CITY OF
Fremont

SPECIAL PROVISIONS

FOR

NILES TOWN PLAZA
PERMEABLE PAVERS

FOR CITY COUNCIL USE ONLY

CITY PROJECT NO. PWC 8949
BID NUMBER 18-036
SPECIFICATIONS

PROJECT MANAGER
JENNIE SUEN
JSUEN@FREMONT.GOV
(510) 494 – 4744

LICENSED LANDSCAPE ARCHITECT
ROGER E. RAVENSTAD
No. 3509
05-11-2018
STATE OF CALIFORNIA

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

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PROJECT LOCATION MAP

Niles Town Plaza
97592 Niles Boulevard

City of Fremont

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Notice Inviting Bids

1. Bid Acceptance. The City of Fremont ("City") will accept sealed bids for its Niles Town Plaza Permeable Pavers Project ("Project"), on or before June 6th, 2018, at 2 p.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 37592 Niles Boulevard, Fremont, California 94536, and is described as follows:

Base Bid

The project general description consists of 1) removing and disposing of existing stabilized decomposed granite, including aggregate base, to 12" depth and installing permeable pavers with class 2 permeable aggregate base and 2) sawcutting, removing and disposing of concrete paving, curb and gutter and installing trench drain with new curb and gutter. All remaining concrete paving, structures, underground trenches and piping are to remain and shall be preserved and protected.

Alternates

Alternate 1: Remove top 6" of stabilized decomposed granite with aggregate base at walkway and replace with 6" concrete over existing base, including installing double sailor brick band. Remove 4" of stabilized decomposed granite with aggregate base at ramp and replace with 4" of concrete.

Alternate 2: Remove top 6" of stabilized decomposed granite with aggregate base at walkway, replace with 6" concrete over existing base.

2.2 Time for Completion. The planned timeframe for commencement and completion of construction of the Project is:

Base Bid

Complete the project within a total of maximum of thirty (30) working days after the date specified in the City's Notice to Proceed, the number of working days is to include lead times to obtain materials specific to the project. All base bid work shall be completed between September 4, 2018 and October 16, 2018. Contractor shall provide a schedule outlining how work shall be completed with the thirty (30) working days allotted for the Base Bid Work prior to the Pre-Construction Meeting.

Alternate 1

If Alternate 1 is awarded with the Base Bid, twelve (12) more additional days shall be added and work shall be completed between September 4, 2018 and November 1, 2018 for a total of forty-two (42) working days after the date specified in the City's Notice to Proceed.

Order of Alternate 1 Work:

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If Alternate 1 is awarded with the Base Bid, all work may begin simultaneously with the Base Bid scope of work. However, base bid work shall be completed prior to October 16, 2018.

Contractor shall maintain ADA access to Main Train Building during Construction. Only one slope up (west end or east end) shall be allowed closed off at one time.

Alternate 1 and 2

If Alternate 1 and 2 is awarded with the Base Bid, eighteen (18) more additional days shall be added and work shall be completed between September 4, 2018 and November 9, 2018 for a total of forty-eight (48) working days after the date specified in the City's Notice to Proceed.

Order of Work for Alternate 1 and 2:

If Alternate 1 and 2 are awarded with the Base Bid all work may begin simultaneously with the Base Bid scope of work. However, base bid work shall be completed prior to October 16, 2018.

Contractor shall maintain ADA access to the Main Train Building during Construction. Only one slope up (west end or east end) shall be allowed closed off at one time.

The City will assess liquidated damages in the amount of **$1,000** for each and every calendar day of delay in finishing the work in excess of the contract time, after the date specified in the City's Notice to Proceed ("Contract Time").

2.3 Estimated Project Cost. The estimated construction cost, or construction cost range, for the Base Bid Project is $196,000, the estimate for Alternate 1 is $ 25,000, and the estimate for Alternate 2 is $ 48,000 for a total base bid and alternates construction cost of $269,000. 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. 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. Bid No. 18-036. Bidders are encouraged to recycle unused Contract Documents.

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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.

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 May 23th, 2018 at 10:00 a.m., at the following location: Niles Town Plaza, 37592 Niles Boulevard, Fremont, California 94536, east side parking lot (Niles Boulevard and I Street), for the purpose of acquainting all prospective bidders with the Contract Documents and the Worksite. The bidders' conference is not mandatory.

12. Specific Brands. Pursuant to Public Contract Code Section 3400(c), City has found that the following specific brands or trade names are required for the following particular

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material(s), product(s), thing(s), or service(s), and no substitutions will be considered or accepted for the Project:

Item:	Required brand or trade item name:	Reference:
None	None	None

Purchasing Division _____ Date: 5/11/18

Linda Wright
Purchasing

Publication Dates: 1) May 15, 2018
2) May 22, 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 Niles Town Plaza Permeable Pavers Project ("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
Niles Town Plaza Permeable Paver, Project No. 8949 (PWC)
Bid No. 18-036

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

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 and soil analyses for test holes may be available for inspection in the **Landscape Architecture Division** or 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. All soil data and analyses available for inspection or provided in the Contract Documents apply only to the test hole locations. The bidder is responsible for determining and allowing for any differing soil 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:

Jennie Suen, Landscape Architect II
39550 Liberty Street, Fremont, California 94537
510-494-4744 (phone)
510-494-4721 (fax)
jsuen@fremont.gov

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 Wednesday, May 30th, 2018, 12 p.m. at least three (3) 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

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City's estimated quantities, and payment will not be adjusted based on actual quantities, 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.

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;

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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. 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.

19. 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.

20. Additive and Deductive Alternates. As required by Public Contract Code Section 20103.8, if this bid solicitation includes additive or deductive items, the method checked below will be used to determine the lowest bid. If no method is checked, subparagraph (a) will be used to determine the lowest bid. City retains the right to add to or deduct from the Contract any of the additive or deductive alternates included in the Bid Proposal.

__X__(a) The lowest bid will be the lowest bid price on the base contract without

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consideration of the prices on the additive or deductive items.

21. **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.

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

Appendix C

Potholing Report	Exaro Technologies Corporation, City of Fremont, dated 2/23/2018

Appendix D

Soils Testing	McCampbell Analytical, Inc, dated 11/8/07

END OF INSTRUCTIONS TO BIDDERS

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Bid Proposal

Niles Town Plaza Permeable Paver Project

_____ ("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. **Bid Alternates**. Bidder submits the following prices for the specified bid alternates:

Alternate 1: _____
Add/Deduct: $_____

Alternate 2: _____
Add/Deduct: $_____

3. **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	_____

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

4.1 **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.

4.2 **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

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for the Project and has attended any mandatory bidders' conference and any mandatory pre-bid Project site visit.

4.3 **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.

4.4 **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.

4.5 **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.

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

5. **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:

5.1 **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");

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

5.3 **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;

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

5.5 **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;

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

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

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6. 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 $_____.

__X__ 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		1	LS	$	$
2	Statewide General Construction Permit (Erosion Control)		1	LS	$	$
3	Temporary Construction Fencing		650	LF	$	$
4	Temporary Tree Protection		330	LF	$	$
5	Excavate and Dispose of Decomposed Granite and Aggregate Base Rock	F	250	CY	$	$
6	Sawcut Concrete Paving, Curb and Gutter		64	LF	$	$
7	Remove Concrete Paving		130	SF	$	$
8	Remove Curb and Gutter		14	LF	$	$
9	Class 2 Permeable Aggregate Base	F	145	CY	$	$
10	Permeable Choker Course		42	CY	$	$
11	Permeable Pavers A and B		6,717	SF	$	$
12	Concrete Curb and Gutter		14	LF	$	$
13	Trench Drain with Concrete		26	LF	$	$
14	6" over 6" Concrete Paving		51	SF	$	$

TOTAL BASE BID: Items 1 through 14 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: _____

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ALTERNATE

BID ITEM NO.	ITEM DESCRIPTION		EST. QTY.	UNIT	UNIT COST	EXTENDED TOTAL AMOUNT
	Add Alternate #1					
15	Temporary Construction Fencing		355	LF	$	$
16	Remove and Dispose of Decomposed Granite and Aggregate Base Rock	F	1,380	SF	$	$
17	6" Concrete Paving over Existing Aggregate Base		1,165	SF	$	$
18	4" Concrete Paving over Existing Aggregate Base		215	SF	$	$
19	Brick Sailor Band in Concrete		20	LF	$	$

TOTAL ALTERNATE #1 BID: Items 15 through 19 inclusive: $_____
[Note: The amount entered as "Alternate 1" should be identical to the Bid Alternate amount entered in Section 2 of the Bid Proposal form.]

