1.01 RELATED DOCUMENTS

The general provisions of the Contract, including General and Supplementary Conditions and Division 1, General Requirements, apply to the work specified in this section.

1.02 SCOPE

A. Work Included

1. All labor, material, power tools, transportation, services and equipment necessary for and properly incidental to the furnishing, installation and completion of all excavation, trench excavation, import, rough grading, mounding, filling, incorporation, backfilling, and compaction for the items of work requiring earthwork and grading as shown or indicated on the drawings specified herein or reasonably to be inferred therefrom.
2. All excavated soils shall be exported and disposed of off-site. Refer to the soil analysis in Appendix D by The Consulting Group (TCG) for recommendations of soil disposal options, and Part 2.01 "EXISTING SOIL SAMPLING AND ANALYSIS", found herein.
3. Refer to Section 01505 "Construction Waste Management" for potential locations to deliver excavated soils.

B. Work Specified Under Other Sections

1. Section 01505 "Waste Management"
2. Section 02050 "Demolition"
3. Section 02400 "Drainage"
4. Section 02900 "Planting"
5. Section 02810 "Irrigation"
6. Section 01535 "Permeable Concrete Paving"
7. Section 03300 "Median Cobble Paving"
8. Section 16110 "Underground Electrical Conduits". Refer to Section 16110 "Underground Electrical Conduit" for addition information regarding trenching and backfill for electrical conduit.

C. Consult all other sections, determine the extent and character of related work and properly coordinate work specified herein with that specified elsewhere to produce a complete, finished and workmanlike installation.

1.03 QUALITY ASSURANCE

A. Reference Standards

The following codes and standards are hereby made a part of this section, and all earthwork shall conform to the applicable requirements therein, except as otherwise specified herein or shown on the drawings.

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1. Standard Specifications

   Where referred to in these Specifications, "Standard Specifications" shall mean the California Caltrans Specifications, 2006 edition, or City of Fremont Standard Specifications, where noted.

2. Percent Compaction

   a. As referred to in these specifications and in accordance with City of Fremont Standard Specifications, percent compaction or relative compaction shall mean the in-place dry density of material expressed as a percentage of the maximum dry density of the same material determined by City of Fremont dry density method. The optimum moisture content corresponding to the maximum dry density shall be determined by the same test.

B. Requirements of Regulatory Agencies

1. Work shall comply with the latest rules and regulations of local and State agencies having jurisdiction.
2. State and local code requirements shall control disposal of debris.

C. Allowable Tolerances

1. Grading under this section shall be to a tolerance as follows:
   a. Subgrade under Synthetic Turf: Refer to Section 01724 Conformance Survey
   b. Areas 4:1 and Flatter

      Plus or minus one-tenth of a foot (0.1'). However, the average grade over any one 50 foot square or 50 foot lineal feet of paving shall not vary more than 0.05' from the average grade shown on the drawings.

   c. Slopes Steeper than 4:1
      i. Plus or minus 0.5'.

D. Definitions

1. <u>Rough Grading</u>
   a. Removal of all organics and surface materials, including sod, and, the manipulation, grading and export of the native soils, organics and surface materials to achieve subgrade and positive drainage.
   b. Imported clean fill, or Import Structural Fill, to establish the necessary subgrade slopes and compaction, as described herein, to achieve positive drainage.
2. <u>Import Structural Fill</u>

   Import structural fill, if required, is defined as a native or import fill material which, when properly compacted, will support foundations, pavements, and other fills. The on-site native clay soil, free of debris, organics and other deleterious material, is suitable for structural fill. Refer to geotechnical report, Section 00220.

3. <u>Onsite Clean Fill Material</u>

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See Import Structural Fill.

4. Subgrade

A combination of graded and compacted native material and imported clean fill material graded per the plans. Subgrade shall be established and graded to achieve positive drainage prior to accepting the aggregate base under concrete paving, or accepting imported topsoil. Subgrade shall be the bottom of any excavation graded to achieve positive drainage for any drainage structure, prior to the placement of concrete.

1.04 REFERENCE STANDARDS

A. ASTM

1. ASTM D422 - 63(2007) Standard Test Method for Particle-Size Analysis of Soils
2. ASTM D 1556 - Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method; 2007.
3. ASTM D 1557 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft3 (2,700 kN m/m3)); 2007.
4. ASTM D 2922 - Standard Test Methods for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth); 2005.
5. ASTM D 3017 - Standard Test Method for Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth); 2005.
6. ASTM D4253 - 00(2006) Standard Test Methods for Maximum Index Density and Unit Weight of Soils Using a Vibratory Table
7. ASTM D4254 - 00(2006)e1 Standard Test Methods for Minimum Index Density and Unit Weight of Soils and Calculation of Relative Density.
8. ASTM Laboratory Procedure D5080

B. AASHTO

1. AASHTO M 147 - Standard Specification for Materials for Aggregate and Soil-Aggregate Base and Surface Courses; American Association of State Highway and Transportation Officials; 1965 (2004).
2. AASHTO T 180 - Standard Specification for Moisture-Density Relations of Soils Using a 4.54 kg (10-lb) Rammer and a 457 mm (18 in.) Drop; American Association of State Highway and Transportation Officials; 2001 (2004).

1.05 SUBMITTALS

A. Submit the following items, and other items as may be required by the Project Engineer, and obtain written approval prior to delivery of materials to the site. Finished work shall match approved samples.

1. Soil Testing Report(s).
2. Material samples: 5 lb sample of each type of material; submit in air-tight containers to testing laboratory.

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a. Imported Structural Fill
b. Imported Clean Fill Material
c. Material curves and sieve analysis to determine compaction requirements and material acceptability for proposed uses.

B. Product Data: Manufacturer's specifications, catalog cuts, data sheets, and installation instructions.

1.06 SPECIAL INSPECTION AND TESTING

A. The City, the Geotechnical Engineer, or the Special Inspection firm, hired by the City, shall perform compaction testing and related special inspection and other related testing on the subgrade and imported aggregates.

B. Structural excavation, grading & aggregate placement subject to building permit will be tested by special inspection firm.

C. See Section 01400 “Testing and Inspection”

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PART 2 MATERIALS

2.01 NATIVE SUBGRADE

A. The results of laboratory testing indicate that the expansion index of the near-surface soil ranges between 15 and 23.

B. Native subgrade shall be compacted as indicated in these specifications.

C. Native subgrade should be compacted at moisture content above optimum.

2.02 TRENCH BACKFILL

A. During excavation to subgrade, trench backfill shall be used to fill utility trenches where utilities were encountered and removed.

B. Refer to Section 02400 for additional information on trench backfill material.

2.03 IMPORTED STRUCTURAL FILL

A. Import structural fill, if required, is defined as a previously excavated native material, or import fill material which, when properly compacted, will support foundations, pavements, and other fills.

B. The on-site native clay soil, free of debris, organics and other deleterious material, is suitable for structural fill. Refer to geotechnical report, Section 00220 and Appendix C.

C. Samples of import structural fill should be delivered to the Geotechnical Engineer of Record, or to the special inspection testing agency for testing and approval, a minimum of 1 week prior to being delivered to the site to develop sieve analysis and compaction curve.

D. Imported Structural Fill, if imported, shall be used only to establish rough subgrade, if on-site material in insufficient in quantity or quality. Such material shall be free of non-organic material, free of perishable material,

rubble, and building debris. Maximum particle size for imported clean fill shall be limited to 3 inches with at least 90% by weight passing a 1-inch sieve. Material shall be granular in nature, and adhere to the following gradation recommendations and conform to the minimum criteria:

Size	% Passing
6 inch	100
4 inch	90-100
No. 200	10-90

Plasticity Index: 20

2.04 MATERIAL RECOMMENDATIONS

A. Materials used during earthwork operations shall comply with the requirements identified in these specifications. Materials shall be evaluated by the City's Geotechnical Consultant for suitability prior to use. The Contractor shall notify the City's Geotechnical Consultant seventy two (72) hours prior to import of materials or use on-site materials to permit time for sampling, testing, and evaluation of the proposed materials.

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Recommended Material Requirements

	Material and Use	Source	Requirements 1,2
	Pipe/Conduit Bedding and Pipe Zone Material - material below conduit invert to 12" above conduit	Import	Refer to "Trench Backfill" in Section 02400.
	Trench Backfill - above bedding material	Import or on-site borrow, or excavated native	As per general fill and excluding rock/lumps retained on 4-inch sieve or 2-inch sieve in top 12 inches.
	General Fill	Import	Close-graded with 35 percent or more passing No. 4 sieve and either; Expansion Index of 50 or less, Plasticity Index of 12 or less or less than 10 percent, by dry weight, passing No. 200 sieve.

1 In general, fill should be free of rocks or lumps in excess of 6 inches in diameter, trash, debris, roots, vegetation or other deleterious material.

2 In general, import fill should be tested or documented to be non-corrosive3 and free from hazardous materials in concentrations above levels of concern.

3 Non- corrosive as defined by the Corrosion Guidelines version 2.0 (Caltrans, 2012).

4 CSS is California Standard Specifications (Caltrans, 2010).

2.05 ROUGH GRADING

A. In order to achieve new subgrade in proposed cobble stone concrete areas and maintenance band locations , rough grading shall include the removal of existing surfaces, including sod removal, to the approximate limits shown on the plans, to the required depth, to accept the new surfacing section and planting.

B. Sod removal shall be considered as included in the final pay quantity for the various rough grading line items, in order to achieve new subgrade.

C. Excavation to subgrade shall be included in the various line items requiring rough grading including but not limited to Concrete Paving.

PART 3 EXECUTION

3.01 EARTHWORK

A. The earthwork shall be conducted in accordance with City of Fremont and applicable grading ordinances. The City's Geotechnical Consultant shall observe earthwork operations. Evaluations performed by the Geotechnical Consultant during the course of operations may result in new recommendations, which may supersede the requirements provided in the specifications.

3.02 LINES AND LEVELS

A. Check all points of horizontal and vertical control before any work is commenced; also check all lines and levels on the drawings. Should any discrepancies be found on the drawings or in the marks established at the site, immediately notify the Project Inspector and the Project Landscape Architect in writing so that proper adjustment may be made. The Project Inspector and the Project Landscape Architect reserve the right to make such minor adjustments in the field as necessary to accomplish the true intent of the drawings and Specifications.

B. Top of subgrade elevations shall be verified using laser-operation survey instruments. Grades at each point must be within ½ -inch plus or minus from the elevations shown on the plans. In addition, no two adjacent points within the grid shall cumulatively deviate more than ¾-inch (0.06 feet) from the respective points' design grades

C. All subgrade slopes shown on the drawings shall be completed and verified by the contractor through a conformance survey, to be reviewed and accepted by the City. The Contractor shall submit the verified grades to the City for review and approval before commencing with subsequent work items. If the methods of verification by the contractor are not acceptable by

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the City, and the City therefore finds it necessary to field verify the grades, the contractor will be charged accordingly. Refer to Section 01724 "Conformance Survey"

D. Protect and maintain all existing bench marks and control monuments and stakes and any new bench marks and control monuments and stakes that may be established.

E. Finish grades shown on drawings are given in feet and decimals of feet, and are to be the top of all graded or paved surfaces. Slope uniformly between given spot elevations unless otherwise indicated.

F. Transition between slopes and relatively flat areas shall be rounded and gradual.

G. Refer to Section 01724 Conformance Survey for additional requirements under synthetic turf areas.

3.03 DUST PALLIATION AND SPILLAGE

A. All necessary precautions, including watering, shall be taken to control air-borne dust to within reasonable limits in accordance with Section 01000 "General Requirements of these Specifications.

B. If serious problems and/or complaints arise due to airborne dust, and when directed by the Project Engineer, operations causing such problems shall be temporarily discontinued at no cost to the City.

C. The contractor shall prevent spillage when hauling on or adjacent to any public street or highway. In the event that spillage occurs, the contractor shall immediately remove all spillage, sweep and clean such streets in accordance with City, County, and State, and other governing regulatory requirements.

3.04 SITE PREPARATION

A. Site preparation shall begin with the removal of vegetation, irrigation lines, concrete, debris and other deleterious materials from areas to be graded. Refer to Section 02050 "Demolition" for additional information.

B. Tree stumps and roots shall be removed to such a depth that organic material is generally not present. Clearing and grubbing shall extend to the outside of the proposed excavation and fill areas and remove up to six inches of the existing grade.

C. The debris and unsuitable material generated during clearing and grubbing shall be removed from areas to be graded and disposed of at a legal dumpsite away from the project area.

D. Existing utilities within the project limits that are to remain in service shall be rerouted, or protected from damage and clarified on plans.

E. Abandoned utilities shall be removed . Excavations resulting from removal of buried utilities or obstructions shall be backfilled with excavated native material or compacted trench backfill.

3.05 EXCAVATION STABILIZATION AND TEMPORARY SLOPES

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A. Excavations, including trench excavation, shall be stabilized in accordance with the Excavation Rules and Regulations (29 Code of Federal Regulations, Part 1926) stipulated by the Occupational Safety and Health Administration (OSHA).

B. The lateral earth pressures listed in the table below may be used to design or select the shoring system. The recommendations listed in the table are based upon the limited subsurface data provided by exploratory borings and excavations and reflect the influence of the environmental conditions that existed at the time of exploration. Excavation stability, material classifications, allowable slopes, and shoring pressures shall be re-evaluated and revised, as needed, during construction. Excavations, shoring systems and the surrounding areas shall be evaluated daily by a competent person for indications of possible instability or collapse.

C. Excavations below the groundwater may be unstable. Dewatering wells, pits or sumps, may be used to depress the water level below the excavation. Additional methods to stabilize drilled pier excavations are described in these specifications.

Recommended OSHA Material Classifications and Allowable Slopes

Formation	OSHA Classification	Allowable Temporary Slope 1,2,3	Lateral Earth Pressure on Shoring4, (psf)
Alluvium	Type B	1h:1v(45°)	45·D+72

1 Allowable slope for temporary excavations less than 20 feet deep. Excavation sidewalls in cohesive soils may be benched to meet the allowable slope criteria (measured from the bottom edge of the excavation). The allowable bench height is 4 feet. The bench at the bottom of the excavation may protrude above the allowable slope criteria.

2 In layered soils, no layer shall be sloped steeper than the layer below.

3 Temporary excavations less than 5 feet deep may be made with vertical side slopes and remain unshored if judged to be stable by a competent person (20 CFR Part 1926.650).

4 D' is depth of excavation for excavations up to 20 feet deep. Includes a surface surcharge equivalent to two feet of soil.

C. The shoring system shall be designed or selected by a suitably qualified individual or specialty subcontractor. The shoring parameters presented in this report is preliminary design criteria, and the designer shall evaluate the adequacy of these parameters and make appropriate modification for their design. The Contractor shall take appropriate measures to protect workers. OSHA requirements pertaining to worker safety shall be observed.

D. Excavations made in close proximity to existing structures may undermine the foundation of those structures and/or cause soil movement related distress to the existing structures. Stabilization techniques for excavation in close proximity to existing structures will need to account for the additional loads imposed on the shoring system and appropriate setback distances for temporary slope. The City's Geotechnical Engineer shall be consulted for additional recommendations if the proposed excavations cross below a plane extending down and away from the foundation bearing surfaces of the adjacent structure at an angle of 1:1 (horizontal to vertical).

E. The Contractor will be responsible for all temporary slopes and trenches excavated at the site and the design of any required temporary shoring.

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Shoring, bracing and benching should be performed by the contractor in accordance with current governing safety standards and shall be included in the price paid for “Rough grading”and in other line items requiring excavation and rough grading.

3.06 UTILITY TRENCH EXCAVATIONS AND BACKFILL

A. Refer to Section 16110 “Underground Electrical Conduit” for addition information regarding trenching and backfill for electrical conduit.

B. Depth and Width of Trench: Trenches shall be excavated to such depths as will permit the pipe to be laid at the elevations, slopes, or depths of cover indicated on the drawings, and at uniform slopes between indicated elevations. Whenever cobbles larger than 3 inches in size are present in earthen bedding, the trench section shall be excavated to the lines required for rock. Every effort shall be made to keep the sides of the trenches firm and undisturbed until backfilling has been completed and consolidated. Trenches shall be excavated with approximately vertical sides between the elevation of the bottom of the pipe and an elevation one foot above the top of the pipe.

C. Trench Excavation to Fill: If pipe is to be laid in embankments or other recently filled material, the fill shall first be brought to final grade or to a height of at least one foot above the top of the pipe, whichever is the lesser. Particular care shall be taken to ensure maximum consolidation of material under the pipe location. The pipe trench shall be excavated as though in undisturbed material.

D. Trench excavations shall be done mechanically, except within the drip line of existing trees.

E. Preparation of Fill Areas: Before beginning backfilling of any trench, the trench bottom shall be free of loose or disturbed soils, rubbish, trash or other debris. Where cobbles or boulders are encountered on the trench bottom above final grade, these materials shall be removed to provide uniform bedding for the utility lines.

F. Restore all pavement and sidewalks, damaged or cut as a result of excavations, to original conditions in a manner approved by the City Engineer.

G. Trench backfill shall meet Section 11A and 11B, City Of Fremont Standard Trench Backfill Specification, Standard Specifications, dated January 1995 (amended). Trench backfill shall be used for all new trench work for utilities other than perforated drainage and irrigation lines

H. Compaction: Trench backfill shall be compacted to a minimum of 90% relative compaction in synthetic turf and paving area, as determined by the City of Fremont dry density test method. In landscaped areas where trench backfill is used, it shall be held 12 inches short of the proposed finished grade to accommodate native backfill, or import topsoil, for proposed or future planting.

I. When backfilling, no material shall be deposited to depths greater than that which will allow a minimum of 90% relative compaction, as noted on the

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plan, to be achieved in any portion of that lift. No subsequent lift shall be placed until the previously compacted lift has been approved by the Engineer. No mechanical tamping will be allowed over conduit without sufficient cover to avoid damage.

J. Native material excavated from trenches may be used per the details herein to backfill in the top twelve (12) inches of the trench within landscape areas.

K. All excess native trench spoils may be defined as "Import Structural Fill" if meeting the requirement of this section, and the geotechnical report, and may be used as compacted fill material for subgrade, where fill is required.

L. Measurement and Payment: Full compensation for the excavation and disposal of native material for utility trenches and storm drain trenches shall be considered as included in the various line items of work requiring such excavations and no separate payment will be made therefore.

3.07 ROUGH GRADING AT PLANTING AREAS

A. After irrigation has been removed and backfilled, excavation shall be performed as required to provide for the various paving and surfacing materials, or imported topsoil, and amendments and bark mulch.

B. The subgrade shall be excavated to follow the natural slope, and create positive slopes toward the curbs. Subgrade shall be sloped as indicated on the plans, unless otherwise noted.

C. Rough grading and excavation shall include, but not be limited to:

1. Tree Planting Pits: Excavation to a minimum four (4) inch depth to remove sod and attain proposed subgrade in order to accept placement of aggregate base and decomposed granite surfacing; establish subgrade for the tree planting pits; establish subgrade for the shrub planting areas.
2. Planting Areas: Excavation to a minimum six (6) inch depth to remove sod and attain proposed subgrade in order to accept imported topsoil and new sod;
3. Excavation to a minimum six (6) inch depth to remove sod and attain proposed subgrade in order to accept concrete mow band;
4. Subgrade under planting areas shall be compacted to 85 to 88 percent relative compaction.

D. Fill areas include, but are not limited to:

1. Fill required to attain proposed subgrade in order to accept placement of aggregate base, concrete surfacing, permeable pavers, and all other features requiring fill to attain proposed subgrade.

E. Unsuitable Material: Material below the grading plane in the excavation area that is unsuitable for the planned use, as determined by the Project Landscape Architect, or in excess, shall be removed and disposed of outside the limits of work. Full compensation for the removal and disposal of such unsuitable material below the grading plane shall be measured and paid for at the contract price paid per cubic yard for **"Rough Grading"** and no separate payment will be made therefore.

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3.08 ROUGH GRADING AT PAVED AREAS

A. Rough grading, excavation and fill shall include, but not be limited to:

1. The removal of all sod, infield fines, and native material in areas designated for excavation to achieve subgrade for the paved areas, including, but not limited to concrete paving, pervious concrete, and permeable pavers, prior to placement of base rock material.
2. Excavation of trenches for accepting reinforced concrete pipe (RCP) or PVC pipe,
3. Excavation to proposed subgrade for asphalt base and concrete pavement section.
4. Any excavation needed to obtain final subgrades.
5. Excavation in areas to attain proposed subgrade in order to accept placement of aggregate base, cobble concrete paving and maintenance bands and any other features requiring excavation to achieve subgrade, prior to placement of base rock, concrete footings, and asphalt concrete.

B. Excavate for street light and utility footings to the indicated depth or deeper if required for solid bearing. Excavations shall have all loose earth, rubbish, etc., removed.

C. Unauthorized excavations for footings, etc., carried to greater depths than indicated shall be filled with concrete without additional expense to the City.

D. The method of excavation used shall meet with the approval of the City Engineer.

E. All cuts and fills shall be conditioned to the moisture content noted herein, and compacted with a sheepsfoot roller or other approved equipment.

F. Subgrade preparation for pavement areas shall extend laterally for at least two feet beyond the edge of pavement.

G. Excavated material may be stockpiled and re-used as landscape fill, where required. If material is not to be used as fill, it shall be off-hauled and disposed of legally.

H. Subgrade shall be sloped as indicated in specifications, unless otherwise noted.

I. Where forming is required, excavation shall be sufficient to permit placing and removal of forms. Unnecessary unauthorized excavation shall not be made.

J. Excavations shall be kept free of water during excavation and until concrete work and backfilling are complete.

1. The method of excavation and de-watering used shall meet the approval of the City Engineer or Senior Construction Supervisor.

K. The soil subgrade should be moisture conditioned and compacted at over optimum water content. Relative compaction values are based on the laboratory test procedure ASTM 01557-02.

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L. There will be no extra cost paid for excavations done by hand. There will be no extra cost paid for remedying over excavation. Unauthorized over-excavations carried to greater depths than indicated shall be filled with concrete or as approved by the City Engineer, without additional expense to the city.

M. Unsuitable Material: Material below the grading plane in the excavation area that is unsuitable for the planned use, as determined by the Engineer, shall be excavated and disposed of outside the limits of work, or bridged with a geotextile, at the direction of the Project Inspector, Project Engineer, or Project Landscape Architect. Full compensation for the removal and disposal of such unsuitable material below the grading plane shall be measured and paid for at the contract price paid per cubic yard for "Rough Grading" and no separate payment will be made therefor.

N. Measurement and Payment: Full compensation for the excavation and disposal of native material for aggregate base, concrete bands, curb and gutter, driveways, sport field light pole, concrete paving, field inlets, fence posts, fence footings, and any other features requiring excavation to achieve subgrade, prior to placement of base rock, concrete footings, asphalt concrete, and any other project facility, shall be considered as included in those various line items of work requiring such excavations and no separate payment will be made therefore.

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3.09 SUBGRADE PREPARATION

A. Subgrade for turf fields or utility trenches and below fill should be prepared as per the recommendations in the table below.

Subgrade Preparation Requirements	
Subgrade Location	**Preparation Recommendations (Also Refer to Compaction Requirements)**
Below Turf Fields	Check for unsuitable materials.
Below Fill	Scarify top 6" then moisture condition and compact to 90% Keep in moist condition by sprinkling water.
Utility Trenches	Check for unsuitable materials. Do not scarify. Compact if disturbed. Remove or compact loose/soft material.

B. Prepared subgrade below fill should be maintained in a moist (but not scarified) condition by the periodic sprinkling of water prior to placement of additional overlying fill or construction of footings and slabs. Subgrade that has been permitted to dry out and loosen develop desiccation cracking, should be scarified, moisture conditioned, and recompacted as per the requirements above.

3.11 PLANTING AREAS

A. Refer to Section 02910 "Import Topsoil".

3.12 OBSERVATION AND REMOVALS

A. Prior to placement of fill or bedding material, the City's Geotechnical Consultant shall evaluate the exposed subgrade. Materials that are considered unsuitable shall be excavated under the observation of the City's Geotechnical Consultant in accordance with the recommendations presented in this section, or the field recommendations of the City's Geotechnical Consultant.

B. Unsuitable materials include, but may not be limited to dry, loose, soft, wet, expansive, organic, or compressible natural soils and undocumented or otherwise deleterious fill materials. Unsuitable materials shall be removed from trench bottoms and below bearing surfaces to a depth at which suitable foundation subgrade, as evaluated in the field by the City's Geotechnical Consultant, is exposed.

C. Excavated materials may be re-used as engineered fill on site provided that the materials comply with, or are processed to comply with these specifications.

3.13 COMPACTION REQUIREMENTS

A. See table below for project compaction requirements, as identified on the project per Geotechnical Report:

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Compaction Requirements

Fill Type	Location	Recommended Compacted Density 1	Recommended Compacted Moisture 2
Bedding and Pipe Zone	Material below conduit invert to 12 inches above conduit	90 percent	At or above optimum.
Aggregate Base	Under Concrete	95 percent	At or above optimum.
Trench Backfill	To 1 foot below bottom of pavement section	90-95 percent	At or above optimum.
General Fill	In locations not already specified	90 percent	At or above optimum.

1 Expressed as percent relative compaction or ratio of field density to reference density (typically on a dry density basis for soil and aggregate). The reference density of soil and aggregate shall be evaluated by ASTM D 1557.

2 Optimum moisture should be evaluated by ASTM D 1557.

B. Compacted fill should be maintained ina moist (but not saturated0 condition by the periodic sprinkling of water prior to placement of additional overlying fill. Fill that has been permitted to dry out and loosen or develop

dessication cracking, should be scarified, moisture conditioned, and re-compacted as per the requirements above.

3.14 EXCAVATIONS NEAR EXISTING STRUCTURES AND EASEMENTS

A. Although potholing has been done, and the information is provided in these plans and specifications, it does not relieve the contractor from his obligation to call for USA and pothole on the site to determine specific depths of utilities.

B. Attention is directed to the fact that there are pipes, drains, and other utilities in certain locations which must remain and be protected. Some of these have been indicated on the drawings, but no attempt has been made to show all of the services, their depth, and the completeness or accuracy of the information given is not guaranteed. **Call Pacific Gas and Electric at least 48 hours prior to commencement of earthwork to verify locations of existing gas main and underground electric conductor on site.**

C. Where determination of the exact location of pipe, utilities, or other underground structure is necessary for doing the work properly, the Contractor is required to excavate test pits or potholes to determine such locations and depths.

D. As the excavation approaches pipes, conduits, or other underground structures, digging by machinery shall be discontinued and the excavation shall be done by means of hand tools, as directed. Such manual excavation, when incidental to normal excavation, shall be included in the work to be done under items involving normal excavation.

E. Measurement and Payment: Full compensation for the excavation and disposal of native material shall be considered as included in the various line items of work requiring such excavations and no separate payment will be made therefor.

3.15 COMPACTION OF IMPORTED STRUCTURAL FILL FOR SUBGRADE

A. Placement and Compaction: All new structural fill material shall be placed in layers 8 inches or less in loose thickness, conditioned to a moisture content over optimum, and compacted with a sheeps-foot roller, or other approved equipment, to achieve a minimum of 90 percent relative compaction. Compaction criteria will be based on the laboratory test procedure ASTM D1557.

B. When directed by the City Engineer or where the field moisture content and density tests indicate that the required compaction or moisture content has not been attained, the fill shall be reconditioned as necessary and re-compacted to the required density before additional material can be added. The Contractor shall be responsible for placing and compacting approved fill materials in accordance with the Specifications.

C. Should the Contractor fail to meet the density requirements, he shall reduce his rate of haul or furnish additional spreading and/or compaction

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equipment or make any other adjustments necessary to achieve a satisfactory fill.

D. The City Engineer shall be allotted sufficient time to perform the necessary testing to assure that properly placed compacted fill is being obtained, i.e., the filling operations shall be arranged in a way that will permit making necessary control tests for each lift prior to the placing of subsequent lifts.

E. The filling operations shall be continued as specified as above until the fill has been constructed to the grades required on the contract drawings.

F. No fill material shall be placed, spread, or compacted during unfavorable weather conditions. When the work is interrupted by heavy rains, filling operations shall not be resumed until field tests by the City Engineer indicate that moisture content and density of the fill are as previously specified.

G. Compacted fill should be maintained in a moist (but not saturated) condition by the periodic sprinkling of water prior to placement of additional overlying fill. Fill that has been permitted to dry out and loosen or develop desiccation cracking, should be scarified, moisture conditioned, and recompacted as per the requirements above.

3.16 CONSTRUCTION OBSERVATION AND TESTING

A. The City Representative or City's Geotechnical Consultant during construction shall check the interpolated subsurface conditions and shall:

- Observe preparation and compaction of subgrade.
- Check and test imported materials prior to their use as fill.
- Perform field density tests to evaluate fill and subgrade compaction.

3.17 STOCKPILING, OFF-HAUL AND SPREADING OF NATIVE MATERIAL

A. Stockpiling and re-use of material generated from grading and excavation work is considered part of rough grading operations and shall be paid for within the contract price paid for **"Rough Grading"** and no separate payment shall be made therefore.

B. Excavated, native material that will not be used to achieve subgrade, be used as Import Structural Fill, or used as landscape fill, shall be off-hauled and disposed of legally. Refer to Appendix C.

C. No stockpiles shall remain when all excavation and off haul work is completed.

D. Off-hauling spoils shall be considered as included in the final pay quantity for "Rough Grading (F)" and no additional payment will be made therefore.

3.18 WEED REMOVAL

A. Areas to receive new sod, planting, paving, or surfacing shall be cleared of all vegetation and debris.

B. Weed Eradication: Contractor shall retain the services of a licensed pest control advisor to evaluate the site and develop a comprehensive weed eradication program for review and approval by the Park Superintendent.

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For bidding and scheduling purposes only, the following program has been proposed and is subject to revision per pest control advisor's recommendations.

C. Water site thoroughly for a period of two consecutive weeks. A specific watering duration and frequency program designed to germinate weeds shall be approved in advance by the Park Superintendent.

D. Discontinue watering process for two days; apply Roundup® or approved equal, non-selective broad spectrum systemic herbicide.

E. Allow sufficient period of time to ensure that all weeds are dead.

F. If live weeds persist, re-apply herbicide per pest control advisor's recommendations.

G. Allow sufficient period of time to ensure that all weeds are dead.

H. The Contractor shall then flail mow/sweep the dead vegetation to a height of ½" maximum. The mowed material shall be hauled from the site. This material shall not be used as fill.

3.19 MEASUREMENT AND PAYMENT

A. The lump sum final pay quantity for "**Rough Grading (F)**" shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the excavation and fill work in order to achieve subgrade as required by these Special Provisions, and as directed by the City Engineer or his designee. Quantities of grading will not be measured. The quantity shown on the Engineer's Estimate for rough grading shall be the final pay quantity for which payment is made as specified in Section 9-1.015, "Final Pay Quantities" of the Standard Specification.

B. Stockpiling and re-use of material generated from cut and fill operations is considered part of rough grading and shall be paid for within the contract price paid for "**Rough Grading**" and no separate payment shall be made therefore.

C. The price paid for Conformance Surveying shall be included in the contract unit price paid for "**Rough Grading (F)**" and no separate payment will be made therefore.

END OF SECTION

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10-5.03 Permeable Concrete Pavers (02795)

PART 1 - GENERAL

1.01 SUMMARY

A. The work in this section shall consist of furnishing and placing geotextile, coarse aggregate, choker base course, waterproof liner and permeable pavers. Geotextile shall conform, except as otherwise provided, to the provisions of Section 88, "Engineering Fabrics," of the Standard Specifications and these Special Provisions. Coarse aggregate and choker base course shall conform, except as otherwise provided, to the provisions of Section 26, "Aggregate Bases," of the Standard Specifications and these Special Provisions.

B. Section Includes

1. Permeable interlocking concrete pavers-80mm.
2. Crushed stone bedding material (choker course).
3. Open-graded base aggregate.
4. Joint/opening filler materials.
5. Edge restraints.
6. Geotextiles.
7. Waterstop/Impermeable liner

C. Related Sections

1. Clearing and Grubbing
2. Earthwork
3. Miscellaneous Concrete Construction

1.02 REFERENCES

A. American Society for Testing and Materials (ASTM)

1. C 131, Standard Test Method for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine.
2. C 136, Method for Sieve Analysis for Fine and Coarse Aggregate.
3. C 140, Standard Test Methods for Sampling and Testing Concrete Masonry Units and Related Units.
4. D 448, Standard Classification for Sizes of Aggregate for Road and Bridge Construction.
5. C 936, Standard Specification for Solid Interlocking Concrete Pavers.
6. C 979, Specification for Pigments for Integrally Colored Concrete.
7. D 698, Test Methods for Moisture Density Relations of Soil and Soil

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Aggregate Mixtures Using a 5.5-lb (2.49 kg) Rammer and 12 in. (305 mm) drop.