BIDDER NAME: _____

BID ITEM NO.	ITEM DESCRIPTION		EST. QTY.	UNIT	UNIT COST	EXTENDED TOTAL AMOUNT
	Add Alternate #2					
20	Temporary Construction Fencing		300	LF	$	$
21	Temporary Tree Protection		60	LF	$	$
22	Remove and Dispose of Decomposed Granite and Aggregate Base Rock	F	2,970	SF	$	$
23	6" Concrete Paving over Existing Aggregate Base		2,970	SF	$	$

TOTAL ALTERNATE #2 BID: Items 20 through 23 inclusive: $_____
[Note: The amount entered as "Alternate 1" should be identical to the Bid Alternate amount entered in Section 2 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

END OF NONCOLLUSION DECLARATION

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Bid Bond

_____ ("Bidder") has submitted a bid, dated _____, 20_____ ("Bid"), to the City of Fremont ("City") for work on the Niles Town Plaza Permeable Pavers 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

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Bidder's Statement of Responsibility

NILES TOWN PLAZA PERMEABLE PAVERS 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 Five (5) most recently completed public works projects within the last five (5) 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 Niles Town Plaza Permeable Pavers 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.

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: No other documents.

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.

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 thirty (30) "Working Days" – Base Bid, forty-two (42) "Working Days" - Base Bid and Alternate 1, forty-eight (48) "Working Days" – Base Bid with Alternate 1 and 2, 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.

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6. **Liquidated Damages.** If Contractor fails to complete the Work within the Contract Time, City will assess liquidated damages in the amount of $1000.00 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 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:	510-494-4700
Attn:	Hans Larsen, City Engineer
Email:	HLarsen@fremont.gov
Copy to:	Jennie Suen, Landscape Architect II
Email:	JSuen@fremont.gov

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.]

FOR CITY COUNCIL USE ONLY

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

FOR CITY COUNCIL USE ONLY

Payment Bond

The City of Fremont ("City") and _____ ("Contractor") have entered into a contract, dated _____, 20___ ("Contract") for work on the Niles Town Plaza Permeable Pavers 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.

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.

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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 AS TO FORM:

s/ _____

_____
Name/Title

END OF PAYMENT BOND

FOR CITY COUNCIL USE ONLY

Performance Bond

The City of Fremont ("City") and _____ ("Contractor") have entered into a contract, dated _____, 20____ ("Contract") for work on the Niles Town Plaza Permeable Paver 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:

FOR CITY COUNCIL USE ONLY

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 AS TO FORM:

s/ _____

_____
Name/Title

END OF PERFORMANCE BOND

FOR CITY COUNCIL USE ONLY

Warranty Bond

The City of Fremont ("City") and _____ ("Contractor") have entered into a contract, dated _____, 20___ ("Contract") for work on the Niles Town Plaza Permeable Paver 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 AS TO FORM:

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

(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. For owned, loaned, hired and non-owned autos.

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

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

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(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.

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

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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.

(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,

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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:

(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;

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(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.

(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

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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.

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

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(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.

(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

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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 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."

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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.

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Article 7 - General Construction Provisions

7.1 Permits and Taxes.

(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.

(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

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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 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.

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(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. 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.

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(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.

(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.

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(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.

(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.

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(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 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.

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(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 mortar, 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.

(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

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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.

(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.

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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 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").

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(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.

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.

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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.

(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.

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(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 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.

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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 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.

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(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.

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.

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(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.

Article 11 - Completion and Warranty Provisions

11.1 Final Completion.

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(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 City's acceptance of the Project pursuant to Section 11.1(D) (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.

(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.

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(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 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

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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.

(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.

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(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 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

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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.

(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.

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(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.

(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.

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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 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

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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 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.

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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.

Article 15 - Weather Delays

15.1 This provision is intended to supplement the requirements of General Conditions Section 5.2 on Schedule Requirements and Section 5.3 on Delays and Extensions of Contract Time.

15.1.1 **"Weather Delay Day."** A "Weather Delay Day" is a Working Day during which Contractor and its forces, including Subcontractors, are unable to perform more than 40% of the critical path Work scheduled for that day due to adverse weather conditions which impair the ability to safely or effectively perform the scheduled critical path Work that day. Adverse weather conditions may include rain, saturated soil, and Worksite clean up required due to adverse weather. Determination of what constitutes critical path Work scheduled for that day will be based on the most current, City-approved schedule.

Article 16 – Close Out Requirements

16.1 Contractor's close out requirements include the following:

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16.1.1 Contractor must replace, with thermoplastic, any existing striping within and adjacent to the Project site that is damaged during the Work. Partially damaged striping must be replaced in its entirety.

END OF GENERAL CONDITIONS

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Special Conditions

SECTION 01 00 00 Supplemental to the General Conditions

PART 1 GENERAL

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. Verification of Conditions
G. Coordination and Cooperation
H. Maintaining Traffic and Public Safety
I. Obstructions
J. Watering
K. Testing
L. Clean-Up

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

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6. A.C. Transit - Dispatch (510) 891-4901
7. East Bay Para Transit (510) 446-2008
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.

1.03 PERMITS, FEES AND LICENSE

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.

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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 of the General Conditions and Section 01 32 19 "Submittals" for additional information for those submittals required at the pre-construction meeting.

B. Contractor should note that the submittal process shall begin upon issuance of award by City Council, and prior to the issuance of the notice beginning of the Contract Time.

C. The City **WILL** provide a written notice indicating the Council award and requesting for submittals to begin. It is the contractor's responsibility to provide submittals as required, and described, in each section of the special provisions.

D. The intent of beginning the submittal process upon City Council award is to expedite this process and allow the Contractor the ability to begin the order and purchase of materials, especially for long lead-time items, in order to complete the contract work within the stated contract time.

1.05 HOURS OF WORK AND CITY HOLIDAYS

A. There are no restrictions to work hours or days for this project. Work hours and days are as stated below and per Article 5 – Contract Time (H).

- 7:00 a.m. to 5:00 p.m. during weekdays. Additional hours shall not occur without the written authorization from the Project Inspector or Project Engineer.
- 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 Year's Day – Monday, December 31, 2018

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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(B)(3) of the General Conditions is hereby waived and does not apply to this Contract.

1.07 VERIFICATION OF CONDITIONS

A. The Contractor shall verify all existing conditions before commencing work. All discrepancies between the plans and actual field conditions shall be immediately reported to the Engineer who shall determine if modifications in the work are necessary. The Contractor shall not modify the work without prior authorization from the Project Landscape Architect.

1.08 COORDINATION AND COOPERATION

A. Refer to Article 2.4 of the General Conditions – Coordination of Work.

B. The work shall be conducted under the general observation of the Engineer and shall be subject to inspection by the City of their representatives to assure strict compliance with the requirements of the Contract Documents, and all applicable building codes and other regulations. The authorized representative of the Engineer on the project site shall be those representatives or consultants designated by the Engineer to act on behalf of the City.

C. One or more Inspectors shall periodically review the Contractor's work as the project progresses to verify conformance with the Contract Documents. 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 and applicable building codes or other regulations. 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).

D. All materials and articles furnished by the Contractor shall be subject to exhaustive inspection, and no material or articles shall be used in the work until it has been inspected and accepted by the Engineer.

E. The Contractor shall be responsible for the coordination of all the work and the coordination of the work of the subcontractors. The Contractor shall not delegate coordination to any subcontractor. The Contractor's on-site supervisory person shall be present and represent the Contractor whenever a meeting is held that involves any interface between the City and any subcontractors or suppliers. The Contractor shall resolve differences or disputes between subcontractors concerning coordination, interfaces, or extent or work.

F. The Contractor shall coordinate all inspections governed by permits obtained in conjunction with the work. The Contractor shall schedule all inspections with adequate advance notice, and in accordance with the requirements of the permit issuer, to assure no delays while waiting for an inspector to review the work before proceeding.

G. It shall be the responsibility of the Contractor to coordinate all necessary utility work with the appropriate utility company. The request for work to be done by the utility company affected shall be made in sufficient time so that the utility company may perform their work in time to prevent delays to the project schedule.

H. The Contractor shall cooperate fully with all utility forces of the City or forces of other public or private agencies engaged in the relocation, altering, or otherwise

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rearranging of any facilities which interfere with the progress of the Work, and shall schedule the Work so as to minimize interference with said relocation, altering, or other rearranging of facilities.

1.08 MAINTAINING TRAFFIC SAFETY

A. Refer to Section to General Conditions.

1.09 OBSTRUCTIONS

A. Attention is directed to Section 01 56 00 “Protection of Existing Facilities” of the Standard Specifications and these Special Provisions.

B. The Contractor shall verify all existing conditions before commencing work. All discrepancies between the plans and actual field conditions shall be immediately reported to the Engineer, who shall determine if modifications to the work are necessary. The Contractor shall not modify the work without prior authorization from the Engineer. Any removal, repair, or replacement caused by the Contractor’s failure to recognize or report unsuitable conditions shall be performed by the Contractor at the Contractor’s sole cost and expense.

C. Protection and repair of damage of laterals and appurtenances shall be the responsibility of the Contractor.

D. In the event that water services are broken or damaged between the meter and the point of service, the Contractor shall immediately at his own expense, repair such damage, in a manner satisfactory to the Engineer, in order that the water supply will not be interrupted for a period greater than one hour. If such interruption is sustained, it shall be the Contractor’s responsibility to notify the occupants of the premises to which said services are connected so that no damage will occur on said premises. Whenever damage is done to water meters, services between the Water District mains and said meters, fire hydrants or other appurtenances, the Water District forces shall make such needed repairs at the Contractor’s expense.

E. In the event damage is done to any gas, electric, or telephone facility by the Contractor, he shall notify the respective utility company. Repairs shall be made by the utility company at the Contractor’s expense.

F. In the event that sanitary sewer laterals are broken or damaged between the point of service and the sanitary main, the Contractor shall immediately, at his own expense, repair such damage, in a temporary manner satisfactory to the Engineer, in order that service will not be interrupted for a period greater than one hour. When such interruption occurs, it shall be the Contractor's responsibility to notify the occupants of the premises to which said service is connected so that no damage will occur on said premises and to notify Union Sanitary District so that permanent repairs may be made at the Contractor’s expense.

G. The Contractor shall take precautions to prevent any damages to existing improvements and landscaping, which is to remain in place, in the work area on both public and private properties. If the existing improvements or landscaping on public or private property are damaged, the Contractor shall repair such damage, at his own expense, to the satisfaction of the Engineer.

H. The Contractor shall verify the exact location of all existing utilities and shall notify the Engineer and the regional notification center for operator of subsurface installations at least two working days, but not more than 14 calendar days, prior to performing any excavation or other work close to any underground pipeline, conduit, duct, wire, or to the structure. The regional notification center is:

UNDERGROUND SERVICE ALERT (USA) TEL: 1-800-227-2600

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I. At those sites not serviced by Underground Service Alert, the Contractor shall be responsible for locating all existing utilities prior to commencing any work. Contractor shall pothole utilities to determine approximate depths of utilities.

J. Measurement and Payment: Payment for conforming to the provisions in this section "Obstructions" not otherwise provided for, shall be considered as included in the prices paid line for the various items of work involved and no additional compensation will be allowed therefor.

1.10 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

1.11 TESTING

A. 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.

1.12 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, 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.

1.13 CLEAN-UP

A. Refer to Section 01 74 23 "Final Cleaning"

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PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

3.01 MEASUREMENT AND PAYMENT

Full compensation for conforming to the provisions in this Section, "**Supplemental Conditions"**, 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 00 00

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SECTION 01 25 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.
2. Specified options of products and construction methods included in Contract Documents.
3. Contractor's determination of and compliance with governing regulations and orders issued by governing authorities.
4. 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.
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

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Construction Coordinator for additional processing and evaluation services, increase costs of other construction by Owner, and similar considerations.

a. 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 32 19 "Submittal Procedures" and Section 01 33 23 "Shop Drawings, Product Data, and Samples".

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.

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.

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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 33 23.

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:

a. 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 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.

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a. 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 33 23 "Shop Drawings, Product Data, and Samples".

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 Used.

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 01 25 00

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SECTION 01 32 00 Project Progress Schedule

PART 1 GENERAL

1.01 RELATED SECTION

A. General Conditions, Article 5 (5.2) "Schedule Requirements".

1.02 DEFINITIONS

A. Baseline Schedule: The first schedule submitted by the Contractor and approved by the Engineer in accordance with Article 5.2(A) of the General Conditions.

B. Progress Schedule: Subsequent schedules submitted by the Contractor and approved by the Engineer that modify the Baseline Schedule, in accordance with Article 5.2(C) of the General Provisions.

C. Contract Schedule: The Baseline Schedule and all subsequent Progress Schedules.

1.03 INTENTION

A. Baseline (As-Planned) Schedule: The Project is to be substantially complete within a total maximum of **thirty (30) working days** after the date specified in the City's Notice To Proceed. Final Completion and final occupancy must be achieved within **forty (40) working days** after the date specified in the City's Notice to Proceed, including all punch list items, and acceptance by the City. Refer to Section 2 of the Notice Inviting Sealed Bids for Contract Time.

1. The Baseline schedule must incorporate delivery of long-lead items without any slack in the schedule.

2. Contract Schedules will represent a practical plan to complete the Work within the Contract time(s) of completion as indicated in Article 5 of the project General Conditions, and will convey the Contractor's intent in the manner of prosecution and progress of the Work.

3. The submittal of the Contract Schedule will be understood to be the Contractor's representation that the Contract Schedule meets the requirements of the Contract Documents and that the Work will be executed in the sequence and duration indicated in the Contract Schedule.

4. The scheduling and execution of construction in accordance with the Contract Documents are the responsibility of the Contractor. The Contractor will involve and coordinate all Subcontractors and material Suppliers in the development and updating of progress schedules.

B. For Baseline and Alternate 1 Schedule: The Project is to be substantially complete within a total maximum of **forty-two (42) working days** after the date specified in the City's Notice To Proceed. Final Completion and final occupancy must be achieved within **fifty-two (52) working days** after the date specified in the City's Notice to Proceed, including all punch list items, and acceptance by the City. Refer to Section 2 of the Notice Inviting Sealed Bids for Contract Time.

C. For Baseline and Alternate 1 and 2 Schedule: The Project is to be substantially complete within a total maximum of **forty-eight (48) working days** after the date specified in the City's Notice To Proceed. Final Completion and final occupancy must be achieved within **fifty-eight (58) working days** after the date specified in the City's Notice to Proceed, including all punch list items, and acceptance by the City. Refer to Section 2 of the Notice Inviting Sealed Bids for Contract Time.

D. Progress Schedule shall be the basis for evaluating job progress, payment requests,

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and time extension requests. Responsibility for developing Critical Path Method (CPM) schedule and monitoring actual progress as compared to Progress Schedule rests with Contractor.

E. The progress schedule shall clearly show sequence and duration of major construction activities, interim milestones or completion dates required in the Contract, and the controlling operation or operations.

F. Failure of Progress Schedule to include any element of the Work or any inaccuracy in Progress Schedule will not relieve Contractor from responsibility for accomplishing the Work in accordance with the Contract. City's acceptance of schedule shall be for its use in monitoring and evaluating job progress, payment requests, and time extension requests, and shall not, in any manner, impose a duty of care upon City, or act to relieve Contractor of its responsibility for means and methods of construction.

G. Failure of Progress Schedule to include any element of the Work or any inaccuracy in Progress Schedule will not relieve Contractor from responsibility for accomplishing the Work in accordance with the Contract. City's acceptance of schedule shall be for its use in monitoring and evaluating job progress, payment requests, and time extension requests, and shall not, in any manner, impose a duty of care upon City, or act to relieve Contractor of its responsibility for means and methods of construction.

H. City Review of Schedules: Refer to General Conditions, Article 5 (5.2) (B).

1. A schedule must not show completion dates beyond the Contract requirements for the interim target dates, milestones or Contract completion. The Contract completion date shall be based on the working days designated in the Contract and not on a proposed early completion shown in the schedule.