8. D 1557, Test Methods for Moisture Density Relations of Soil and Soil Aggregate Mixtures Using a 10-lb (4.54 kg) Rammer and 18 in. (457 mm) drop.
9. D 1883, Test Method for California Bearing Ratio of Laboratory-Compacted Soils.
10. ASTM D 2922 Standard Test Methods for Density of Soil and Soil-Aggregate In-Place by Nuclear Methods (Shallow Depth).
11. D 4254, Standard Test Methods for Minimum Index Density and Unit Weight of Soils and Calculation of Relative Density.

B. Interlocking Concrete Pavement Institute (ICPI)

1. Permeable Interlocking Concrete Pavement manual.
2. Permeable Design Pro software for hydrologic and structural design

C. Caltrans Standard Specifications, May 2006.

1.03 SUBMITTALS

A. In accordance with Conditions of the Contract and Division 1 Submittal Procedures Section.

B. Paver manufacturer's/installation subcontractor's drawings and details:

1. Subcontractor shall provide shop drawing layout of pavers for the following patterns:

a. Maintenance Band - Double Stack Bond course with Single Running Bond Course

b. Crosswalk Field - 6 x 9 – 90 degree Herringbone pattern w/ Soldier Course Edge Band

c. Corner Planter- Precast Concrete Pavers - 12 x12 - Banded Square Pattern as shown on plans.

2. Indicate layout, pattern and relationship of paving joints to fixtures, and project formed details.

C. Minimum 3 lb (2 kg) samples of base and bedding aggregate materials.

D. Sieve analysis of aggregates for base and bedding materials per ASTM C 136.

E. Project specific or producer/manufacturer source test results for void ratio and bulk density of the base and subbase aggregates.

F. Soils report indicating density test reports, classification, and infiltration rate measured on-site under compacted conditions, and suitability for the intended project.

G. Permeable concrete pavers:

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1. Paver manufacturer's catalog sheets with product specifications.
2. Four (4) representative full-size samples of each paver type, thickness, color, and finish. Submit samples indicating the range of color expected in the finished installation.
3. Accepted samples become the standard of acceptance for the work of this Section.
4. Laboratory test reports certifying compliance of the concrete pavers with ASTM C 936.
5. Manufacturers' material safety data sheets for the safe handling of the specified paving materials and other products specified herein.
6. Paver manufacturer's written quality control procedures including representative samples of production record keeping that ensure conformance of paving products to the product specifications.

H. Paver Installation Subcontractor:

1. Demonstrate that job foremen on the project have a current certificate from the Interlocking Concrete Pavement Institute Concrete Paver Installer Certification program.
2. Job references from projects of a similar size and complexity. Provide Owner/Client/General Contractor names, postal address, phone, fax, and email address.
3. Written Method Statement and Quality Control Plan that describes material staging and flow, paving direction and installation procedures, including representative reporting forms that ensure conformance to the project specifications.

1.04 QUALITY ASSURANCE

A. Paver Installation Subcontractor Qualifications:

1. Utilize an installer having successfully completed concrete paver installation similar in design, material and extent indicated on this project.
2. Utilize an installer with job foremen holding a current certificate from the Interlocking Concrete Pavement Institute Concrete Paver Installer Certification program.

B. Review the manufacturers' quality control plan, paver installation subcontractor's Method Statement and Quality Control Plan with a pre-construction meeting of representatives from the manufacturer, paver installation subcontractor, general contractor, engineer and/or owner's representative.

C. Mock-Ups:

1. Install a 10 ft x 2.5 ft paver area of the median maintenance band paver layout.
2. Use these areas to determine surcharge of the bedding layer, joint sizes,

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and lines, laying pattern, color and texture of the job.

3. This area will be used as the standard by which the work will be judged.
4. Subject to acceptance by owner, mock-up may be retained as part of finished work.
5. If mock-up is not retained, remove and properly dispose of mock-up.

1.05 DELIVERY, STORAGE, AND HANDLING

A. General: Comply with Division 1 Product Requirement Section.

B. Comply with manufacturer's ordering instructions and lead-time requirements to avoid construction delays.

C. Delivery: Deliver materials in manufacturer's original, unopened, undamaged container packaging with identification tags intact on each paver bundle.

1. Coordinate delivery and paving schedule to minimize interference with normal use of buildings adjacent to paving.
2. Deliver concrete pavers to the site in steel banded, plastic banded, or plastic wrapped cubes capable of transfer by forklift or clamp lift.
3. Unload pavers at job site in such a manner that no damage occurs to the product or existing construction

D. Storage and Protection: Store materials in protected area such that they are kept free from mud, dirt, and other foreign materials.

1.06 ENVIRONMENTAL REQUIREMENTS

A. Do not install in rain or snow.

1.07 MAINTENANCE

A. Extra materials: Provide 100 SF additional material for use by owner for maintenance and repair.

B. Pavers shall be from the same production run as installed materials.

1.08 WARRANTY

A. 15-year limited material warranty for paver restraint edging from manufacturing defects in workmanship or material.

PART 2 - PRODUCTS

2.01 <u>PERMEABLE PAVERS</u>

A. Manufacturer: Calstone

1. Manufacturing Service Center Contact: 1155 Aster Avenue, Sunnyvale, CA 94086. 408-984-8800

B. Permeable Interlocking Concrete Paver Units:

1. Paver Type: Quarry Stone Permeable Paver System

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a. Material Standard: Comply with ASTM C 936.
b. Color: **Rustic Yellowstone**
c. Color Pigment Material Standard: Comply with ASTM C 979.
d. Concrete pavers shall have spacer bars on each unit
e. Size: 6 inches by 9 inches x 3-1/8 inches thick.

2.02 PERMEABLE BASE ROCK

A. Refer to Section 02400 “Drainage” for Class II Permeable Base Rock.

2.03 PERMEABLE BEDDING (CHOKER COURSE)

A. Permeable bedding (choker course) materials shall be crushed, angular rock, or stone, conforming to the following ASTM requirements: 90% fractured faces, LA Abrasion < 40 per ASTM C 131, minimum CBR of 80% per ASTM D 1883.
B. Do not use rounded river gravel
C. All stone materials shall be washed with less than 1% passing the No. 200 sieve.
D. Permeable bedding (choker course), conforming to ASTM D 448 gradation as shown below:

Permeable Bedding Grading Requirements

ASTM stone size No. 8

Sieve Size	**No. 8** Percent Passing
1/2 in.	100
3/8 in.	90 to 100
No. 4	20 to 55
No. 8	5 to 30
No. 16	0 to 10
No. 50	0 to 5

E. Aggregate Source: Hanson Aggregates, 7999 Athenour Way, Sunol, CA.,94586-9454. Phone: (925) 862-2257.

2.04 JOINT OPENING/FILLER MATERIAL

A. Joint Opening/Filler materials shall be crushed, angular rock, or stone, conforming to the following ASTM requirements: 90% fractured faces, LA Abrasion < 40 per ASTM C 131, minimum CBR of 80% per ASTM D 1883 and used to fill the void between permeable pavers.
B. The specified Joint Opening/Filler materials shall conform to the requirements defined herein, and the requirements for Caltrans Class 1B permeable material, as defined in Section 68-1.025 “Permeable Material”.
C. Do not use rounded river gravel

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D. All stone materials shall be washed with less than 1% passing the No. 200 sieve.

E. Joint opening/filler material, conforming to ASTM D 448 gradation as shown below:

Joint Opening/Filler Grading Requirements

ASTM stone size No. 9

No. 9	
Sieve Size	Percent Passing
1/2 in.	100
3/8 in.	100
No. 4	55 to 100
No. 8	10 to 40
No. 16	0 to 10
No. 50	0 to 5

F. Aggregate Source: Hanson Aggregates, 7999 Athenour Way, Sunol, CA.,94586-9454. Phone: (925) 862-2257.

2.05 NON-WOVEN GEOTEXTILE FABRIC

A. Refer to specifications Section 02300 GEOTEXTILES.

2.06 SEALER

A. Paver sealer shall be an acrylic in a solvent base with low-medium solids level for deep penetration and low gloss; stain resistance; efflorescence (white powder) suppression; sand joint stabilization; little to no gloss for retention of natural traction; strengthen any potential weak spots in the paver surface.

B. Gloss can be customized from low to high.

C. Clear in color, usually darkens and richens material colors a shade or two

D. For surfaces over 3% absorption rating. Materials of under 3% absorption rating will allow less penetration and leave more solids on the surface than might be desirable. See the "Problem Solving" section on sealing if you don't know the absorption rating and can't find out from the store that sold you the material.

E. Product: Aldon System, Penetrating Paver Sealer, or approved equal

PART 3 - EXECUTION

3.01 EXAMINATION

A. Acceptance of Site Verification of Conditions:

1. General Contractor shall inspect, accept and certify in writing to the paver

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installation subcontractor that site conditions meet specifications for the following items prior to installation of interlocking concrete pavers.

a. Upon completion of subgrade work in areas to receive permeable pavers, the Contractor shall contact the Engineer for inspection of the site prior to proceeding with installation of topsoil, waterstop, geotextile and aggregate courses.

b. The subgrade shall be tested for permeability and over-compaction prior to the installation of waterstop, geotextile and aggregate.

c. Provide written density test results for soil subgrade to the Owner, General Contractor and paver installation subcontractor.

d. Verify location, type, and elevations of edge restraints, [concrete collars around] utility structures, and drainage pipes and inlets.

2. Do not proceed with installation of bedding and interlocking concrete pavers until subgrade soil conditions are corrected by the General Contractor or designated subcontractor.

3. Verify that the soil subgrade is free from standing water.

3.02 INSTALLATION OF WATERSTOP AND GEOTEXTILE

A. Upon completion of subgrade work in areas to receive permeable pavers, the Contractor shall contact the Engineer for inspection of the site prior to proceeding with placement of geotextile materials and permeable base course. The subgrade shall be tested for permeability and over-compaction prior to the installation of waterstop, geotextile and aggregate. Subgrade relative compaction should be a minimum of 85% and a maximum of 90%.

B. Geotextile shall be placed immediately after approval of subgrade preparation. Any accumulation of debris or sediment which has taken place after approval of subgrade shall be removed prior to the installation of geotextile at the Contractor's expense.

C. Geotextile shall be placed in accordance with the manufacturer's standards and recommendations. Adjacent strips of geotextile shall overlap a minimum of sixteen inches (16"). Contractor shall provide excess geotextile outside of the storage bed such that a minimum four-foot (4') edge strip may be folded over curb and gutter and other adjacent materials, to create a vertical barrier, and to wrap permeable materials, as shown on the plans. Prior to the placement of the coarse aggregate, the Contractor shall secure geotextile at least four feet (4') outside of storage bed to prevent any runoff or sediment from entering the permeable paver base.

D. Along the concrete curb and gutter, the waterstop shall be placed to full depth. Waterstop shall be draped over the curb and gutter to support the material in place. Geotextile shall then be placed on subgrade in permeable paver areas and overlap the waterstop prior to the installation of permeable base.

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E. Permeable base shall be placed in 4-6 inch lifts. Contractor shall lightly compact each lift, keeping equipment movement over storage bed subgrades to a minimum. Aggregate shall be installed to grades indicated on the plans.

F. Permeable Bedding Course (Choker course) aggregate shall be installed evenly over surface of coarse aggregate bed. Choker base course shall be sufficient to allow for even placement of permeable pavers to a 2” depth.

G. Following placement of Permeable Bedding Course (Choker course) aggregate, the Contractor shall fold geotextile back along all bed edges to protect permeable paver base from sediment washout along bed edges. A minimum four-foot (4’) edge strip shall be used to protect beds from adjacent bare soil. This edge strip shall remain in place until all imported topsoil is installed, stabilized, and landscaped. In addition, Contractor shall take any other necessary steps to prevent sediment from washing into infiltration bed during site development. When the site is fully stabilized, temporary sediment control devices shall be removed.

H. Excess geotextile fabric and waterstop material shall be trimmed prior to the placement of permeable pavers.

I. Refer to permeable paving edging for installation of steel edge.

3.03 INSTALLATION OF PAVER RESTRAINT EDGING

A. Preparation: Ensure that all underground utility lines are located and will not interfere with the proposed edging installation before beginning work.

B. Locate border line of edging with string or other means to assure border straightness and curves as designed.

C. Edging Installation: Install base of edging resting on compacted level base and facing towards and under pavers, drive 3/8" x 10" (9.5 mm x 242 mm) bright spiral steel spikes through edging holes in section base of paver restraint edging at spaces for following applications:

1. Anchor each section end with spike.
2. Heavy Vehicular Loads: 4 inches (102 mm) on center.

D. Securely connect sections together in accordance with manufacturer’s instructions.

E. Install pavers.

3.04 INSTALLATION PERMEABLE ROCK AND PAVERS

A. General

1. Keep area where pavement is to be constructed free from sediment during entire job. Geotextiles, base and bedding materials contaminated with sediment shall be removed and replaced with clean materials.

B. Geotextiles

1. Refer to paragraph 3.02

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C. Permeable Base

1. Moisten, spread and compact permeable base in 4 to 6 in. (100 to 150 mm) lifts without wrinkling or folding the geotextile and waterstop.
2. For each lift, make at least two passes in the vibratory mode then at least two in the static mode with a vibratory roller, temper, plate or other equipment, until there is no visible movement of the permeable base material. Do not crush material with the roller.
3. The surface tolerance of the compacted permeable base material shall be 1/2 in. over a 10 foot straightedge.
4. Perform density testing on all compacted permeable base:
   a. The Testing Company shall supply nuclear moisture/density gauges and ancillary equipment required to conduct density and moisture content measurements for compaction of the Class 2 Permeable Aggregate drainage layer. Qualified testing laboratory operators/gauges may conduct compaction testing. Each gauge operator shall be trained in the safe operation, transportation and handling of the gauge. The registered owner of the gauge shall have and maintain a valid Radioisotope License for each gauge.
   b. Each gauge shall have been calibrated within the last 12 months, either by the manufacturer or other qualified agent, against certified density and moisture reference blocks. The density standard count and the moisture standard count shall be within 2 percent and 4 percent respectively, of the most recent calibration values. A certificate of calibration for each gauge shall accompany each gauge.
5. Prior to installing the bedding material, the contractor shall perform an infiltration bucket test to ensure that the material is permeable.
6. Compaction Testing
   a. No testing shall be performed within 10 ft (3 m) from any unrestrained outside edge of the work area. The control strip may be incorporated into the project upon acceptance of density measurements by the Testing Company.
   b. During testing, the surface of the aggregate shall be visibly moist and maintained as such throughout construction and compaction.
   c. After initial placement of the permeable base material, the compaction equipment shall make two passes over the entire surface of the control strip. Field densities and field moisture contents, using the backscatter/indirect method, shall be determined at five randomly selected locations at least 15 ft (5 m) apart. The dry density and moisture content shall be calculated for each of these locations and the averages shall be used as initial values. The maximum compacted thickness of the aggregate base layer measured for density shall be 4 in. (100 mm).
   d. The compaction equipment shall then make two additional passes

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over the entire surface. After compaction, three separate, random field density and moisture content determinations shall be made, using the backscatter/indirect method, and a new average dry density and moisture content shall be calculated.

e. If the new average dry density exceeds the previous value by more than 1.2 pcf (20 kg/m3) then two additional passes of the equipment shall be carried out as described above. If the new average dry density does not exceed the previous value by more than 1.2 pcf (20 kg/m3), then compaction of the control strip will be considered satisfactory and complete.

f. Upon satisfactory completion of testing, an additional seven (7) field density and moisture tests, using the backscatter/indirect method, shall be taken at random locations and the dry density and moisture content values shall be determined. The final dry density and moisture content of the control strip shall be the average of these seven values plus the three most recent values obtained upon completion.

8. Compaction Equipment

a. Use a smooth dual or single smooth drum, minimum 10 ton (10 T) vibratory roller or a minimum 13,500 lbf (60 kN) centrifugal force, reversible vibratory plate compactor that provides maximum compaction force without crushing the aggregate base.

9. Test Report

a. The test report shall include the following:

1) Project description.
2) Sketch of test area and test locations.
3) Aggregate type and layer thicknesses.
4) Aggregate characteristic properties: gradation, void ratio, bulk density.
5) Compaction equipment type and weight.
6) Static or vibratory compaction.
7) Number of passes of the compaction equipment.
8) Test number and location.
9) Individual and average field wet density, moisture content, and dry density values determined after each compaction operation in accordance with ASTM D 2922 *Standard Test Methods for Density of Soil and Soil-Aggregate In-Place by Nuclear Methods (Shallow Depth).*
10) Calculation of target density.

D. The surface tolerance the compacted permeable base should not deviate more than. ±1 in. over a 10 ft (3 m) straightedge.

E. Bedding layer

1. Moisten, spread and screed the No. 8 stone bedding material.

2. Fill voids left by removed screed rails with No. 8 stone.

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3. The surface tolerance of the screeded No. 8 bedding layer shall be ±3/8 in (10 mm) over a 10 ft (3 m) straightedge.
4. Do not subject screeded bedding material to any pedestrian or vehicular traffic before paving unit installation begins.

F. Paver restraining Edge

1. Refer to part entitled “INSTALLATION OF PAVER RESTRAINT EDGING”

G. Permeable interlocking concrete pavers and joint/opening fill material

1. Lay the paving units in the pattern(s) and joint widths as required by the manufacturer to maintain infiltration, and as shown on the shop drawings provided by the subcontractor, as developed according to the contract drawings.
2. Maintain straight pattern lines.
3. Fill gaps at the edges of the paved area with cut units. Cut pavers subject to tire traffic shall be no smaller than 1/3 of a whole unit.
4. Cut pavers and place along the edges with a masonry saw.
5. Fill the openings and joints with No. 9 stone.
6. Remove excess aggregate on the surface by sweeping pavers clean.
7 Compact and seat the pavers into the bedding material using a low-amplitude, 75-90 Hz plate compactor capable of at least 5,000 lbf (22 kN) centrifugal compaction force. This will require at least two passes with the plate compactor.
8. Apply additional aggregate to the openings and joints if needed, filling them completely. Remove excess aggregate by sweeping then compact the pavers. This will require at least two passes with the plate compactor.
9. All pavers within 6 ft (2 m) of the laying face must be left fully compacted at the completion of each day.
10. The final surface tolerance of compacted pavers shall not deviate more than ±3/8 (10 mm) under a 10 ft (3 m) long straightedge.
11. The surface elevation of pavers shall be 1/8 to 1/4 in. (3 to 6 mm) above adjacent drainage inlets, concrete collars or channels.

3.05 FIELD QUALITY CONTROL

A. After sweeping the surface clean, check final elevations for conformance to the drawings.

B. Lippage: No greater than 1/8 in. (3 mm) difference in height between adjacent pavers.

C. The surface of the pavers may be 1/8 to 1/4 in. (3 to 6 mm) above the final elevations after compaction. This helps compensate for possible minor settling normal to pavers.

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D. The surface elevation of pavers shall be 1/8 to 1/4 in. (3 to 6 mm) above adjacent drainage inlets, concrete collars or channels.

E. Bond lines for paver courses: ±½ in. (±15 mm) over a 50 ft (15 m) string line.

3.06 PROTECTION

A. After work in this section is complete, the General Contractor shall be responsible for protecting work from sediment deposition and damage due to subsequent construction activity on the site.

3.07 MEASUREMENT AND PAYMENT

A. The square foot price paid for **"Permeable Concrete Pavers – 12" Maintenance Band"** shall include full compensation for furnishing labor, materials, tools, equipment and incidentals for doing all the work complete in place as shown on the plans, including joint filler, class permeable material, bedding (choker course) material, geotextile, waterstop, and edge restraint as required by these special provisions, and as directed by the Engineer.

END OF SECTION

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10-5.04 Irrigation System (02810)

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. These special provisions are part of the plans and shall include all labor, materials, equipment, reasonable incidentals, and services necessary to the execution of the work.

B. Related Sections: Refer to all other sections, determine the extent and character of related work, and coordinate all work to produce a complete, properly constructed product.

1. Section 02900 “Planting”

1.02 DESCRIPTION

A. Furnish material, labor, and perform all operations in connection with and reasonably incidental to complete installation of the irrigation system as indicated on the drawings as specified and as necessary to complete the work, including but not limited to the following:

1. Trenching, stockpiling, excavation, and backfill of trenches.
2. Directional drilling and or boring for sleeves and or conduit.
3. Connect to existing water meter or meter to be installed by ACWD prior to construction.
4. Furnishing materials and installation for complete system including sprinklers, bubblers, valves, irrigation controllers, radio, receiver, flow sensor, master valve, pipe, fittings, conduit, low voltage wire, electrical service to controller, and all wire splices and connections.
5. All work of every description mentioned in the specification and/or addenda thereto, and all other labor, and materials reasonably incidental to the satisfactory completion of the work, including clean-up of the site, as directed by the Engineer.
6. Tests system to ensure coverage is adequate & the system is in proper working order, including running test on the Calsense controller in the presence of the Calsense representative and Senior Maintenance Representative.
7. Clean-up, inspection and approval.
8. Record drawings and guarantee.

B. 1. Irrigation water stub-out.

2. 120 volt A.C. electrical stub-out to controller location.
3. Irrigation piping in structure.
4. Irrigation sleeves.
5. Electrical conduit in structure for 24 volt wire.

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1.03 GENERAL REQUIREMENTS

A. OSHA Compliance:

B. All articles and services covered by this specification shall meet or exceed the safety standards established under the Federal Occupational Safety and Health Act of 1970, together with all amendments in effect as of the date of this specification.

C. Codes and Standards: Comply with all applicable codes and standards.

1. All work and materials shall be in full accordance with the latest rules and regulations of the National Electric Code; the Uniform Plumbing Code, published by Western Plumbing Officials Association; and other State or local laws or regulations. Nothing in these drawings or specifications is to be construed to permit work not conforming to these codes.

2. When the specifications call for materials or construction of a better quality or larger size than required by the above mentioned rules and regulations, the provision of the specifications shall take precedence over the requirements of the said rules and regulations.

3. The Contractor shall furnish, without any extra charge, any additional material and labor when required by the compliance with these rules and regulations, though the work be not mentioned in these particular specifications or shown on the drawings.

4. The Contractor shall erect and maintain barricades, guards, warning signs and lights as necessary or required by OSHA regulations for the protection of the public or workmen.

5. Any existing buildings, equipment, piping, pipe covering sewers, sidewalks, landscaping, etc., damaged by the Contractor during the course of this work shall be replaced or repaired by the Contractor in a manner satisfactory to Engineer and at Contractor's expense, and before final payment is made. The Contractor shall be responsible for damage caused by leaks in the piping systems being installed or having been installed by him. He shall repair, at his own expense, all damage so caused, in a manner satisfactory to Engineer.

6. The Contractor shall pay for all permits, licenses and fees required.

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1.04 LAYOUT OF WORK

The Contractor shall stake out the irrigation system as shown on the drawings. These areas shall be checked by the Contractor and Architect before construction is started. Any changes, deletions or additions shall be determined at this check.

1.05 INSTRUCTION

After the system has been installed and approved, the Contractor shall instruct the Owner's Representative in complete operation and maintenance of the irrigation system.

1.06 SUBMITTALS

A. Materials List: Within thirty-five (35 days) after award of contract, and before any irrigation system materials are delivered to the job site, submit to the City a complete list of all irrigation system materials proposed to be furnished and installed.

1. Show manufacturer's name and catalog number for each item; furnish complete catalog cuts and technical data; and furnish the manufacturer's recommendations as to method of installation.

2. The manufacturer's recommendations shall become the basis for acceptance or rejection of the work.

3. Do not permit any irrigation system component to be brought into the job site until it has been approved in writing by the City.

B. Record Documents

1. During the course of installation, carefully show in red line on a print of the irrigation system drawings, all changes made to the irrigation system during installation.

2. Upon completion of the irrigation system installation, transfer the as-built data accurately onto reproducibles to the City. Reproducibles shall be either a legible digital scan of the original redline drawing (150 dpi minimum) or shall be a minimum of two (2) color copies of the original redlined 24x36 drawing. The contractor shall submit record documents to the City upon completion of the project. These as-builts may also be defined as reproducibles.

3. Dimension from two permanent points of reference, such as building corners, sidewalks, road intersections or monuments, for the following items:

a. Connection to water source

b. Gate valves

c. Routing of pressurized mainlines and lateral lines

d. Remote control valves

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e. Quick coupling valves

f. Flow sensor

g. Backflow Preventer

h. Other equipment as directed by City

4. Delivery of Record Documents shall not relieve Contractor of the responsibility of furnishing required information that may be omitted from Record Documents.

C. Special Tools: Two sets of special tools required to operate, adjust, dismantle or repair equipment. Include tools not normally found in possession of maintenance personnel.

D. Manuals: Within 10 calendar days of completion of work of this section and as a condition of its acceptance, deliver to the City four (4) individually bound manuals containing the following information:

1. Contractor's name, address, and telephone number
2. Duration of guarantee, periods as specified herein
3. List of equipment with names and addresses of local manufacturer's representatives with duration of written warranties
4. Complete operating and maintenance instructions on all equipment
5. Spare parts lists and related manufacturer's information

E. Controller Charts

1. Record drawings shall be approved by the Inspector before controller charts are prepared.
2. Provide one controller chart for each controller supplied.
3. The chart shall show the area controlled by the automatic controller and shall be the maximum size which the controller door will allow.
4. The chart is to be a reduced drawing of the actual as-built system of a size that will fit into controller door, and that will be readable when reduced.
5. The chart shall be a photocopy and a different color shall be used to indicate the area of coverage for each station. Contractor shall provide City with a mylar reproduction for the City files.
6. When completed and approved, the chart shall be hermetically sealed between two pieces of 10 mil. plastic.
7. These charts shall be completed and approved prior to the final inspection of the irrigation system, and placed in the controller door(s).

1.07 QUALITY ASSURANCE

A. Reference Standards

1. ASTM: American Society for Testing and Materials

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a. D 1785; Standard Specification for polyvinyl chloride (PVC) plastic pipe, Schedule 40

b. D 1785; Standard Specification for polyvinyl chloride (PVC) plastic pipe, Schedule 40, Class 200, Class 315.

c. D2446: Standard Specification for polyvinyl chloride (PVC) plastic pipe fittings, Schedule 40 and Schedule 80

d. D2665: Standard Specification for polyvinyl chloride (PVC) plastic pipe fittings, Schedule 40.

2. NSF: National Sanitation Foundation
3. AWWA: American Water Works Association
4. ANSI: American National Standards Institute

B. Qualifications of Installers: Provide at least one person who shall be present at all times during execution of this portion of the work and who shall be thoroughly familiar with the type of materials being installed and the material manufacturer's recommended methods of installation and who shall direct all work performed under this section.

C. Codes and Standards: In addition to complying with all pertinent codes and regulations, comply with the latest rules of the National Electrical Code and the Electrical Safety Orders of the State of California, Division of Industrial Safety for all electrical work and materials.

D. Standard of Installation: Material and workmanship shall be in accordance with local codes and ordinances of legally constituted authorities, except that where provisions of these specifications exceed such requirements, these Specifications shall govern.

E. Permits, Licenses, and Fees: The Contractor shall secure the required licenses and permits including payments of charges and fees, give required notices to public authorities, verify permits secured or arrangements made by others affecting the work of this section.

F. Final Acceptance: Within 10 days of the Contractor's notification that the installation is complete, the City and required agencies will inspect the installation and, if acceptance is not given, will prepare a "punch list" which, upon completion by the Contractor, another inspection will be made. Final acceptance will not be made until all punch list items have been completed.

1.08 DELIVERY, STORAGE AND HANDLING

A. Protection: Use all means necessary to protect irrigation system materials before, during and after installation and the installed work and materials of all other trades.

B. Replacement: In the event of damage, immediately make all repairs and replacements necessary to the satisfaction of the City and at no additional cost to the City.

1. Exercise care in handling, loading, unloading and storing plastic pipe and fittings under cover until ready to install; Transport plastic pipe only on a

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vehicle with a bed long enough to allow the pipe to lay flat to avoid undue bending and concentrated external load. Protect pipe from sunlight.

2. Repair all dented and damaged pipe by cutting out the dented or damaged section and rejoining with a coupling.

1.09 PROJECT/SITE CONDITIONS

A. Connections to Utilities:

1. Source of water and power supply: The Contractor shall verify and be familiar with the location, size and detail of stub-outs provided at the source of water and PG&E connection point for electrical supply to the irrigation controller, as shown on the plans. Source of water point of connection shall be existing stub-outs at approximate locations as shown on plans. Power shall be supplied from adjacent existing city street light as shown on plans and detail.

2. Existing utilities and conditions: Prior to trenching, the Contractor shall locate all cables, conduits, sewer lines and other utilities and shall take proper precautions not to damage or disturb such improvements. If a conflict exists between such obstacles and the proposed work, the Contractor shall promptly notify the City. Do not proceed until all discrepancies have been resolved.

B. Inspection: The Contractor shall at all times permit the City or his authorized agents to visit and inspect the work or any part thereof. He shall maintain proper facilities and provide safe access for such inspections to all parts of the work. Where the specifications require work to be tested by the Contractor, it shall not be covered up until tested or approved by the City and governing agencies. The Contractor shall be solely responsible for notifying the City and required agency (48 hours notice required), where and when such work is in readiness for testing. Should any such work be covered without such test or approval, it shall, if so ordered, be uncovered at the Contractor's expense.

C. Completion: The work will be accepted in writing when the entire Scope of Work shall have been completed satisfactorily to the City. In judging the work, no allowance for deviation from the original plans and specifications will be made unless previously approved in writing by the Engineer. The City or authorized representative shall have final authority on all items of the project.

D. Loose Equipment to Furnish: Loose sprinkling equipment, operating keys and spare parts shall be furnished to the City by the Contractor as shown on the plans.

1.10 GUARANTEE

A. The entire irrigation system shall be unconditionally guaranteed by the Contractor as to material and workmanship (including settlement of backfill) for a period of one year following the date of final acceptance of work.

1. If within one year from the date of completion, settlement occurs and adjustments in pipes, valves, sprinkler heads, and bubblers, or paving is

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necessary to bring the system or paving to the proper level of the permanent grades, the Contractor, as part of the work under his contract, shall make all adjustments without extra cost to the City, including the complete restoration of all damaged planting, paving or other improvements of any kind.

B. Should any operational difficulties in connection with the sprinkler system develop within the one year guarantee period which in the opinion of the City is due to inferior material or workmanship, said difficulties shall be immediately repaired at no additional cost to City, including any and all other damage caused by such defects.

C. Service by the Contractor: The Contractor shall service the system at the City's request during the guarantee period and shall be paid for work performed which is not covered by the guarantee. If requested by the City, the Contractor will furnish the City with a schedule of service fees.

D. The City reserves the right to make temporary repairs as required.

PART 2 - MATERIALS

2.01 PIPE AND FITTINGS

A. PVC Pressure Mainline (constant pressure) pipe and fittings

1. 2” and smaller: 1120 schedule 40 PVC plastic pipe with Schedule 40 PVC solvent weld fittings at changes in direction or branch mains, use appropriate Schedule 40 PVC solvent weld fittings as approved by the Uniform Plumbing Code.
2. Pipe shall be made from an NSF approved Type 1, Grade 1 PVC with a cell classification of 12454 per ASTM D1784
3. PVC fittings shall be PVC Type II, Schedule 40 NSF approved.
4. Schedule 40 pipe shall be manufactured in strict compliance to ASTM D1785 and D2665 (where applicable), consistently meeting and/or exceeding the Quality Assurance test requirements of these standards with regard to material, workmanship, burst pressure, flattening, and extrusion quality.
5. All PVC pipe shall bear the following markings:
   a. Manufacturer’s name
   b. Nominal pipe size
   c. Class or Schedule
   d. Pressure rating in PSI
   e. NSF
   f. Date of extrusion
6. All fittings shall bear the manufacturer’s name or trademark, material designation, size, applicable I.P.D. schedule and NSF Seal of approval.

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7. Inside diameter of pipe shall be the same size as iron pipe.
8. PVC Type I shall not be threaded.
9. Caution shall be utilized in handling Type I pipe due to the possibility of cracking or splitting.
10. When connection is plastic to metal, male adapters shall be used unless otherwise noted or detailed. The Male adapter shall be hand tightened, plus one turn with a strap wrench. Joint compound shall be non-lead base (Teflon paste or equal). Teflon tape may be substituted.
11. Threaded Nipples – ASTM D2464, Schedule 80 with molded threads.
12. No plowing/pulling of mainline accepted.
13. Refer to "trenching and backfilling" elsewhere in this section for minimum depths.

B. PVC Non-pressure lateral line and fittings

1. Class 200 PVC, Solvent-weld belled end for 1-1/4" and greater.
2. Sch 40 PVC for lines 1" and smaller
3. Manufactured from virgin polyvinyl chloride (PVC) compound in accordance with ASTM D2241 and ASTM D1784; cell classification 12245-B, Type 1, Grade 1.
4. Fittings – Standard weight, Schedule 40, injection molded PVC; complying with ASTM D1784 and D2466, cell classification 12454-B.
5. Tees and ells – Side gated.
6. Threaded Nipples – Injection molded type (where required) per ASTM D2464, Schedule 80 with molded threads.
7. Refer to "trenching and backfilling" elsewhere in these specifications for minimum depths.