2. The schedule submitted shall meet, in all respects, the time and order of work requirements of the Contract. The work shall be executed in the sequence indicated in the schedule and subsequent updates and revisions. The Contractor shall be responsible for assuring that all work sequences are logical and the schedule shows a coordinated plan for complete performance of the work. Failure of the Contractor to include any element of the work required for the performance of the Contract in the network shall not relieve the Contractor from completing all work within the time limit specified for completion of the Contract. If the Contractor fails to define any element of work, activity, or logic, and the omission of error is discovered by either the Contractor or Engineer, it shall be corrected by the Contractor at the next scheduled monthly update or revision.

3. The Contractor shall allow fifteen (15) days for the Engineer to review the schedule and provide any comments, a favorable review of the schedule, or request a meeting to review the schedule. When completed, the agreed upon Progress Schedule shall be the one used by the Contractor for planning, organizing, and directing the work, and for reporting progress. Upon agreement, this will be deemed the Original Progress Schedule and shall be updated to reflect the current status of work.

I. Progress Schedule: Shall include or comply with following requirements:

1. Time scaled, cost and resource (labor and major equipment) loaded CPM schedule.

2. Identify the activities which constitute the controlling operations or critical path.

3. Individual activities that are not significant in themselves and create a series of parallel paths shall be grouped within major activities or combined to form a more general major activity. The actual number of activities shall be sufficient to assure adequate planning of the project and to permit monitoring and evaluation of

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progress and analysis of time impacts and not to primarily manage the various resources that may be used by the Contractor.

4. Major activities are defined as single activities or groups of activities that create a significant portion of the project due to location, related type of work, or common completion dates.

5. Major activities shall have durations of not less than five (5) nor more than twenty (20) working days. Milestone of transitional activities may have a duration of less than five (5) days. Isolated major activities, concurrent, or combined activities may have more than twenty (20) working days when approved by the Engineer.

6. Activity durations shall be total number of actual work days required to perform that activity.

7. The start and completion dates of all items of Work, their major components, and milestone completion dates, if any.

8. City-furnished materials and equipment, if any, identified as separate activities.

9. Activities for maintaining Project Record Documents.

10. Dependencies (or relationships) between activities.

11. Processing/approval of submittals and shop drawings for all Contract-required material and equipment. Activities that are dependent on submittal acceptance or material delivery shall not be scheduled to start earlier than expected acceptance or delivery dates.

    a. Include time for submittals, re-submittals, and reviews by City. Coordinate with accepted schedule for submission of shop drawings, samples and other submittals.

    b. Contractor shall be responsible for all impacts resulting from re-submittal of shop drawings and submittals.

12. Procurement of major equipment, through receipt and inspection at jobsite, identified as separate activity.

    a. Include time for fabrication and delivery of manufactured products for the Work.

    b. Show dependencies between procurement and construction.

13. Activity description; what Work is to be accomplished and where.

14. The total cost of performing each activity shall be total of labor, material, equipment, including overhead and profit of Contractor.

15. Responsibility code for each activity corresponding to Contractor or Subcontractor responsible for performing the Work.

16. Interface with the work of other contractors, City, and agencies such, as but not limited to, utility companies.

17. Show detailed Subcontractor Work activities. In addition, furnish copies of Subcontractor schedules upon which CPM was built.

    a. Also furnish for each Subcontractor, as determined by City, submitted on Subcontractor letterhead a statement certifying that Subcontractor concurs with Contractor's Original CPM Schedule and that Subcontractor's related schedules have been incorporated, including activity duration, cost and resource loading.

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b. Subcontractor schedules shall be independently derived and not a copy of Contractor's schedule.

c. In addition to Contractor's schedule and resource loading, obtain from electrical, mechanical and plumbing Subcontractors, and other subcontractors as required by City, productivity calculations common to their trades, such as units per person day, feet of pipe per day per person, feet of wiring per day per person, and similar information.

d. Furnish schedule for Contractor/Subcontractor CPM schedule meetings which shall be held prior to submission of Original CPM schedule to City. City shall be permitted to attend scheduled meetings as an observer.

18. Activity durations shall be in Work days with the exception of the Plant Establishment Period.

19. Any such agreement shall be formalized by a Change Order. The City shall not pay for acceleration if the contractor requests an earlier (Advanced) time of completion.

20. The City is not required to accept an earlier (advanced) schedule, i.e., one that shows early completion dates for the Contract Working Days.

21. The Contractor shall not be entitled to extra compensation in the event agreement is reached on an earlier (advanced) schedule and Contractor completes his Work, for whatever reason, beyond completion date shown in earlier (advanced) schedule but within the Contract Times.

22. A schedule showing the work completed in less than the Contract Times, which has been accepted by City, shall be considered to have Project Float. The Project Float is the time between the scheduled completion of the work and Contract Substantial Completion. Project Float is a resource available to both City and the Contractor.

23. Float Ownership: Refer to Article 5 (5.2)(C)(1) of the General Conditions. The Project owns the float. As such, liability for delay of the Completion Date rests with the party whose actions, last in time, actually cause delay to the Completion Date.

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

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

J. Recovery Schedule: Refer to General Conditions, Part 5.2.D

K. Effect of Acknowledgement: Refer to General Conditions, Part 5.2.E

L. Posting: Refer to General Conditions, Part 5.2.F

M. Reservation of Rights: Refer to General Conditions, Part 5.2.G

1. The City reserves the right to require additional submittals from the Contractor, to be submitted at the pre-construction meeting, that are not specifically identified herein. If so requested, the Contractor shall provide the Engineer with six (6) copies of any additional submittals, or if directed, provide all submittal electronically, if they do not coincide with a physical product material.

N. Authorized Working Days and Times: Refer to General Conditions, Part 5.2.H

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O. Additional requirements for Work Schedules:

1. Progress Schedule Updates: An update is defined as a regular monthly submittal and review of the schedule to incorporate actual progress to date by activity; any approved time adjustments, anticipated changes to planned activities, and projected completion dates. A revision is defined as a change in the future portion of the schedule that modifies logic, adds or deletes activities, or alters activities, sequences or durations.

2. When the monthly update is completed, the Contractor shall meet with the Engineer to review Contract progress. At that meeting, the Contractor shall identify and discuss potential problem areas; current and anticipated delaying factors and their impacts; actions taken or proposed; proposed changes in schedule; out of sequence work; and any other topics related to job progress or scheduling. The Contractor shall update the most recent schedule to incorporate all current schedule information, including actual progress, approved adjustments of time and proposed changes in sequence and logic.

3. The Engineer may use these and other information in evaluating the effect of the changes, delays, or time savings on the accepted schedule current at the time to determine the applicable adjustment of time, if any to any target date or completion date due to the changes, delays, or time savings.

Part 2 Products

Not Used.

Part 3 Execution

3.01 MEASUREMENT AND PAYMENT

Full compensation for conforming to the provisions of this section "**Project Progress Schedule**" shall be considered as included in prices paid for "**Mobilization**" and no additional compensation will be allowed therefor.

END OF SECTION 01 32 00

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SECTION 01 32 19 Submittal Procedures

PART 1 GENERAL

1.01 RELATED DOCUMENTS

A. General

Drawings and General Conditions of the Contract, including Division 1 Specifications, apply to this Section.

1. Refer to General Conditions, Part 2.5 “Submittals”.
2. Section 01 25 00 “Product Substitution Procedures” for product substitutions.
3. Section 01 60 00 “Product Requirements” for Product Options

B. Timing and Manner of Submission:

1. Submittals shall begin to be provided to the City immediately after award of contract by City Council. Do not submit all at one time. Submit in accordance with the sequence of procurement, fabrication and construction.
2. Make submittals far enough in advance of scheduled dates of installation to allow the time required for reviews, for securing necessary approvals, for possible revision and re-submittal, and for placing orders and securing delivery.
3. For items with long lead times, those items will be submitted first in order to get review and approvals, and submit for requisition of those items.4.

   Submittal quantities:

   a. If submitted electronically, provide 1 copy in .pdf format, and all electronic .pdf submittals must be followed up with 1 hard copy mailed to the City to ensure the submittal is received.
   b. If hard copies are submitted, provide six (6) hard copy submittals.
   c. Samples: Provide 1 product sample at the required dimensions described elsewhere in these specifications, for the appropriate products.