C. Solvent for all PVC pipe shall be #711 Gray, along with #P-70 primer, NSF approved as manufactured by Industrial Polychemical Service, Gardena, California, or approved equal.

D. Electrical conduit shall be grey Schedule 40 PVC.

2.02 SLEEVING AND CONDUIT

A. Sleeve below all hardscape elements with class 315 PVC twice the diameter of the pipe or wire bundle within, or as delineated on the plans.

B. Burial depths for open cut sleeves below finished grade are as follows:

1. 30 inch minimum under thoroughfare
2. 24 inch minimum under planter area
3. 24 inch minimum under parking lot
4. 18 inch minimum under sidewalk

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5. 36 inch minimum under traffic circles (residential areas)

C. Minimum bore depths beneath City pavement. The following are minimum bore depths required for Guided or Directional Bore Methods of installing conduit or sleeving beneath the pavement to minimize displacement of surface improvements and adjacent utilities.

Individual Conduit or Cluster Size	**Minimum Bore Depth**
2 inches	4 feet minimum or greater on thoroughfares. 3 feet minimum or greater for residential streets.
3 inches	4 feet minimum or greater
4 inches	5 feet minimum or greater
6 inches	7 feet minimum or greater
8 inches	10 feet minimum or greater

D. The City Engineer may grant exceptions to the minimum bore depths referenced above should a soils report be obtained from a Geotechnical Engineer stating that soil conditions are optimal for allowing shallower depth to install conduit.

E. Note that the Jack and Bore Method of installing conduit follows the minimum bore depths of 42 inches on thoroughfares and 36 inches on residential streets, disregarding conduit size.

F. Under Hardscape Crossings: Sleeves shall extend a minimum of 24 inches beyond all sidewalk edges, or shall extend 24" beyond the back edge of the curb and 24 inches into all tree wells on any side, where noted on the plans.

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2.03 PVC FLEXIBLE PIPE

A. Extruded from flexible vinyl chloride compound:

1. ½ inch pipe: 0.50 inch inside diameter, 0.090 inch wall thickness
2. Material shall conform to ASTM designation D-2287.

2.04 VALVES

A. Quick Coupling Valve:

1. Quick coupling valves shall be 1-inch, two-piece winged, single slot valves. Wings shall stabilize the valve and prevent it from rotating in the ground. Each valve shall have a molded vinyl locking cover. Quick Coupling Valve HQ-44-LRC-AW, by Hunter, or approved equal.

2. Upon completion of the Contract and prior to final acceptance, the Contractor shall supply the City with coupler keys and hose ells in the quantity called for on the plans. The coupler keys and hose ells shall be of the same manufacturer as the coupling valve.

B. Remote Control Valves: Valves shall be of the manufacturer shown on the Drawings, Griswold 2230 Series, or approved equal. PVC ball valve shall be in-line upstream, and sized per the line size. Remote control valves shall be size shown on plans and as follows:

1. Cast iron bodied with replaceable, non-ferrous, metallic valve seats
2. Normally closed globe (straight) valves
3. Solenoid shall be designed for operation on a 24-volt, AC circuit.
4. Remote Control Valves to be equipped with a union fitting on the discharge side of the valve.

C. Ball valves (PVC): For use in-line with remote control valves. Shall be low torque for ease of operation, precision molded micro-finish, ball seats are self-adjusting HMW-HDPE to compensate for wear, “pre-loaded” stem seal for longer life, EPDM stem seal and O-rings, valve made of HI-IMPACT Type I PVC material, Schedule 80 material, meeting ASTM standards and NSF listed. WLT Series by KBI, or approved equal.

2.05 MASTER VALVE

A. Master valve shall be Griswold Model 2160, normally open remote control valve.

B. Cast iron bodied with replaceable, non-ferrous, metallic valve seats

C. Normally closed globe (straight) valves

D. Solenoid shall be designed for operation on a 24-volt, AC circuit.

E. Remote Control Valves to be equipped with a union fitting on the discharge side of the valve.

2.06 VALVE BOXES FOR VALVES AND FLOW SENSOR

A. In Landscaping: All remote control valve, quick coupler valves, and gate valves shall be installed in plastic valve boxes as shown in details. All shall be Carson, or approved equal and shall be marked “Irrigation” with station numbers for control valves stenciled in white on valve box cover.

1. Color: Green in ground cover areas.
2. Round valve box: Carson 910, lockable
3. Rectangle valve box: Carson 1324, lockable

B. In Concrete: For all laterals, mainline, and sleeves, where the systems is capped for future expansion, and terminates under concrete sidewalk, the capped ends shall be covered with a concrete utility box, with lockable cover. Utility boxes shall be Carson H1324, Christy B16, or approved equal. All

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boxes shall be extended for a depth to pipe of 24” to expose the lateral. All boxes shall be marked “Irrigation” stenciled in white on utility box cover.

2.07 FLOW SENSOR

A. Flow meter/sensor shall be Calsense Model FM-1B-1.5”

2.08 IRRIGATION CONTROLS

A. Automatic Controller: Automatic controller shall be a Calsense ET 3000e series in a metal pedestal enclosure, as indicated on the drawings and within these specifications

B. Controller: ET-3000e-8-LR-RRe-SSe-R AND ET-3000e-24-LR-RRe-SSe-R

C. Each pilot or “hot” wire shall be a different color with the common wire being white. Install one additional pilot wire and one additional common wire of a different color along entire length of mainline unless otherwise noted on plan. Pump relay wire when required, shall be red in color. Field splices between the controller and electric valves are not permitted except in authorized pull-boxes as noted on plan.

D. Connection to existing 120V electrical supply to be made by a licensed electrical contractor. Refer to drawings for location. Contractor shall verify location and that existing electrical supply is functioning prior to connection.

E. Controller shall be installed in controller cabinet, type and size as shown on the drawings.

2.09 BOXES FOR ELECTRICAL

A. In Landscape areas: Carson Model 1419 plastic box with plastic lid. Lid shall be marked “Electrical”. Color: Grey.

B. In concrete: Utility boxes shall be Carson Model H1324, Christy B16, or approved equal. All boxes shall have lockable covers.

2.10 ELECTRICAL WIRE

A. Irrigation Low Voltage Control Wire: All wiring to be used for connecting the automatic controller to the electric solenoid actuated remote control valve shall be Type UF-600V, 7 strand or solid copper, PVC insulation, single conductor, UL approved underground feeder cable, approved for direct burial.

B. All Low voltage control wire and communication wire shall be housed in dedicated 1” PVC conduit. Include 1 extra control wire for future expansion.

C. Common ground wire: Size #12-1 wire with a white insulating jacket.

D. Control wire servicing remote control valves: Size #14-1 wire with insulating jacket of color other than white.

E. Wire servicing master valve and flow sensor shall be housed in a dedicated electrical conduit separate from all other valve control wiring.

F. Wire servicing flow sensor: Size #14-1 THWN for use in electrical conduit.

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G. Wire servicing master valve: Size #12-1 THWN for use in electrical conduit.

H. Splices shall be weather-proofed by using Scotchlok Y-Spring connectors, Spears Model DS-100 connectors and DS-300 sealant, or approved equal.

I. Pull rope with tracer wire to be included for all conduit.

2.11 BACKFLOW PREVENTION UNITS:

A. Backflow prevention, where required for the potable water system, shall be of size and type as indicated on the drawings (Febco 825YA Reduced Pressure Assembly). All backflow prevention units shall be installed in accordance with the requirements set forth by local codes.

B. Backflow prevention unit shall be installed in a BPU cage of size and type indicated on the drawings (Guard Shack™ enclosures, Color: powdercoat black).

2.12 TREE AND SHRUB BUBBLER

A. Bubbler shall be Toro 570 Pressure Compensation Stream Bubbler Nozzles, SB-90-PC2, with the following ranges: PSI 30-50, 0.21-0.23 (Shrub) GPM, 1.5' radius or PSI 30-50,0.46-0.50 (Tree) GPM, 1.5' radius.

B. Bubbler shall be capable of being attached to the above-described sprinkler body.

C. All heads of a particular type of function in the system shall be of the same manufacturer and shall be marked with the manufacturer's name and identification in such a position that they can be identified without being removed from the system.

2.13 GATE VALVES

A. Gate valves shall be Nibco T-113-IRR, threaded, with malleable iron handwheel (ASTM A47), bronze body (ASTM B62).

2.14 BALL VALVES

A. Ball valves (Brass): For use in-line with the master valve and flow sensor. Shall be two-piece forged brass body (ASTM B283 Alloy C37700), full port, blowout-proof stem, TFE seats, steel plated handle and nut, brass pack gland (ASTM B16) Virgin PTFE packing stem, 430 stainless flat washer fluorocarbon O-ring, reinforced PTFE thrust washer brass stem, Virgin PTFE packing seat ring, Brass ball with chrome plate(ASTM B16 Alloy C36000), and forged brass end piece (ASTM B283 Alloy C37700). Nibco T-FP-600, or approved equal.

2.15 OTHER MATERIALS

All other materials not specifically described but required for a complete and proper irrigation system installation shall be new, first-quality of the respective kinds, and subject to the approval of the City.

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PART 3 - EXECUTION

3.01 SURFACE CONDITIONS

A. Inspection

1. Prior to all work in this section, carefully inspect the installed work of all other trades and verify that all such work is complete to the point where this installation may properly commence.
2. Verify that irrigation system may be installed in strict accordance with all pertinent codes and regulations, the original design, the referenced standards and the manufacturer's recommendations.

B. Discrepancies

1. In the event of discrepancy, immediately notify the City or his authorized representative.
2. Do not proceed with installation in areas of discrepancy until all such discrepancies have been fully resolved.

C. Preservation and Cleaning: The Contractor shall clean up the work as it progresses. At frequent intervals, and at all times when directed by the City, the Contractor shall remove and dispose of accumulations of rubbish and debris of all kinds. At the time of completion, the entire site shall be cleared of tools, equipment, rubbish, etc., all of which shall be removed from the site; and the entire project, including surrounding premises, shall be left in proper, clean condition ready for acceptance.

D. Excavation around existing trees: Where it is necessary to excavate adjacent to existing trees, use caution to avoid injury to trees and tree roots. Excavate by hand in areas where two (2) inch and larger roots occur. Paint roots one (1) inch and larger in diameter with two coats of tree seal, or equal. Backfill trenches adjacent to tree within twenty-four (24) hours. Where this is not possible, shade the side of the trench adjacent to the tree with wet burlap or canvas.

3.02 FIELD MEASUREMENTS

The irrigation plans are diagrammatic. Make all necessary measurements in the field to ensure precise fit of items in accordance with the dimensions required in the plans, details, and these specifications.

3.03 COORDINATION OF CALSENSE EQUIPMENT AND CONTROLLER INSPECTION

A. Coordinate delivery and installation of all irrigation equipment with site work. Prior to beginning site work coordinate with Jennifer Gregorius of “Calsense” @ (925) 325-9368 to confirm installation requirements for this particular project. A pre-construction meeting will be conducted at the City to confirm manufacture requirements and procedures in regards to the installation of all “Calsense” equipment.

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B. Prior to beginning site work the Contractor shall notify the Project Landscape Architect if any equipment is unavailable or on back order immediately.

C. The Contractor shall coordinate with Calsense representative to provide inspections of all installed Calsense equipment prior to requesting city inspection. The contractor shall allow sufficient time after field installation (minimum 5 working days) for Calsense representative to install software and test all installed components prior to the completion of the allotted working days for the contract. Contractor shall make corrections as required by the Calsense representative. Once corrections are made Contractor shall provide Project Landscape Architect with written certification from Calsense representative that all equipment is installed and functioning correctly prior to Final City Inspection.

D. Correctly functioning equipment shall be defined as operating correctly on site, both manually and by radio remote, and all radio frequencies in the local controller shall be linked, coordinated, and communicating clearly with the central computer located at the Corporation Yard. If the central computer cannot communicate with the local controller, the installation will neither be accepted by the Calsense Representative nor the City.

3.04 TRENCHING AND BACKFILLING

A. Trenching

1. Excavation shall be open vertical construction sufficiently wide to provide free working space around the work installed and to provide ample space for backfilling and compacting.

2. Depth of trenches shall be sufficient to provide a minimum cover above the top of the pipe.

3. When two or more pipes are to be placed in the same trench, maintain a six-inch space between pipes as minimum. No pipe shall be installed directly over another.

4. Maintain 3” clearance from the edge of the trench to the outside edge of the pipe.

B. Backfilling:

1. Mainline and laterals shall be placed on a 2” deep sand bed and have a minimum of 6” sand cover in planting, pavement, and hardscape areas.

2. The remaining cover in pavement and hardscape areas shall be City Standard Trench Backfill.

3. City Standard trench backfill shall be used to the intersection of the pavement, hardscape, or curb and gutter, with the planting area, and extend under the curb and gutter.

4. The remaining cover in landscaped areas shall be native material or approved soil to finished grade.

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5. Unsuitable material, including clods and rocks over 2-1/2 inches in size shall be removed from the premises by Contractor and disposed of legally at no cost to the City.
6. All backfilling shall be properly compacted so as to avoid future settlement.
7. Surplus earth remaining after backfilling shall be disposed of on the premises as directed by the City.

3.05 INSTALLATION OF PIPING

A. General: Layout of the piping system shall be per the drawings and to the depth specified above.

B. Under Existing Pavement:

1. Piping under existing pavement may be installed by jacking, boring or hydraulic driving, except that no hydraulic driving will be permitted under asphaltic concrete pavement.

C. Inspection of Pipe and Fittings: Carefully inspect all pipe fittings before installation, removing all dirt, scale and burrs; ream as required. Install all pipe with all markings up for visual inspection and verification.

D. PVC Pipe

1. PVC pipe shall be installed in a manner which will provide for expansion and contraction as recommended by the pipe manufacturer. Pipe routing is diagrammatic and shall be installed in such a manner as to conform with the details.
2. In joining, use only the specified solvent and make all joints in strict accordance with the manufacturer's recommended methods. Give solvent welds at least 16 minutes set-up time before moving or handling and 24 hours curing time before filling with water.
3. For plastic-to-steel connections, work the steel connections first; use a non-hardening non-lead base pipe dope on all threaded plastic-to-steel connections and use only light wrench pressure. All plastic-to-steel connections shall be made with plastic male adapters. Provide each assembly with its own outlet from the irrigation main (no multiple assemblies).

3.06 INSTALLATION OF EQUIPMENT

A. Automatic Controller Location and Installation:

1. The controller location is essentially diagrammatic and shall be specifically located by the Project Landscape Architect.
2. All local and applicable codes shall take precedence in the furnishing and/or connecting of 120 volt electrical service to the controller.

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3. Adequate coverage (18" min.) of the 24 volt service wires leading from the controller shall be installed from the bottom of the controller to trenches.
4. Install automatic irrigation controller and PCA in irrigation controller cabinet size, type and location as noted on the plans.
5. Connect control lines to controller in sequential arrangement according to assigned identification number of valve. Control lines shall be labeled at controller with permanent non-fading labels indicating identification number of valve controlled.

B. Control Wires:

1. Install master valve & flow sensor wire in dedicated PVC electrical conduit with pull/splice boxes located in the landscaping areas, or per the details.
2. Install all other control wires in a separate, dedicated PVC conduit.
3. All electrical equipment and wiring shall comply with local and state codes and be installed by personnel skilled and licensed in the trade. Low voltage control wires may be installed by the sprinkler irrigation Contractor when code allows.
4. Connecting and splicing of wire at the valves shall be made using approved materials. No other splices will be allowed. All such splices shall be placed within a valve box. Leave a 36” long coil, 1” in diameter at each splice and a 36” long expansion loop every 100 feet along the wire run.
5. If control wire conduit runs are to exceed 300 linear feet, add a pull box at 300 foot intervals.
6. Connections shall be made by crimping bare wires with brass connectors and sealing with watertight resin sealer packs
7. Install a minimum of one (1) spare control wire of a different color along the entire main line. Loop 36” of excess wire into each valve box.

C. Electrical Work: All electrical work shall be installed per local code requirements.

D. Master Valves / Flow Sensor:

1. Execute extreme care to keep debris from entering the main line when “cutting in” master valves and flow sensor.
2. Thoroughly flush main line before installing valves

E. Quick Coupling Valves: Quick coupling valves shall be set approximately 12 inches from walks, curbs, headerboards or paved areas where applicable per detail drawings.

F. Valve boxes:

1. Set approximately 6 inches from walks, curbs, headerboards or paved areas where applicable per detail drawings.

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2. Set boxes 2” above finished grade in groundcover area, or flush if located in hardscape surfacing.
3. Where more than one box occurs, position all boxes in an orderly arrangement and maintain 6” between boxes and position narrow side of box parallel to hardscape.
4. See Attachment D herein these specifications.

G. Backflow Prevention Unit: Backflow Prevention Unit shall be installed in accordance with the drawings and the requirements of all applicable codes.

H. Bubblers: Flush and adjust irrigation outlets, bubblers, and nozzles for optimum performance and to prevent overspray onto field, walks, roadways, and /or buildings as much as possible. This shall include selecting the best throttle of the flow control at each valve to obtain the optimum operating pressure for each control zone.

3.07 FIELD QUALITY CONTROL

A. General

1. Furnish all necessary testing equipment and personnel.
2. Correct all leaks and retest until acceptance by the City.

B. Closing uninspected work: Do not allow or cause any of the work of this section to be covered up or enclosed until it has been inspected, tested and approved by the City and other authorized agencies.

C. Flushing: Before backfilling the main line, and with all control valves in place but before lateral pipes are connected, completely flush and test the main line and repair all leaks. Flush out each section of lateral pipe before sprinkler heads are attached.

D. Testing

1. Thoroughly bleed the line of air and debris.
2. Before testing, fill the line with water for a period of least 24 hours.
3. After valves have been installed, test all live water lines for leaks at a pressure of 150 psi for a period of two hours, with all couplings exposed and with all pipe sections center loaded. The Engineer must be notified of pressure test no less than 48 hours in advance. Main line trenches must not be backfilled, except for center loading to prevent arching or slipping under pressure, prior to the Engineer's approving pressure test. Fittings must not be covered by backfill during test.
4. Remote control valves shall be adjusted so that the most remote sprinkler heads operate at the pressure recommended by the head manufacturer. Remote control valves shall be adjusted so a uniform distribution of water is applied by the sprinkler heads to the planting areas for each individual valve system.

E. Final Inspection

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1. Thoroughly clean, adjust and balance all systems.
2. Demonstrate the entire system to the City and/or, if required, authorized agent and other governing agencies providing that all remote control valves are properly balanced, that all heads are properly adjusted for radius and arc of coverage, and that the installed system is workable, clean and sufficient.
3. Work beyond this point (Irrigation) may not proceed until said final inspection is completed.

3.08 MEASUREMENT AND PAYMENT

A. The contract unit price paid per each for **"Irrigation Controller-CalSense e3000," "Flow Sensor," "Master Valve," "Tree Bubblers"** and **"Shrub Bubblers," "Remote Control Irrigation Valves with Box and Wire," "Gate Valves," "Backflow Preventer and Enclosure,"** and **"Quick Coupling Valves,"** shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work covered in this section, including "Trenching and Backfilling", complete in place as shown on the plans, as required by these Special Provisions, and as directed by the Project Landscape Architect.

B. The contract unit price paid per linear foot for **"1.5" Mainline Pipe,"** and **"6" Irrigation Sleeves,"** shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work covered in this section, including "Trenching and Backfilling", complete in place as shown on the plans, as required by these Special Provisions, and as directed by the Project Landscape Architect.

C. The linear foot unit price final pay quantity of **"Lateral Pipe (F)**" shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work involved, including "Trenching and Backfilling", complete in place as shown on the plans, as required by these Special Provisions, and as directed by the City Engineer or his designee. Quantities of grading will not be measured. The quantities shown on the Engineer's Estimate for "Lateral Pipe," shall be the final pay quantity for which payment is made as specified in Section 8.2 and 8.8, "Final Payment" of the General Conditions and no additional payment shall be made therefore.

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END OF SECTION

10-5.05 PLANTING AND ORNAMENTAL BOULDERS (02900)

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. These special provisions are part of the plans and shall include all labor, materials, equipment, reasonable incidental, and services necessary to the execution of the work.

B. Refer to all other sections, determine the extent and character of related work, and coordinate all work to produce a complete, properly constructed product.

C. This section is complete in its entirety and is not supplemental to the standard specifications for Caltrans except where specifically noted.

1.02 RELATED SECTIONS

A. Section 01530 —Tree Removal, Tree Pruning, and Root Trimming

B. Section 01535 —Tree Protection

C. Section 02810 —Irrigation

D. Caltrans Standard Specifications, Section 26, “Aggregate Base”

1.03 DESCRIPTION OF WORK

Provide labor, materials, and equipment necessary for completion of landscape planting as shown on the drawings and specified herein.

1.04 SUBMITTALS

A. Submit the following items, and other items as may be required by the Project Landscape Architect, and obtain written approval prior to delivery of materials to the site. Finished work shall match approved samples.

1. Fertilizers, Organic Compost and Soil Conditioners: Including one-half pound (½) each of organic compost, sawdust, bark, sand, peat moss, controlled release fertilizer, bone meal, Dolomite Lime and two (2) each of controlled release fertilizer tablets.

2. Materials for tree staking. Include one each of tree ties and a 12” length section of the tree staking material.

3. Soil Testing Report(s).

4. Topsoil: 1/2 pound sample with soil analysis certificate.

5. Plant ordering certificates: Show quantities, sizes (caliper and head, and container), and source.

6. Bark Mulch: Specification sheet and 1/2 pound sample of mulch.

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B. Product Data: Manufacturer's specifications, catalog cuts, data sheets, and installation instructions.

C. Certification

1. Furnish the Project Landscape Architect with: Duplicate, legible copies of certificates and/or invoices for all soil, fertilizer, soil conditioners, plants, and other materials, stating the grade, weight or quantity, source, and date of delivery.

D. Plant Sources: Submit name and address of proposed suppliers of plant materials to City within 28 days of notice to proceed. List plants to be obtained from each source. For any plant found to be unattainable, show suggested substitute species or size, with source. Obtain City's acceptance of sources and/or substitutions.

1. Ordering of Plants: Submit documentation, within 20 days following acceptance of nursery sources, that plant material has been ordered. Indicate size of plant, container size and quantity of each on order form. Instruct nursery to label each plant with botanical name.

E. Test Reports for Topsoil: Provide material samples directly to testing laboratory. Recommended Testing Lab: Soil and Plant Laboratory, 352 Matthew Street, Santa Clara, CA 95052-0153 (408) 727-0330. Test results, including analysis and comment with any soil amendment recommendations to be specified using organic compost amendments, are to be sent directly to Project Landscape Architect and general contractor by testing agency. Tests to be performed:

1. Import Topsoil: Submit test reports of representative sample prior to delivery and for every 100 cubic yards (or 75 cubic meters) delivered to the site. Test AO5, for agricultural suitability, fertility, particle size analysis; including recommendations for soil amendments specified as organic amendments, and organic fertilization during Maintenance Period. Test results must be approved by the Landscape Architect prior to delivery of soil to the site. As a minimum requirement samples are to be taken 12” below finish grade and delivered in separated sealed containers uniquely labeled identifying their locations on the site. Samples must be collected in clean containers and must not be mixed.

2. All Other Fertilizers and Amendments: For standard products, submit manufacturer’s analysis. For all other products, submit analysis by testing Laboratory. Specify amendments using organic amendments.

3. Submit test results for site soil, import soil and organic amendment together, as a package.

1.05 PRODUCT HANDLING

A. Plant Materials

1. Quantities: Plant materials shall be delivered in quantities required to complete work as indicated on the Drawings and shall be of species, kinds, sizes, etc., specified.

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2. Labels: Plants shall be labeled prior to delivery to site, with correct botanical names, using durable, legible labels. Plants not labeled by nursery of origin shall not be accepted. Keep plants of different species and varieties separated at site.

3. Protection: Plants shall be handled and stored so that they are protected from drying out, wind burn, or other injury. Any plant damaged by improper handling or neglect may be rejected whether in the ground or not. All plants shall be handled solely by their containers. The Contractor's on-site plant storage area shall be subject to approval by the Project Landscape Architect.

4. Inspection

   a. Right of inspection for approval or rejection is reserved at the place of growth and/or on the Project site at any time upon delivery or during the work. Plants shall be inspected for size, variety, condition, defects or injury.

   b. All plant materials requiring inspection by the City shall be assembled and available for inspection on the site.

   c. If the Project Landscape Architect is required to make additional inspections at the place of growth due to failure of the Contractor to assemble the required plant materials or rejection of plant materials, the Project Landscape Architect's time and expense shall be reimbursed by the Contractor.

B. Materials for Planting Operations: Manufactured materials shall be delivered in original containers with brand and maker's name marked thereon. Materials in broken containers or showing evidence of damage will be rejected and must be immediately removed from the site. Odorous materials shall not be brought to the site until they are to be used.

1.06 PROJECT CONDITIONS

A. Existing Conditions:

1. General: Exercise caution against injury to, or defacement of, existing conditions. At Contractor's expense, repair or replace items damaged from installation operations.

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PART 2 - PRODUCTS

2.01 GENERAL

All products shall be in conformance with the specifications listed below. Any changes to products to be used shall be approved, in writing, by the Project Landscape Architect prior to job site delivery.

2.02 PLANT MATERIALS

A. Nomenclature: Plant names specified on the drawings shall conform with those in The Sunset Western Garden Book, latest edition, published by Lane Publishing Company.

B. Quality

1. Plants shall conform with American Association of Nurserymen Standards, ANSI Z60, in all ways.
2. Plants shall be symmetrical and typical for variety and species.
3. Plants shall be sound, healthy, vigorous, and free from plant disease and insect pests or their eggs.
4. Container stock shall be grown for 9 months minimum in containers in which delivered. Container plants with cracked or broken balls of earth when taken from containers may be planted only with specific approval of the Project Landscape Architect.
5. Root systems shall be healthy, with no circling or girdling at any stage of production. Roots shall be evenly and completely spread throughout the container to bottom and sides. Young white roots shall be evident at edges of container, without overgrowing and forming a solid mat of roots at bottom or edges.
6. Plants shall not be pruned prior to delivery, except as authorized by the Landscape Architect.
7. Protect plants in transit and after delivery to the Project site. Plants in broken containers and plants with broken branches or injured trunks will be rejected. Remove rejected material from the site immediately.
8. Furnish all certificates of inspection that are required by county or state authorities.
9. Substitutions will be allowed only when specified material is proved unavailable, and only with approval of the Landscape Architect. Secure the availability of materials as early in the project process as possible. Proposals will be considered for use of nearest equivalent size and variety with equitable adjustment to the Contract price.

C. Dimensions: Height and spread of specimen plant materials are specified on the drawings. All measurements shall be made with material in a normal position without support of the branches. Plants specified by container size only shall be equal to similar plants in local retail nurseries.

2.03 ORGANIC COMPOST SOIL AMENDMENT, SOIL CONDITIONERS, MULCHES, AND FERTILIZERS

A. General: The following soil additives may be required in various quantities by the Soils Testing Laboratory and the Landscape Architect to bring soil to an acceptable condition to promote vigorous and healthy plant growth. The

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addition of these and other industry standard amendments shall be at the expense of the contractor.

B. Compost shall be a well decomposed, stable, weed free organic matter source. The product shall be certified through the US Composting Council's (USCC) Seal of Testing Assurance Program (STA) Program. It shall be derived from agricultural or food waste or yard trimmings. The product shall contain no substances toxic to plants, will possess no objectionable odors and shall not resemble the feedstock (the original materials) from which it was derived.

C. Before delivery of the compost, the supplier will submit a copy of lab analysis performed by a laboratory that is enrolled in the US Composting Council's CAP and using the approved Test Methods for the Evaluation of Composting and Compost (TMECC). The lab report shall verify:

1. Feedstock Materials shall be specified and include one or more of the following: landscape/yard trimmings, grass clippings, food scraps, and agricultural crop residues.
2. Organic Matter Content: 50% - 60% by dry wt. preferred, 35-70% acceptable
3. Carbon and Nitrogen Ratio: C:N < 25:1 plus at least one measure of stability and at least one measure of toxicity.
4. Maturity/Stability: shall have a dark brown color and a soil-like odor. Compost exhibiting a sour or putrid smell, containing recognizable grass or leaves, or is hot (120F) upon delivery or rewetting is not acceptable. In addition any one of the following is required to indicate stability.
5. Toxicity: any one of the following measures is sufficient to indicate non-toxicity.
   a. NH4- : NO3-N < 3
   b. Ammonium < 500 ppm, dry basis
   c. Seed Germination > 80 % of control
   d. Plant Trials > 80% of control
   e. Solvita® > 5 Index value
6. Nutrient Content: provide analysis detailing nutrient content including N-P-K, Ca, Na, Mg, S, and B.
   a. Total Nitrogen content 0.9% or above preferred.
   b. Boron: Total shall be <80 ppm; Soluble shall be <2.5 ppm
7. Salinity: Must be reported; may vary but < 4.0 mmhos/cm preferred. Soil should also be tested: <2.5 mmhos/cm is preferred for soil/compost blend but may vary with plant species.
8. pH: pH shall be between 6.5 and 8. May vary with plant species.
9. Particle size: 95% passing a 1/2" screen.

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10. Bulk density: shall be between 500 and 1100 dry lbs/cubic yard
11. Moisture Content shall be between 35% - 55% of dry solids.
12. Inerts: compost shall be relatively free of inert ingredients, including glass, plastic and paper, < 0.1 % by weight or volume.
13. Weed seed/pathogen destruction: provide proof of process to further reduce pathogens (PFRP). For example, turned windrows must reach min. 55C for 15 days with at least 5 turnings during that period.
14. Select Pathogens: Salmonella <3 MPN/4grams of TS, or Coliform Bacteria <10000 MPN/gram.
15. Trace Contaminants Metals (Lead, Mercury, Etc.) Product must meet US EPA, 40 CFR 503 regulations.

D. Nitrolized Redwood or Fir Sawdust:

1. 100% Redwood or Fir sawdust; shavings not allowed.
2. Particle size:
   a. Minimum 95% passing 4 mesh screen (1/4")
   b. Minimum 80% passing 8 mesh screen (1/8")
   c. 0-30% passing 35 mesh screen (500 Micron)
3. Salinity: Maximum 3.5 millimhos per centimeter at 25°C as measured by saturation extract conductivity.
4. Iron: Minimum .08 percent dilute acid-soluble iron (Fe) on dry weight basis.
5. Nitrogen: .4-6 percent on a dry weight basis.

E. Controlled Released Fertilizer Packets: 20-10-5 (N-P-K) in a biodegradable packet, and shall contain POLYON® coated fertilizers; contains an expanded minor and secondary element package; contains a significant amount of kelp based organic matter to promote soil biology. Best PAKS 20-10-5, by Simplot Professional Products, P.O. Box 198, Lathrop, CA 95330, 800-992-6066, or approved equal:

TOTAL NITROGEN	20.00%
4.10% Ammoniacal Nitrogen	
1.90% Nitrate Nitrogen	
14.00% Urea Nitrogen	
AVAILABLE PHOSPHATE	10.00%
SOLUBLE POTASH	5.00%
Calcium	2.00%
Magnesium	2.00%
Sulfur	3.00%
Copper	0.25%
Iron	0.90%
Manganese	0.25%
Molybdenum	0.002%

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Zinc	0.150%

E. Ammonium Sulfate: 21-0-0 (N-P-K). As required by soils report and directed by the Project Landscape Architect.

F. Single Superphosphate: 0-25-0 (N-P-K). As required by soils report and directed by the Project Landscape Architect.

G. Bark for Mulching: Refer to Section 10-4.02, 2.04 Tree Bark Mulch.

2.04 IMPORT TOPSOIL

A. General (All planting areas): Soil in all planting areas shall be free of rocks over one inch in diameter, subsoil, refuse, plants or roots, clods, weeds, viable weed seeds, sticks, solvents, petroleum products, concrete, base rock, or other harmful substances.

B. Topsoil: Topsoil has been imported as "Clean Fill" under section 10.1.26 of these specifications. All topsoil will be tested and then approved by the Landscape Architect prior to placement or delivery to the site.

1. Topsoil shall consist of a friable, sandy loam soil, free from noxious weeds or grasses, refuse, heavy roots, stones larger than one inch in size, and other deleterious substances.

a. Agricultural Suitability:

Salinity (ECe, mmhos/cm at 25°C):	0-4.0
Sodium (SAR):	0-4.0
Boron (PPM in Saturated Extract):	0-0.7
pH of saturated paste:	5.5-7.5

b.

Particle Size:	Minimum	Maximum
Clay and Silt	20 percent	50 percent
Fine Sand	30 percent	40 percent
Coarse Sand	0 percent	15 percent
Gravel (Maximum Aggregate size 3/4")	0 percent	8 percent
Decomposed Organic Matter	0 percent	15 percent

2. Should the samples not meet all of the standards given above, the Testing Laboratory will submit in the report what additives (in addition to the material already called for in these specifications) are to be incorporated to correct these problems. All topsoil will be brought into conformance with these specifications and the recommendations of the Testing Laboratory at no additional cost to the city.