C. Required Content

1. Identify each submittal and re-submittal with the following information:
   a. Project name and address as they appear on the Contract Documents.
   b. Contract name and number.
   c. Contractor's name and address.
   d. Date of submission.
   e. Numbering System: Submittals shall be identified by sequential numbering (ie, 001, 002, 003, etc.) Any re-submittals shall be numbered sequentially according to the original submittal number, followed by the subscript ".1, .2, .3” (ie, 001.1, 001.2, etc.). Submittals and re-submittals shall be kept intact with the original number. Do not add new drawing or information outside the scope of the original submittal, unless specifically requested. Do not assign a new number for a re-submittal.
   f. Reference: List Specification Section number and product reference as a cross reference for each submittal.
   g. Do not submit separate submittals for items that can be in combined

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submittals. Only provide separate submittals if specific items in question require re-submittal due to a “revise and resubmit” request.

2. Identify each submittal with the following additional identification:

   a. Contractor's stamp with initials or signature, certifying to review of submittal, compliance with Contract Documents, coordination with other impacted work, and verification of field measurements.

   b. Drawing and Specification Section numbers to which the submittal applies.

   c. Subcontractor's or supplier's name and address.

   d. Name and telephone number of the individual to contact for additional information regarding the submittal.

   e. Whether it is an original or a re-submittal.

3. Coordination of Submittals: Prior to submittal for the Project Manager's review, as applicable, fully coordinate material as follows:

   a. Determine and verify field dimensions and conditions, materials, catalog numbers, and similar data.

   b. Coordinate shop drawing submittals with previously issued Addenda and Information Bulletins.

   c. Coordinate with the various types of Work and public agencies involved.

   d. Secure necessary approvals from public agencies and others and signify by stamp, or other means, that approvals have been secured.

   e. Unless otherwise specifically permitted by the Project Manager, make submittals in groups containing all associated items.

4. Completeness: Submittals shall be complete; partial submittals will be rejected for not complying with the Contract Documents.

D. Required Corrections and Re-submittals:

1. Subject to same terms and conditions as original submittal.

2. Project Manager will accept not more than one (1) re-submittal.

   a. Should additional re-submittals be required, Contractor shall reimburse Owner for Construction Manager’s account and Project Manager’s account for time spent in processing additional re-submittals at rate of 3.25 times rate of Direct Personnel Expense (DPE). Direct Personnel Expense is defined as direct salaries of Construction Manager’s and Project Manager’s 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 contributions and benefits.

E. Effect of Review and Acknowledgement by City

1. The Project Manager, as applicable, will review the Submittals or shop Drawings; mark the submittal or shop drawings with required revisions; stamp the submittal or shop drawings and indicate "No Exceptions Taken," "Make Changes Noted," or "Revise and Resubmit”. "Revise and Resubmit” stamps shall not be construed by the Contractor as a valid reason for an extension of time request.

2. Review the returned submittal or shop drawings and take appropriate action as indicated.

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a. If submittal or shop drawings are marked "Revise and Resubmit," make revisions and indicate them with a "cloud," stamp and date, and resubmit in the same manner and number as for the original submittal.

b. If submittal or shop drawings are marked "No Exceptions Taken" or "Make Changes Noted", print and distribute copies for Owner and Inspector, as well as those required for Contractor and Subcontractors.

3. The Project Manager, as applicable, may review at their discretion up to one re-submittal and take action, as appropriate, in the same manner as for the original submittal. If more than one re-submittal is required, any associated costs as a result of additional reviews shall be an extra service of the Project Manager, or his consultants, and will be processed as a deductive Change Order.

4. As with the original submittal, review the returned submittals or shop drawings and take appropriate action as indicated. As specified hereinabove, resubmit and revise until final action by the Project Manager, as applicable. Final action is signified by the markings "No Exceptions Noted," or "Make Changes Noted," on the returned shop drawings.

5. Following final action by the Project Manager, the Contractor shall make copies and distribute as required for accomplishment and inspection of the indicated Work.

6. Only those submittals or shop drawings which bear stamps showing final review of the Contractor, or the Project Manager, or the Project Manager's consultants, or the Owner's consultants, as applicable, shall be used.

7. Reproduction and Mailing Costs: The Contractor shall pay the reproduction and mailing costs of the sepias and all prints.

F. Enforcement: Refer to General Conditions, Part 2.5

G Excessive RFI's: Refer to General Conditions, Part 2.5

H. Additional Requirements for Submittals: See Part 3.01 herein

1.02 SHOP DRAWINGS, SUBMITTALS, PRODUCT DATA, SAMPLES, AND OTHER SUBMITTALS

A. Shop Drawings:

1. Submit copies, as required herein.

B. Product Data:

1. Comply with all requirements for submittals of material chemical content, ventilation requirements during installation, maintenance requirements, and emissions test data specified in Division 1 and technical Specification Sections.

2. Submit in the quantity required to be returned, together with four additional copies each of brochures, catalog cuts, and similar material for mechanical, electrical, hardware, and elevator items; and three additional copies for all others.

3. Review, processing, and distribution of Product Data shall be the same as that for Shop Drawings.

C. Samples:

1. Submit in the size specified in the individual Specification SECTIONS, and in the quantity required to be returned, together with one additional Sample, which will be retained by the Project Manager or his consultants, or the Owner's consultants, as applicable.

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2. Where Samples have natural variations in texture, color, or dimension, submit Samples showing the extreme range plus the middle range of variation.

3. Ship samples to the Project Manager's or consultant's office, carriage prepaid. Samples to be returned to the Contractor will be shipped, carriage collect.

4. Patterns and Colors: Unless the exact pattern and color of a product are indicated in the Contract Documents, whenever a choice of pattern or color is available for a product, submit accurate color charts and pattern charts to the Project Manager for his review and selection.

5. Other Submittals: Submit as specified in the individual Specification Section.

6. Certificates of Compliance:

   a. Submit certificates of compliance with the associated Shop Drawings, Product Data, Samples, and other submittals required for the product.

   b. Submit on 8-1/2 x 11 inch white paper.

   c. Submit six (6) copies.

   d. The Project Manager will retain the certificates of compliance; no review reply is intended.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

3.01 SUBMITTALS REQUIRED AT THE PRECONSTRUCTION MEETING

A. The Contractor shall provide six (6) copies of each of the following submittals to the Engineer at the pre-construction meeting, if these have not been previously provided:

1. Designation of Superintendent

2. A list of all permits and licenses the Contractor has obtained indicating the agency that issued the permit or if the permit has not been obtained, the expected date of receipt of the permit.

3. **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.

4. Construction Schedule

5. A **Waste Handling Plan** (See Section 1505) is required within 10 days of the issuance of a Notice to Proceed.

6. Health and Safety Plan (HASP): The Contractor shall submit a preliminary HASP at the pre- construction meeting for the review and approval of the Engineer. All edits and questions must be addressed and resolved, and a final HASP must be submitted prior to start of Work. The HASP shall conform to the requirements of

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Title 8 of the CCR and title 29 of the CFR, as well as all other relevant statutes and requirements.

7. Site Operations Workplan (SOW): A preliminary SOW shall be submitted for review and approval by the Engineer at the pre-construction meeting. The SOW shall include a detailed description of any conflicts between proposed equipment locations and landscape /tree protection measures, along with a proposed remedial plan. All edits and questions must be addressed and resolved, and a final SOW must be submitted prior to start of Work. The SOW shall identify the work areas, including a site plan showing location of offices, access, proposed stockpile/staging areas, equipment operation and storage areas, landscape maintenance, and storm water runoff control measures. The SOW shall describe the Contractor's sequence and schedule of detailed activities for demolition, including: mobilization; termination of utilities at the property boundaries or as directed by the City; removal, segregation, and control of materials identified as potentially hazardous requiring disposal off-site; general building salvaging, recycling, and demolition; removal and disposal of hazardous and non-hazardous materials off-site; providing, placing, and compaction of fill material in basement excavation; grading; site work, and demobilization. The SOW shall also include a list of the equipment to be used for each phase of work, as well as minimum operating distances from active utilities, existing trees to remain, the skate park, the library, existing parking lots, hardscapes to remain, and a discussion of anticipated problems or difficulties and possible responses. The Contractor shall submit, as part of the SOW, a plan for minimizing the amount of dust and noise affecting the corporation yard. A California-registered engineer, or equivalent shall stamp the plan.

8. General Contractor shall provide a list of all proposed project submittals, if not previously submitted for review.

9. Certified Payroll Reports and Statements of Compliance.

3.02 MEASUREMENT AND PAYMENT

Full compensation for conforming to the provisions in this section "**Submittals,"** 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 01 32 19

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SECTION 01 32 30 Photographic Documentation

PART 1 GENERAL

1.01 GENERAL

A. Photographic documentation performed by the General Contractor and their subcontractors for various milestones in the projects as described herein.

1.02 PHOTOGRAPHIC DOCUMENTATION

A. The Contractor shall take photographs of the existing conditions of the entire jobsite prior to the start of demolition and construction and monthly after the start of construction, and upon encountering unforeseen underground utilities or other conditions.

1. Prior to construction to document conditions within the work area;
2. Start of construction, including clearing and grubbing and demolition operations, as applicable;
3. Upon encountering unforeseen underground utilities or other conditions
4. Anytime a problem arises that may result in a Notice of Potential Claim and the problems can be illustrated by photographs.
5. Highlights of all formal Inspections; and
6. Highlights of all undergrounding work and utility crossings; and
7. Highlights of the Final Inspection and Acceptance by the District.

B. Photographs shall be provided to the Engineer digitally, by email or thumb drives, or burned to CD's capable of being downloadable to a personal computer on pdf or jpg format with the following requirements:

1. Minimum resolution: 1024 x 768 pixels
2. Colors: 24 bits per pixel.

C. Photographs shall show an unobtrusive time and date indicator on each photo, accurately depicting the time and date when the photography was performed.

D. The following information shall be furnished for each digital photograph in a manner approved by the Engineer.

1. Title of Contract and Contract Number;
2. Identification of subject shown;
3. Station point of camera and direction of view;
4. Time and date taken.

E. CD's or thumb drives shall be labeled with the same identifying information specified above for photographs.

1.03 VIDEO RECORDINGS

A. The Contractor shall provide video recordings to supplement contract photographs of certain construction milestones and events as indicated herein:

1. Start of construction including clearing and demolition operations, as applicable;

2. Highlights of all formal inspections; and

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3. Highlights of the final inspection and acceptance by the City.

B. Video recordings shall be standard definition DVD - Video format and stored on a DVD optical disc.
C. Video recordings shall include a complete, clearly spoken narration of the events being photographed. Also, video recordings shall include an unobtrusive time and date indicator on the film, accurately depicting the time and date when the photography was performed.
D. The DVD disc shall be labeled with the same identifying information specified above for photographs. In addition, the narration of each recording shall lead off with this same identifying information.
E. Individual digital video files shall use the file naming convention indicated in 1.02 above, however, the filename shall be modified such that the first character shall be "V" for video instead of "P".

1.04 DISPUTES AND POTENTIAL CLAIMS

A. In the event a problem arises or dispute occurs which may result in a Notice of Potential Claim under Section 9-1-04 of the Caltrans Standard Specifications and the problem or dispute can be illustrated by photographs and DVD recordings, the Contractor shall provide such photographs and DVDs

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

3.01 MEASUREMENT AND PAYMENT

Full compensation for conforming to the provisions in this section "**Photographic Documentation**," 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 01 32 30

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SECTION 01 33 23 Shop Drawings, Product Data, and Samples

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Definitions

B. Submittals.

C. Shop drawings.

C. Other submittals.

E. Product data.

F. Samples

1.02 RELATED SECTIONS

A. Refer to General Conditions, Article 2.6 “Shop Drawings”.

1.03 DEFINITIONS

A. The term “Shop Drawings,” as used herein, 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, erection, installation, application, layout, settings, and the like, of items required by or shown in the Drawings and Specifications, including lists or schedules of materials and equipment, manufacturer’s standard drawings, wiring and control diagrams, all other drawings as may be required to show that the materials, equipment, and systems, and the positions thereof.

B. The term “product data,” as used herein, includes manufacturer-prepared descriptive literature, catalog sheets, brochures, performance data, test data, printed diagrams, schedules, illustrations, and other information furnished by the Contractor or the various product and materials suppliers to illustrate and describe a product, material, system, or assembly for some portion of the Work.

C. The term “samples,” as used herein, are physical examples which illustrate materials, equipment, colors, textures, finishes, functions, configuration, and work quality, and establish the standards of quality and utility by which the Work will be judged for acceptance.

1.04 SUBMITTALS

A. Shop drawings, product data, and samples will be submitted in accordance with Article 2.6 of the General Conditions and Article 15 of the Special Conditions, Section 01 32 19, Submittal Procedures.

B. Review processing and distribution will the same as the Submittal processing.

C. Quantities:

1. Six (6) full size bond prints of each shop drawing and one (1) scanned electronic copy.

2. Six (6) copies of manufacturers’ standard schematic drawings and one (1) scanned electronic copy.

3. Six (6) copies of Contractor’s or manufacturers’ calculations, and six (6) copies of manufacturers’ standard data, and one (1) scanned electronic copy.

4. Six (6) copies of manufacturers’ printed installation, assembly, erection, application, and placement instructions, and one (1) scanned electronic copy.

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5. Two (2) of each sample item specified in the various Specification Sections, unless otherwise specified.

   a. Where samples have natural variations in texture, color, or dimension, submit samples showing the extreme range plus the middle range of variation.

   b. Unless the exact pattern and color of a product are indicated in the Contract Drawings or Specifications, whenever a choice of pattern or color is available for a product, submit accurate color charts and pattern charts to the Engineer for review and selection.

6. Six copies of inspection reports, test reports, and certificates of compliance.

7. Where submittals are submitted to the Engineer for information or record purposes, submit two copies.

8. Where permits and licenses and other such documents are obtained in the City's or BART's name, submit the original and one copy.

1.05 SHOP DRAWINGS

A. Shop drawings will be prepared in accordance with ANSI Y14.1, Drafting Standards Manual, and the following requirements:

1. Shop drawings will be limited to the following standard sizes in inches: Maximum size will be 22 inches by 34 inches.

Name	WIDTH (Vertical)	LENGTH (Horizontal)
ANSI A	8 1/2 inches (215.9mm)	11.0 inches (279.4mm)
ANSI B	11.0 inches (279.4mm)	17.0 inches (431.8mm)
ANSI C	17.0 inches (431.8mm)	22.0 inches (558.8mm)
ANSI D	22.0 inches (558.8mm)	34.0 inches (863.6mm) (Maximum)

2. Each shop drawing will have the following information in the title block:

   a. Project name and contract number

   b. Shop drawing number, date, title, revision number, and sheet number

   c. Contract number, Contract sheet number, Contract page number.

   d. Contractor's name and address.

   e. Subcontractor/manufacturer/supplier name and address (if applicable)

   f. Name of installation location.

   g. Specifications section(s) and/or drawings and detail numbers.

3. Each shop drawing will use symbols from one standard reference source. The Contractor will furnish a complete symbol list that includes non-standard symbols used on the shop drawing. Symbols used will conform to the list of standard references as listed below:

   a. Institute of Electrical and Electronic Engineers (IEEE).

   b. National Electric Manufacturer's Association (NEMA).

   c. ANSI Y14: American National Standards Institute "Drafting Standards Manual".

   d. ANSI Y10: American National Standards Institute "Letter Symbols for Drafting".

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e. ANSI Y32: American National Standards Institute “Graphic Symbols for Drafting”.

4. Each shop drawing will include details necessary for the procurement, installation, maintenance, and repair of all components or facilities equipment provided. Change Order notices that are attached to shop drawings will not constitute revised shop drawings. Each shop drawing will include all changes and be upgraded to reflect the latest configuration.

B. Shop drawings will be submitted in accordance with the following requirements:

1. The first shop drawing submitted by the Contractor will be reviewed for conformance to the requirements herein. Once approval is given, the Contractor will use this approved drawing as the standard, and prepare subsequent drawings to a quality equal to or better than the approved standard.

2. Each shop drawing prepared and submitted for review will have in the lower right hand corner, just above the title block, a five-inch square blank space in which the Engineer may indicate the action taken.