C. Subgrade: Subgrade has been established under a different section.

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2.05 SHRUBS AND TREES

A. Refer to Planting and Site Furnishings Plan, Sheet LD11

2.06 PLANT SUPPORTS

A. Tree Stakes: Lodgepole Pine tree stakes, untreated; chamfered top, pointed bottom. 2" diameter, length as shown on detail.

B. Ties: Tree ties shall be manufactured by Wonder Tree-Tie, tel. (800)910-2810, or approved equal, as indicated on the tree planting detail.

2.07 MISCELLANEOUS ITEMS – ORNAMENTAL BOULDERS

A. Boulders shall be Moss Rock and conform to the following sizes

a. QTY: 5' X 3' X 3'

b. QTY: 4' X 3' X 3'

c. QTY: 3' X 2' X 2'

Boulder Source: Clark's U-Save Rockery, Hayward, CA
Ph: (510) 471-0755 or approved equal.

PART 3 - EXECUTION

3.01 INSPECTIONS

A. Prior to the work of this section, verify grades and inspect the work of other trades. Verify that all such work is complete to the point where the installation may properly commence.

B. In the event of discrepancy, immediately notify the Engineer in writing. Do not proceed with this installation until all discrepancies have been resolved or take responsibility of condition of site at no additional expense to the City.

C. Inspect trees, shrubs and ground cover plants upon delivery for injury, insect infestations, and proper pruning.

3.02 SOIL TESTING

A. General: Prior to planting, provide a soil test and recommendations as stated elsewhere in these specifications.

B. Testing shall be done by a reputable laboratory for soil and plant disease diagnosis and analysis, with a minimum of 5 years of experience. See "Test Report for Topsoil" under "Submittals".

C. Soil analysis at a minimum should be done for soil chemistry including pH, fertility, agricultural suitability, particle size analysis, percolation rate, and presence of calcareous conditions, unless otherwise noted in these specifications.

D. Soil test results shall be presented in a report form, and should include recommendations for organic soil amendment, fertilization, drainage

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mitigation, and other necessary measures, for both planting and during the initial 90-day maintenance period.

3.03 SOIL PREPARATION

A. Contaminated Soil

1. Do not perform any soil preparation work in areas where soil is contaminated with cement, plaster, paint or other construction debris. Bring such areas to the attention of the Engineer and do not proceed until the contaminated soil is removed and replaced as described elsewhere in these specifications.
2. In planting areas treated with soil sterilant, soil shall be removed from the entire contaminated area to a depth of 12 inches and replaced with new soil.

B. Moisture Content: Soil shall not be worked when moisture content is so great that excessive compaction will occur, nor when it is so dry that dust will form in the air or that clods will not break readily. Water shall be applied, if necessary, to bring soil to an optimum moisture content for tilling and planting.

C. Grades.

1. Allowing for the import of 6 inches of topsoil and soil amendments.
2. Imported topsoil, after adding amendment shall be 1-1/2" below the finished surface of adjacent curb, paving and pavers.
3. Grades of planting areas not to receive topsoil have been established to within 1-1/2 inch of finish grade under work of another section.
4. Notify the City Inspector prior to commencing soil preparation work if existing grades are not satisfactory, or assume responsibility for conditions as they exist.

D. Deep Ripping

1. All subgrades in planting areas shall be deep-ripped to a depth six (6) inches. The deep-ripping shall be done in cross pattern, after the site has been rough graded, and prior to importing topsoil and amendments.
2. All rocks greater than two (2) inches in diameter, measured at their largest dimension, shall be removed from the top two (2) inches of the ripped area.
3. At the completion of the deep-ripping operations soil shall be loose and friable. The areas to receive topsoil and/or soil conditioners shall be brought to a smooth, uniform surface free of ruts, furrows, and other irregularities.
4. No ripping required on slopes of 2:1 and steeper unless slope is to receive topsoil.
5. No ripping required in planting areas with existing plants and trees to remain.

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3.04 TOPSOIL PLACEMENT

A. General: Topsoil shall be placed only on properly ripped subsoil.

B. Moisture content of topsoil shall be such that the soil may be easily worked. Soil shall not be placed or worked if it is excessively wet resulting in high compaction, or dry resulting in excessive dust.

C. Extraneous material such as weeds, wood, and rocks over 2” in diameter shall be removed from the topsoil and disposed of off-site.

D. Surface of topsoil shall be graded evenly with no irregularities. Thickness of topsoil including soil conditioners shall vary from 12” to 24” after watering settling in accordance with paragraphs entitled SOIL CONDITIONING and FINE GRADING

E. Top soil shall be finished to 1-1/2” below adjacent finished concrete surfaces or pavers.

3.05 SOIL CONDITIONING

A. General: After import topsoil has been completed and high and low spots graded, incorporate organic soil amendments by hand, or by mechanical methods to a depth of 6 inches, or as indicated in the soils report and rototill, making repeated passes with the cultivator to the depth specified until the amendments have been thoroughly mixed into topsoil.

B. Shrubs and container grown groundcovers: See 3.07, SHRUB PLANTING AND TREE PLANTING, in this section.

C. Roll or water settle amended soil to not less than 85% and not more than 90% compaction. Finish to smooth, even surface conforming to established grades after settlement. Rake immediately prior to planting.

3.06 FINE GRADING

A. When weeding, soil preparation, and soil conditioning have been completed, and soil has been thoroughly rolled or water settled, all planting areas shall be smooth-graded, ready for placement of plant materials. Rocks larger than 2 inches in diameter shall be removed.

B. Grading shall be done when soil is at optimum moisture content for working.

C. Grades

1. Finish grades shall ensure positive drainage of the site. Flow lines shall be not less than 2%.
2. Finish grades in medians shall crown from the center of the median to the back of curb, or edge of pavers
3. Finish grading shall be consistent and free from undulations, irregularities or depressions. Areas filled by floating loose soil into depressions shall be thoroughly water settled.
4. Finish grades shall be 1-1/2 inches below top of adjacent pavement, headers, curbs, or walls, unless otherwise indicated on the drawings.

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5. Tops and toes of all slopes shall be rounded to produce a gradual and natural-appearing transition between relatively level areas and slopes.
6. Contractor shall eliminate all erosion scars.
7. The Contractor shall request an inspection by the Project Landscape Architect at (510) 494-4700 for approval of the final grades before planting operations begin.

3.07 SHRUB PLANTING AND TREE PLANTING

A. General

1. Do not install plant materials until all construction work has been completed and sprinkler systems have been installed and tested. Planting areas shall have been graded and prepared as herein specified and shall have been approved by the Project Landscape Architect or Park Superintendent.
2. Do not plant during unfavorable weather, or with excessively wet or dry soil conditions.
3. Stake location for trees on ground and obtain the approval of Project Landscape Architect before digging. Protect all utilities, vegetation, and structures during work. Bring any conflict to the attention of the Project Landscape Architect immediately.

B. Excavation

1. All plant pits shall be dug with vertical walls. If excavated with an auger, pit wall shall be thoroughly loosened by hand digging.
2. Plant holes shall be to the width and depth shown on the details.
3. Excavated soil may be spread evenly over groundcover and shrub beds, provided required finish grades are maintained, previously completed soil conditioning is not covered, and rocks larger than 2 inches in diameter and debris are removed and disposed of off-site.

C. Soil Mix for Backfill

The following ingredients shall be tumbled to achieve a homogeneous mix in the top 12 inches of tree plant pits:

Nitrolized Redwood Sawdust	30 percent
Native Soil	70 percent

D. Fertilizer Packets (Best Paks)

Place packets in the backfilled planting holes per the manufacturer's printed recommendations at the following rates:

24" boxes	25 paks (5 in bottom, 5 per side)
5 gallon	3 paks
2 gallon	2 paks

E. Drainage Holes for Tree Planting

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1. Following excavation of tree holes and prior to placing backfill, fill planting hole with water and allow water to percolate into existing soil for 24 hours. Any planting holes not totally drained within 24 hours shall have drainage holes installed.
2. Failure of drainage test: Report in writing to the City all areas not passing the above test, and all soil conditions that Contractor considers detrimental to growth of plant material. State condition, and proposal for correcting the condition. Obtain City's instructions prior to proceeding with work affected. Repeat drainage testing and correction of conditions until tests are passed. Failure to perform drainage tests, or to notify City Construction Inspector in writing of conditions specified above, renders Contractor responsible for all plant failure that occurs as a result of inadequate drainage or detrimental soil conditions, as determined by the City.
3. If directed to install a drainage hole, the Contractor shall drill a 6 inch diameter hole 3 feet deeper than the bottom of the hole, remove excavated material and retest the hole for drainage. After certification of acceptable drainage by the Landscape Architect, backfill with compacted sand or drain rock and resume planting operation.
4. Installation of required drainage holes are considered to be included in the unit price for tree planting.

F. Planting: Backfill plants using specified mix and thoroughly water settle each pit so that no backfill rests atop the rootball and the top of rootball is 1 inch above surrounding finished grade. Any plant that settles below that point prior to final acceptance shall be replanted in proper position.

3.08 PLANT SUPPORTS

A. Tree Staking

1. Scope
   a. Double-stake 24" box trees except where noted.
2. Installation
   a. Double stakes shall be at right angles to the prevailing wind, except where otherwise indicated. For median trees, double stakes shall be parallel to face of curb, unless otherwise noted on the plan.
   b. Set stakes plumb.
   c. Secure tree ties to stakes per manufacturer's instructions. Allow 3 inches movement of tree in all directions.
   d. Stakes must not protrude through root ball.

3.09 MISCELLANEOUS ITEMS

A. Mulching:
   1. Where watering basins are required, fill basin with 3-inch deep mulch. Keep mulch 4" away from all tree trunks.

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2. Install 3-inch deep mulch in new planting areas. Depth may taper to a minimum depth of 1-1/2" as it approaches edge of finished surface.

A. Ornamental Boulders: Shall be installed as described on detail sheets.

3.10 FIELD QUALITY CONTROL

A. Supervision: Qualified foreman must be continuously on site during work operations.

B. Plant materials: Subject to review upon delivery at project site. For distant material, submit color photographs, with indication of scale, for preliminary review.

C. Observation of the Work: Give the Project Landscape Architect at least 24 hours notice and arrange for inspection by contacting the City Construction Inspector. Request observation at the following stages:

1. After planting areas are delineated or plant locations spotted, but before growing containers are removed or holes dug.
2. During planting of trees.
3. Preliminary Inspection: When installation is completed, but before start of maintenance.
4. Final Inspection: Shall take place at the completion of plant maintenance period. Give written notice of request in advance.

3.11 CLEAN UP

A. Upon completion of planting, all cans, boxes, plant labels, nursery stakes and ties, and other debris that is a part of the planting operation shall be removed from the site.

B. All pavement shall be washed off, and site shall be left in clean condition. All planting areas shall be cultivated and weed free before final inspection. Clean up operations shall take place throughout the course of work so that walks and drives are clean at all times.

C. Perform cleanup during the installation of work and upon completion of the work. Maintain the site free of soil and sediment, free of trash and debris. Remove from site all excess soil materials, debris, and equipment. Repair any damage to adjacent materials and surfaces resulting from installation of this work.

D. Overspray: Installing contractor is responsible for washing or otherwise cleaning excess material off all area not intended to receive treatment.

3.12 PLANT ESTABLISHMENT PERIOD

A. Plant Establishment Period: The plant establishment period for all landscaped areas shall be 90 days.

B. Start of Plant Establishment Period:

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1. Upon written approval of the work by the Landscape Architect the 90-day plant establishment period shall begin. The first day of that period shall be specified in the Project Landscape Architect's report.

C. Scope

The Contractor shall provide complete landscape maintenance of all planting areas. The work shall include, but not be limited to, watering, litter control, weed control, fertilizing, rolling, cultivating, repair of irrigation systems, erosion control and control of diseases and pests.

D. Watering

1. The moisture content in all planted areas shall be sufficient to insure healthy plants and vigorous growth. This shall be accomplished by means of visual observation of plant material and the surrounding surface soil conditions within any given area.
2. Observed deficiencies or excesses in watering program will be corrected immediately by the adjustment of controllers, as required. Controllers shall be programmed to water deeply without runoff by use of short repeat cycles.
3. Irrigation shall be controlled and individual heads adjusted to prevent overspray and runoff onto paved areas.
4. Trees planted within Tree Well Filtration

E. Insect, Disease, and Pest Control: Pesticides and herbicides are not allowed unless approved by the city.

F. Fertilization

At the end of the maintenance period, furnish and apply fertilizers per the recommendations of the soil and plant lab report.

G. Pruning

1. Pruning shall be done only at the direction of the Park Superintendent, the Urban Forestry Supervisor, or a Certified Arborist hired by the contractor to guide pruning activities, in accordance with NAA "Pruning Standards and Practices" to balance loss of root system. Thinning shall not exceed 30 percent of existing branching structure.
2. If the contractor hires a Certified Arborist, the arborist must be registered by the International Society of Arborists (ISA), and in conjunction with the Engineer, ascertain the limbs and roots which are to be trimmed from new trees, and clearly mark them to designate the approved point of cutting.
3. Pruning shall be done by thinning and shaping to achieve a natural appearance. Excessive pruning or stubbing back will not be permitted.
4. Pruning cuts shall be allowed to heal naturally and not painted over with wound dressing or asphaltic emulsion.
5. All pruning cuts shall be made flush to the bark curl and shall be cleanly cut with no tearing of the bark.

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6. All cuttings shall be removed from the site.

7. Do not remove lower branches from low-branching or multi-trunk trees, unless directed to do so by the Park Superintendent, Urban Forestry Supervisor, or a Certified Arborist.

H. Weed Control

1. Weeds shall be kept under control by hand or by the application of herbicides designed for use on any type of weeds invading the planting areas, at not less than 10-day intervals.

2. All equipment used for applying herbicides shall be properly cleaned before it is used on this project. Herbicides shall be applied per manufacturer's printed instructions. Herbicides shall not be used during windy or gusty days. All possible precautions shall be taken to protect desirable vegetation from damage. Any repair, or replacement with new plants of existing trees to be preserved shall be at the Contractor's expense.

I. Replacements: Immediately replace any plant materials that die or are damaged. Replacements shall be made to the specifications required for original plantings.

J. Condition of Plantings at the End of the Maintenance Period

1. All plant materials shall be live, healthy, undamaged, and free from infestations.

2. Planting areas shall be free of all broadleaf and grass weeds.

3. Plantings that do not conform to these specifications shall be replaced and brought to a satisfactory condition before final acceptance of the work.

3.13 GUARANTEE

A. All plants installed under the contract shall be guaranteed to live and grow for a period of one year from the date of final acceptance of contract work.

B. Any material found to be dead, missing, or in poor condition during the guarantee period, shall be replaced by the Contractor within fifteen (15) days of written notification by the City. Replacement shall be made to the same specifications required for original plantings, and shall be at no cost to the City.

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PART 4 - MEASUREMENT AND PAYMENT

A. The cubic yard final pay quantity for **"Import Topsoil (6")(F)"** of the unit price schedule shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work involved, complete in place as shown on the plans, as required by these Special Provisions, and as directed by the City Engineer or his designee. The quantities shown on the Engineer's Estimate for "Import Top Soil," shall be the final pay quantity for which payment is made as specified in Section 8.2

and 8.8, “Final Payment” of the General Conditions and no additional payment shall be made therefore.

B. The square foot unit price paid for **“Soil Preparation and Amendment “** of the unit price schedule shall include full compensation for fine grading and furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work covered in this section, complete in place as shown on the plans, as required by these Special Provisions, and as directed by the Landscape Architect.

C. The cubic yard final pay quantity for **“Bark Mulch (3”)(F)”** of the unit price schedule shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work involved, complete in place as shown on the plans, as required by these Special Provisions, and as directed by the City Engineer or his designee. The quantities shown on the Engineer's Estimate for “Bark Mulch,” shall be the final pay quantity for which payment is made as specified in Section 8.2 and 8.8, “Final Payment” of the General Conditions and no additional payment shall be made therefore.

D. The contract unit price paid per each for **“2 Gallon Shrub” and “5 Gallon Shrub”** of the unit price schedule shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work covered in this section, complete in place as shown on the plans, as required by these Special Provisions, and as directed by the Landscape Architect.

E. The contract unit price paid per each for **“24” Box Tree”** of the unit price schedule shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work covered in this section, complete in place as shown on the plans, as required by these Special Provisions, and as directed by the Landscape Architect.

F. The lump sum contract price paid for **“90-Day Plant Establishment Period”** of the unit price schedule shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work covered in this section, complete in place as shown on the plans, as required by these Special Provisions, and as directed by the Landscape Architect.