3. All final approved shop drawings and catalog cuts will be submitted to the Engineer upon completion of the Work as specified in Article 15 of the Special Conditions, Section 01 78 39, Project Record Documents.

C. When specified, shop drawings related to BART facilities that are prepared and submitted electronically, such drawings will be created using AutoCAD. Shop drawings to be prepared and submitted electronically include shop drawings which will be utilized as illustrations and drawings in Operation and Maintenance Manuals.

1.06 OTHER SUBMITTALS

Other submittals will be furnished upon request for the Engineer’s approval to verify compliance of all equipment and materials with the Contract Documents. These submittals will include in addition to drawings: catalog cuts, certifications of compliance, or any other substantiating information or samples of material items as necessary.

1.07 PRODUCT DATA

A. The Contractor will modify manufacturers’ standard diagrams, charts, illustrations, brochures, calculations, schematics, catalog cuts, and other descriptive data to delete information which is not applicable to the Contract. The Contractor will supplement standard information with additional information applicable to this Contract, and indicate dimensions, clearances, performance characteristics, capacities, wiring and other diagrams, and controls.

B. If the Contractor utilizes drawings prepared by others, such drawings may include the standards and symbols of others if the drawings are a mix of existing product drawings and drawings prepared specifically for this Contract. In the event others provide drawings prepared specifically for this Contract, such drawings will conform in symbols, media and standards to the Contractor’s drawings.

C. The Contractor will modify the manufacturer’s printed installation, erection, application, and placing instructions to delete information which is not applicable to the Contract.

D. Submittals will include the following:

1. Date and revision dates.

2. Contract title and number.

3. Reference Contract Drawing numbers.

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4. Applicable Contract Specification Section numbers.
5. Identification of product by either description, model number, style number, serial number, or lot number.
6. The names of the Contractor, Subcontractors, Suppliers, and manufacturers as applicable.
7. Applicable standards, such as ASTM or Federal specification numbers.

E. Certificates of Compliance:

1. The Engineer may permit the use of certain materials prior to sampling and testing if accompanied by a certificate of compliance stating that the materials involved comply in all respects with the requirements of the Contract Documents. The certificate will be signed by the manufacturer of the material. A certificate of compliance will be furnished with each lot of material delivered to the Work, and the lot so certified will be clearly identified in the certificate.
2. All materials used on the basis of a certificate of compliance may be sampled and tested at any time. The fact that material is used on the basis of a certificate of compliance will not relieve the Contractor of responsibility for incorporating material in the Work which conforms to the requirements of the Contract Documents. Any such material not conforming to such requirements will be subject to rejection whether in place or not.
3. The Engineer reserves the right to refuse the use of material submitted for approval solely on the basis of a certificate of compliance.
4. The form of the certificate of compliance and its disposition will be as approved by the Engineer.

1.08 SAMPLES

A. The Contractor will furnish to the Engineer samples required by the Contract Documents. Samples will be submitted without charge, with shipping charges prepaid. Materials for which samples are required will not be used in the Work until approved in writing by the Engineer.

B. Sample Label: Each sample will be labeled with the following data:

1. Name, number, and location on project;
2. Name of Contractor;
3. Material or equipment represented, and location in the project;
4. Name of producer, brand, trade name if applicable, and place of origin; and
5. Date of submittal.

C. The Contractor will forward a letter in triplicate to the Engineer submitting each shipment of samples and containing the information listed on the Sample Label specified herein. Approval of a sample will be only for the characteristics and use named in the submittal and approval, and will not be construed to change or modify any Contract requirement. Before submitting samples, the Contractor will assure itself that the materials or equipment will be available in the quantities required in the Contract, as no change or substitution will be permitted after a sample has been approved unless such change or substitution is approved by the Engineer in writing.

D. Samples of material from local sources will be taken by or in the presence of the Engineer. Samples taken otherwise will not be considered for testing.

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E. Inspection and tests will be made, but it is understood that such inspections and tests, if made at any point other than the point of incorporation in the Work, in no way will be considered as a guaranty of acceptance of any material which may be delivered later for incorporation in the Work.

F. Approved samples not damaged in testing may be incorporated in the finished work if marked for identification and approved by the Engineer. Materials incorporated in the Work will match the approved samples.

G. Failure of any material to pass the specified tests will be sufficient cause for refusal to consider, under the Contract, any further samples of the same brand, make, or source of that material. The Engineer reserves the right to disapprove any material which has previously proven unsatisfactory in service.

H. Samples of material delivered to the site or installed in place may be taken by the Engineer for testing. Failure of samples to meet Contract requirements will annul previous approvals of the item tested.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

3.01 MEASUREMENT AND PAYMENT

Full compensation for conforming to the provisions in this Section "**Shop Drawings, Product Data, and Samples**", 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 33 23

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SECTION 01 41 00 Regulatory Requirements

PART 1 GENERAL

1.01 SUMMARY

This section includes regulatory and environmental requirements applicable to Contract.

1.02 SECTION INCLUDES

A. This Section provides terms associated with the Contract environmental requirements

B. Federal Water Pollution Control Act, refer to Section 01 57 19 “Temporary Environmental Controls”

C. Chemicals, refer to Section 01 57 19 “Temporary Environmental Controls”

D. Hazardous Substances Waste Materials and Asbestos, refer to Article 10.2 of the General Conditions and Section 01 57 19 elsewhere herein

E. References to Regulatory Requirements

F. Compliance with Americans with Disabilities Act

1.03 RELATED SECTIONS

A. Section 01 57 19 “Temporary Environmental Controls”

B. Section 01 57 23 “Statewide Construction General Permit (Erosion and Sediment Control)”

C. Section 01 56 39 “Tree Protection”

D. Section 31 00 00 “Earthwork”

1.04 REGULATORY REQUIREMENTS

A. Summary

1. This section includes regulatory requirements applicable to Contract.

B. References to Regulatory Requirements

1. Codes, laws, ordinances, rules and regulations applicable to the Work shall have full force and effect as though printed in full in the Contract. Codes, laws, ordinances, rules and regulations are not furnished to Contractor, since Contractor is assumed to be familiar with their requirements. The listing herein of applicable codes, laws and regulations for hazardous waste abatement work is supplied to Contractor as a courtesy and shall not limit Contractor's responsibility for complying with all applicable laws, regulations or ordinances having application to the Work. Where conflict among the requirements or with these specifications exists, the most stringent requirements shall be used.

2. Contractor's work shall conform to all applicable codes, laws, ordinances, rules and regulations which are in effect on date of contracting.

3. References on the Drawings or in the Specifications to "code" or "building code" not otherwise identified shall mean the codes specified below, together with all additions, amendments, changes, and interpretations adopted by code authorities of the jurisdiction.

C. Codes which apply to Contract include, but are not limited to, the following:

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1. California Building Code (Part 2, Title 24, C.C.R., including, without means of limitation, sections 11A, 11B, 16A, 102A.23, 308, 420A, 504-506, 904.2.6, 1019 and 1604)
2. California Electrical Code (Part 3, Title 24, C.C.R.)
3. California Mechanical Code (Part 4, Title 24, C.C.R.)
4. California Plumbing Code (Part 5, Title 24, C.C.R),
5. National Electrical Code

D. Laws, Ordinances, Rules and Regulations

1. During prosecution of Work to be done under Contract, comply with applicable laws, ordinances, rules and regulations, including, but not limited to, the following:
2. Federal
   a. Americans with Disabilities Act
   b. Federal Water Pollution Control Act
   c. 29 CFR, Section 1910.1001, Asbestos
   d. 40 CFR, Subpart M, National Emission Standards for Asbestos
3. Executive Order 11246
4. State of California
   a. California Code of Regulations, Titles 5, 8, 19, 21, 22, 24 and 25
   b. California Education Code
   c. California Public Contract Code
   d. California Health and Safety Code
   e. California Government Code
   f. California Labor Code
   g. California Civil Code
   h. California Code of Civil Procedure
   i. CPUC General Order 95, Rules for Overhead Electric Line Construction
   j. CPUC General Order 128, Rules for Construction of Underground Electric Supply and Communications Systems
   k. California Occupational Safety and Health Administration (Cal OSHA)
   l. Occupational Safety and Health Administration (OSHA): Hazard Communications Standards.
5. State of California Agencies
   a. State and Consumer Services Agency
   b. Office of the State Fire Marshall
   c. Office of Statewide Health Planning and Development
6. Local Agencies:
   a. Bay Area Air Quality Management District

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b. California Green Building Standard

c. City of Fremont

d. County of Alameda

7. Other Requirements:

a. National Fire Protection Association (NFPA): Pamphlet 101, Life Safety.

b. Energy Efficient Standards

8. City of Fremont:

a. Per the City of Fremont Municipal Code

E. Implementation of environmental mitigations shall be in accordance with the California Environmental Quality Act (CEQA) Guidelines, Title 14, CCR, Section 15091 and the National Environmental Policy Act (NEPA). Environmental mitigations come from the Mitigation Monitoring and Reporting Plan for the BART Warm Springs Extension Project EIR/EIS (see Exhibits - Environmental). Mitigation measures are requirements of regulatory agencies' permits and conditions of approval. The Contractor shall comply with the requirements and conditions specified in the listed Exhibits - Environmental.