G. The unit price final pay quantity paid per ton for **"Ornamental Boulders (F)"** shall include full compensation for furnishing all labor, materials, tools equipment, and incidentals and for doing all the work complete and in place as shown on the plans as required by these Special Provisions, and as directed by the City's Authorized Representative. The quantities shown on the Engineer's Estimate for “Ornamental Boulders,” shall be the final pay quantity for which payment is made as specified in Section 8.2 and 8.8, “Final Payment” of the General Conditions and no additional payment shall be made therefore.

END OF SECTION

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10-5.06 MEDIAN COBBBLE PAVING (03400)

PART 1 – GENERAL

1.01 RELATED DOCUMENTS

A. These special provisions are part of the plans and shall include all labor, materials, equipment, reasonable incidentals, and services necessary to the execution of the work.

B. Refer to all other sections, determine the extent and character of related work, and coordinate all work to produce a complete, properly constructed product.

C. This section is complete in its entirety and is not supplemental to the standard specifications for Caltrans except where specifically noted:

1. Caltrans Standard Specifications, Section 26, "Aggregate Base"
2. Caltrans Standard Specifications, Section 73, "Concrete Curbs Gutters and Sidewalks"
3. Caltrans Standard Specifications, Section 90, "Portland Cement Concrete"

1.02 DESCRIPTION OF WORK

A. Scope of work includes but is not necessarily limited to:

1. Aggregate base
2. Concrete bed
3. River cobbles

1.03 SUBMITTALS

A. Samples

1. Prior to placement, contractor shall submit to the Landscape Architect, six (6) river cobbles.
2. The approved samples shall establish the design appearance of the cobble specified.
3. Once this sample has been approved, and prior to placement of the concrete bed, the contractor shall provide an on site 4 foot square test panel with river run cobbles and concrete bed for approval by the Landscape Architect. If the test panel does not meet the specifications contained herein, the panel shall be rebuilt at the Contractor's expense for approval by the Project Landscape Architect before proceeding with the work. Once the test panel has been

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approved, the contractor shall retain the test panel during construction as the standard for judging the completed work.

1.04 QUALITY ASSURANCE

All work shall be accomplished using Caltrans Standard Specifications as a reference and standard for quality and performance.

1.05 PRODUCT DELIVERY

A. Weight or delivery certificates for each load of material shall be delivered to the Engineer.

B. The delivery certificates shall state the material by the approved material designation, the weight or volume, the date, time and delivery, vehicle name or number.

1.06 COORDINATION

The Contractor shall obtain information and instructions from other trades and suppliers in ample time to schedule and coordinate the installation of items furnished by them to be embedded in concrete under this Section so that provision for their work can be made without delaying the project.

1.07 PROTECTION

A. Protect and prevent damage to adjacent properties and improvements that may be caused by the Contractor's operations.

B. Cutting and/or patching made necessary by failure or delay in complying with these requirements shall be done at no cost to the City.

C. Any damage to the finished pavement surface from subsequent construction shall be repaired to a clean, smooth, true and uniform surface. Existing or new paving which has been damaged due to the Contractor's operations, and which cannot be repaired to the satisfaction of the Engineer, shall be removed and replaced at the Contractor's own expense before final payment is made.

D. Locate all existing underground utilities, including irrigation lines, in the areas of work. If existing lines are to remain in place, provide adequate means of protection during construction.

E. Should uncharted or incorrectly charted existing utilities including irrigation lines be encountered during construction, consult the Engineer immediately for directions as to procedure. Cooperate with City and utility companies in keeping respective services and facilities in operation. Repair damaged utilities or irrigation lines to the satisfaction of the City or utility owner.

F. Do not interrupt existing utilities including irrigation lines serving facilities occupied and used by the City or others, except when permitted in writing

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by the Engineer, and then only after acceptable temporary utility service or irrigation lines have been provided.

G. Protect and prevent damage to moisture barriers located along edges of planter areas. Damaged or removed moisture barriers shall be replaced at no cost to the City.

1.08 CONSTRUCTION LAYOUT

A. The Contractor shall be responsible for construction layout and staking of all elements of the work.

B. The radial edge of all cobble paving areas shall be continuously sinuous with no visible tangent points or breaks

C. Project Inspector, Project Engineer or Project Landscape Architect to verify layout prior to pouring any concrete.

1.09 DISPOSAL

All materials removed shall be disposed of in accordance with the provisions in Section 7-1.13, "Disposal of Material Outside of the Highway Right-of-Way," of the Standard Specifications.

1.10 TESTS AND INSPECTIONS

Tests and inspections shall be performed by the City.

1.11 CLEAN-UP

During the progress of the work and at the completion of the work, the Contractor must conform to the requirements of the Section titled "General Requirements" of these Special Provisions.

PART 2 – MATERIALS

2.01 CONCRETE BED

A. Comply with pertinent provisions of Section 90, "Portland Cement" of the Standard Specifications for materials not specified herein necessary to perform the work of this Section.

B. Portland Cement:

1. Shall be Class 2 and shall contain not less than 590 pounds of cementitious material per cubic yard. 28-day compressive strength shall be 2500 psi minimum.

2. **Slump: 4" maximum**

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3. Aggregate Size, Fine Aggregate Size, Water, and Admixture Materials shall comply with pertinent provisions of Section 90, “Portland Cement” of the Standard Specifications.

2.02 RELATED MATERIALS

A. Concrete Integral Coloring to be Integral Color Admixture:

Color: Chromix Adobe Tan, #C-21, L.M. Scofield Company, (323) 720-3000 or approved equal.

2.03 PROPORTIONING AND DESIGN OF MIXES

A. Submit concrete mix design for Engineer’s approval prior to pouring of any concrete.

B. Produce concrete of required consistency and strength which will present an appearance satisfactory to the Engineer. Color of all exposed concrete shall match color of adjacent existing concrete when dry.

2.04 AGGREGATE BASE

A. Aggregate base shall be Class 2 and shall conform to the provisions in Section 26, “Aggregate Base,” of the Standard Specifications and these Special Provisions.

B. As a substitute for Class 2 material, with approval from the City, aggregate base may be Class 3 and shall conform to the provisions in Section 26, “Aggregate Base,” of the Standard Specifications and these Special Provisions.

C. All substitutes will be evaluated for approval during a 35 days period after the award of the contract, and the contractor submits the appropriate data.

D. The use of Class 3 material as a substitute shall be subject to Section 5-1.14 “Cost Reduction Incentive” of the Standard Specifications and the City will receive a reduction in cost for the line items that receive Class 3 material as aggregate base.

2.05 RIVER COBBLES

A. Type: “Fresno” or “Noyo” cobble, or approved equal.

B. Color: Medium/dark grey to light/medium brown tan.

C. Size: **4” to 6”** rounded cobble.

D. Cobbles shall be washed clean, and be free of dirt and debris.

PART 3 – EXECUTION

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3.01 SUBGRADE PREPARATION

Compact subgrade to 90% minimum relative compaction in 8” lifts.

3.02 AGGREGATE BASE

Saturate aggregate base 24 hours prior to placing concrete bed.

3.03 CONCRETE MIXING

A. Concrete shall be mixed and delivered to the site in conformance with Section 90 of the Standard Specifications.

B. All concrete shall be kept continuously agitated until discharged into the hopper at the job site.

3.04 CONCRETE INTEGRAL COLOR

A. Add integral color per the manufacturer’s instructions.

Rate: (1) Scofield measured bag of admixture per cubic yard of concrete mix.

3.05 CONVEYING AND PLACING CONCRETE

A. All pipes, sleeves, anchors and bolts, angle frames, inserts, supports, ties and other materials in connection with concrete construction shall be placed and secured in position before the concrete is placed.

B. Before placing concrete, mixing and conveying equipment shall be wet cleaned, the forms and space to be occupied by concrete shall be thoroughly cleaned, and the forms shall be wetted. Groundwater shall be removed until the completion of the work.

C. No concrete shall be placed in any unit of work until all formwork has been completely constructed, all reinforcement has been secured in place, all items to be built into concrete are in place, and form ties at construction joints tightened.

D. Concreting, once started, shall be carried on as a continuous operation until the section of approved size and shape is completed.

E. Concrete shall be handled as rapidly as practicable from the mixer to the place of final deposit by methods which prevent the separation or loss of ingredients. It shall be deposited as nearly as practicable, in its final position to avoid rehandling or flowing. Concrete shall not be dropped freely where reinforcing bars will cause segregation, nor shall be dropped freely more than six feet (6'). Concrete shall be deposited to maintain a plastic surface approximately horizontal.

F. Concrete that has partially hardened shall not be deposited in the work.

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G. Along the faces of the forms, suitable tools shall be used during the pour to force large particles away from the forms and bring to the surface of the forms. The responsibility for providing fully filled out, smooth, clean and properly aligned surfaces free from objectionable pockets and blemishes shall rest entirely with the Contractor.

3.06 RIVER COBBLE PLACEMENT

A. Place cobbles while concrete bed is workable.

B. Assess each cobble to determine the smoothest, most aesthetically pleasing side of the cobble. Cobbles with fractures and breaks shall not be allowed..

C. Cobbles shall be “Saturated Surface Moist” (SSM) prior to placement, and all surfaces shall be cleaned of dirt and debris prior to placement.

D. Firmly place each cobble to embed 1/2 of the cobble in the concrete bed.

E. Place cobbles flat and tight to one another minimizing the visible exposed concrete.

F. Distribute cobbles randomly of similar shape and size throughout the paving.

G. Before the concrete bed hardens, remove excess concrete which has been displaced by the placement of the cobbles.

1. Remove any excess concrete from upper one-half of the cobble.

2. The final concrete bed shall create a smooth continuous plane that drains as shown on the Plans.

H. The finished surface of the cobble median paving shall drain without puddles and conform to the details shown on the plans.

3.07 PROTECTION AND CURING

A. Concrete shall be protected from injurious action of the elements and defacement of any nature during construction operations. Watchmen will be required at such times as required until concrete has set for a period of ten (10) hours. Damage resulting from the vandalism may require removal and replacement of complete units of work.

B. All forms shall be kept sufficiently wet to prevent drying out of the concrete.

C. Slabs and exposed corners of concrete shall be protected from traffic or use that will damage them in any way.

3.08 PATCHING AND CLEANING

A. After forms are removed, projecting fins, bolts, form ties, nails, etc., not necessary for the work, shall be removed or cut back one inch (1") from the

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surface, and joint marks and fins in exposed work shall be smoothed off and cleaned as directed by the Engineer.

B. Defects in concrete work shall be repaired as directed by the Engineer. Voids and stone pockets shall be chipped to a depth of at least one inch (1") or more, as required, to remove all loose material with the edges perpendicular to the surface and parallel to form markings. Voids, surface irregularities, chipped areas, etc., shall be filled by patching, gunite and/or rubbing, as directed by the Engineer. Repaired surfaces shall duplicate the appearance of the unpatched work.

C. Clean adjoining work stained by the leakage of concrete to meet the approval of the Engineer.

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3.09 MEASUREMENT AND PAYMENT

The contract prices paid per square foot for "**Median Cobble Paving**" shall include full compensation for furnishing labor, materials, tools, equipment and incidentals for doing all the work including, all forming, concrete, and aggregate base, complete in place as shown on the plans, as required by these special provisions, and as directed by the Engineer.

***** END OF SECTION *****

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SECTION 01 77 00 PROJECT CLOSEOUT

PART 1 GENERAL

1.01 MAINTENANCE, CORRECTION AND REPAIR PERIOD

A. The Contractor shall comply with the correction and repair requirements contained in the General Conditions, Article 11, and the Supplemental Conditions.

B. Replacement of earth fill or backfill, where it has settled below the required finish elevations, shall be considered as a part of such required repair work, and any repair or resurfacing constructed by the Contractor which becomes necessary by reason of such settlement shall likewise be considered as a part of such required repair work unless the Contractor shall have obtained a statement in writing from the affected private owner or public agency releasing the City from further responsibility and liability in connection with such repair or resurfacing

C. The Contractor shall make all repairs and replacements promptly upon receipt of written order from the City. If the Contractor fails to make such repairs or replacements with seven (7) calendar days, the City reserves the right to do the work or to have the work done by others and the Contractor and its Surety shall be liable to the City for the cost thereof.

1.02 CLOSEOUT TIMETABLE

A. All temporary buildings, including field offices, storage buildings, port-a-potties, and sheds shall be removed from the project site within seven (7) calendar days after completion of the Work as defined in the Contract Documents.

B. All temporary services such as water, power, utilities, service contracts, pager contracts, telephones, and other temporary services shall remain in service for 7 days following execution of a Notice of Completion of the Work by the City, and shall be discontinued within seven (7) calendar days after said execution of a Notice of Completion of the Work.

C. The site and all applicable appurtenances and improvements shall be cleaned as specified in “Final Clean Up”.

1.03 FINAL INSPECTION

A. When all requirements of the above prepared punch list have been completed, the Contractor shall request the final inspection to determine Acceptance of remaining punch list items.

B. The request shall be made in writing, addressed to the Engineer, at least seven (7) days in advance of the requested date of the final inspection.

C. The Contractor shall be represented by its principal superintendent and such subcontractors and suppliers as deemed necessary to answer questions of the Engineer’s inspection team.

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D. Depending on the extensiveness of the punch list items, certain elements of the Work may be scheduled separately for final inspection at appointed times.

1.04 CONSTRUCTION PUNCH REVIEW

A. Refer to Article 11 – "Completion and Warranty Provisions" of the General Conditions.

B. When the Contractor considers the work complete, the Contractor shall notify the Engineer in writing that the work is complete and request that the Engineer prepare a preliminary list of remaining deficiencies, hereafter termed a "Punch List".

C. The Contractor shall make the request in writing, addressed to the Project Engineer, at least seven (7) calendar days in advance of the requested date of preliminary inspection.

D. Within a reasonable time thereafter, the Contractor and the Engineer shall make an inspection of the work to determine the status of completion.

E. The preliminary inspection of all construction shall be performed with the Project Engineer, Parks Superintendent, Project Landscape Architect, Project Inspector, Building Inspector, Alameda County Health Inspector, and Contractor. The Contractor shall be represented by its principal superintendent and such subcontractors and suppliers as deemed necessary to answer questions of the City's inspection team.

F. Information gathered from the inspection shall be compiled by the Engineer into a comprehensive Punch List of work to be performed, corrected or completed. The Punch List shall include all items to be completed or corrected prior to the Constructor's application for final payment.

G. Upon acceptance of the Work by the City, by agreement between the parties some small remaining punch list items may remain to be completed by the Contractor.

H. Failure of the Contractor to complete or correct all such outstanding punch list work to the satisfaction of the Engineer within 30 calendar days following acceptance and Notice of Completion, shall constitute a waiver by the Contractor of all rights to any and all claims it may have to all monies withheld by the City under the Contract to cover the value of such uncompleted or uncorrected items. The Contractor hereby agrees to complete all such outstanding punch list items within 30 calendar days following acceptance and notice of completion of the Work by the City.

I. Final payment and the return of retained funds will not be released until all work items on the Punch List have been completed by the Contractor to the satisfaction of the Engineer.

J. Depending on the extensiveness of the punch list items, certain elements of the Work may be scheduled separately for final inspection at appointed times.

1.01 USE PRIOR TO FINAL COMPLETION

A. Refer to Article 11.3.

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1.06 SUBSTANTIAL COMPLETION

A. Substantial completion is as defined in the General Conditions, Article 11.4.

B. Provide written evidence of release from all parties who are entitled to claims against the subject project, property, or improvement pursuant to the provisions of law.

C. If any deficiencies are noted, they will be listed by the Engineer in a written memo to the Contractor. The Contractor shall complete all listed deficiencies in a timely manner until the work is in acceptable condition.

D. All work on the punch list shall be completed by the Contractor prior to requesting the final inspection.

1.06 FINAL PAYMENT AND SUBMITTALS

A. The Contractor, prior to requesting its final progress payment, shall submit the following items to the Engineer:

1. All as-built information for underground utilities, irrigation, electrical, storm and sewer drainage, fiber optics, potable water, and other underground information.

2. All as-built information, record drawings, and specifications shall be completed, signed and submitted to the engineer as requested, and required elsewhere in these special provisions.

3. Warranties, Bonds, and Certificates: Contractor shall submit to the Project Engineer specific warranties, guarantees, workmanship, bonds, maintenance agreements, final certifications and similar documents as they apply to the project, as specified in these special provisions.

1.02 MEASUREMENT AND PAYMENT

A. Full compensation for conforming to the provisions in this section "**Project Closeout**," not otherwise provided for, shall be considered as included in prices paid for the various contract items of work involved and no additional compensation will be allowed therefor.

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END OF SECTION

END OF SPECIAL CONDITIONS