1. Section 401 of the Clean Water Act Section, Water Quality Certification issued by the Regional Water Quality Control Board (RWQCB).

2. 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/. (A revised permit was adopted by SWRCB September 2, 2009 and goes into effect July 1, 2010).

1.05 REFERENCES TO REGULATORY REQUIREMENTS

A. Codes, laws, ordinances, rules and regulations applicable to the Work shall have full force and effect as though printed in full in the Contract. Codes, laws, ordinances, rules and regulations are not furnished to Contractor, since Contractor is assumed to be familiar with their requirements. The listing herein of applicable codes, laws and regulations for hazardous waste abatement work is supplied to Contractor as a courtesy and shall not limit Contractor's responsibility for complying with all applicable laws, regulations or ordinances having application to the Work. Where conflict among the requirements or with these specifications exists, the most stringent requirements shall be used.

B. Contractor's work shall conform to all applicable codes, laws, ordinances, rules and regulations which are in effect on date of contracting.

C. References on the Drawings or in the Specifications to "code" or "building code" not otherwise identified shall mean the codes specified below, together with all additions, amendments, changes, and interpretations adopted by code authorities of the jurisdiction.

1.06 COMPLIANCE WITH AMERICANS WITH DISABILITIES ACT

Contractor acknowledges that, pursuant to the Americans with Disabilities Act (ADA), programs, services and other activities provided by a public entity to the public, whether directly or through a contractor, must be accessible to the disabled public. Contractor shall provide the services specified in this Agreement in a manner that complies with the

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ADA and any and all other applicable federal, state and local disability rights legislation. Contractor agrees not to discriminate against disabled persons in the provision of services, benefits or activities provided under this Agreement and further agrees that any violation of this prohibition on the part of Contractor, its employees, agents or assigns shall constitute a material breach of this Agreement.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

3.01 MEASUREMENT AND PAYMENT

Full compensation for conforming to the provisions of this section "**Regulatory Requirements**" shall be considered as included in prices paid for various contract items of work involved and no additional compensation will be allowed therefor, unless specified otherwise.

END OF SECTION 01 41 00

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SECTION 01 42 19 Reference Standards

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Reference Standards

B. Reference Standards File

C. Abbreviations

1.02 REFERENCE STANDARDS

A. The Contract Documents contain references to various standard specifications, codes, practices, and requirements for materials, equipment, work quality, installation, inspections, and tests, which references are published and issued by the organizations, societies, and associations listed herein by abbreviation and name. Such references are hereby made a part of the Contract Documents.

B. Whenever a referenced standard contains administrative requirements, including measurement and payment provisions, such as the standard specifications of various government entities, utility districts, and other agencies, such administrative requirements will not apply to the Work of this Contract. References to such standards will be applicable to the pertinent technical provisions only.

C. In case of a conflict between the Contract Specifications and referenced standards, the Contract Specifications will govern. Unless otherwise specified, reference standards apply only to material, workmanship, and procedure. Commercial terms and legal responsibilities are not intended to be included in the reference.

D. All material, equipment, and workmanship, specified by the number, symbol, or title of a referenced standard will comply with the latest edition or revision thereof and all amendments and supplements thereto in effect on the date of the Invitation to Bid, except where a particular edition or revision thereof is indicated in the reference.

E. Unless otherwise specified, references in the Contract Documents to “Caltrans Standard Specifications” will mean the Caltrans Standard Specifications, 2015 Edition, including any revised standard specifications in effect on the date of the Invitation to Bid.

F. References in the Contract Documents to “Fremont Standard Details” or “City Standard Details” will mean the City of Fremont Standard Details, current edition on the date of the Invitation to Bid.

1.03 REFERENCED STANDARDS FILE

Referenced standards will be obtained by the Contractor and maintained in the Contractor's office. Referenced standards will be made readily available for use by the Engineer and the Contractor’s staff in carrying out the quality assurance and quality control programs specified in the Contract Documents, and to assure compliance with the requirements of the codes, specifications, test methods, practices, and other standards referenced in the Contract Documents.

1.04 ABBREVIATIONS

Wherever in the Contract Documents an organization’s abbreviation or acronym is used, it will be understood to mean the full name of the respective organization as specified in the various Specification Sections, and as follows:

1. AA Aluminum Association

2. AABC Associated Air Balance Council

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3. AAMA American Architectural Manufacturers Association
4. AAN American Association of Nurserymen
5. AAR Association of American Railroads
6. AASHTO American Association of State Highway and Transportation Officials
7. ACI American Concrete Institute
8. AEIC Association of Edison Illuminating Companies
9. AFBMA Anti-Friction Bearing Manufacturer's Association
10. AIMA Acoustical and Insulating Materials Institute
11. AISC American Institute of Steel Construction
12. AISI American Iron and Steel Institute
13. AMCA Air Moving and Conditioning Association
14. ANSI American National Standards Institute
15. APA American Plywood Association
16. API American Petroleum Institute
17. APTA American Public Transportation Association
18. AREMA American Railway Engineering and Maintenance-of-Way Association
19. ARI Air-conditioning and Refrigeration Institute
20. ASHRAE American Society of Heating, Refrigerating, Engineers, Inc. and Air Conditioning
21. ASME American Society of Mechanical Engineers
22. ASNT American Society for Non-destructive Testing
23. ASQC American Society for Quality Control
24. ASTM American Society for Testing and Materials
25. AWPA American Wood Preservers Association
26. AWPI American Wood Preservers Institute
27. AWS American Welding Society
28. AWWA American Water Works Association
29. BAAQMD Bay Area Air Quality Management District
30. BHMA Builders' Hardware Manufacturers Association
31. BSI Building Stone Institute
32. Caltrans State of California, Department of Transportation
33. CARB California Air Resources Board
34. CEQA California Environmental Quality Act
35. CLFMI Chain Link Fence Manufacturers Institute
36. CMAA Crane Manufacturer’s Association of America
37. CPUC California Public Utilities Commission

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38. CRSI Concrete Reinforcing Steel Institute
39. CS Commercial Standards, United States Department of Commerce
40. DEMA Diesel Engine Manufacturer's Association
41. DHI Door and Hardware Institute
42. DOT United States Department of Transportation
43. DSI Dimensional Stone Institute
44. DTSC California Department of Toxic Substances Control
45. EEI Edison Electric Institute
46. EIA Electronic Industries Association
47. FGMA Flat Glass Marketing Association
48. FM Factory Mutual System
49. FS Federal Specification
50. FTA Federal Transit Administration
51. ICBO International Conference of Building Officials
52. ICEA Insulated Cable Engineers Association
53. IEEE Institute of Electrical and Electronics Engineers
54. IES Illuminating Engineering Society
55. IMSA International Municipal Signal Association
56. IPCEA Insulated Power Cable Engineers Association
57. ITE Institute of Traffic Engineers
58. JIC Joint Industrial Council
59. MIA Marble Institute of America
60. MSS Manufacturers Standardization Society
61. NAAMM National Association of Architectural Metal Manufacturers
62. NBFU National Board of Fire Underwriters
63. NEBB National Environmental Balancing Bureau
64. NEC National Electrical Code
65. NEII National Elevator Industry, Inc.
66. NEMA National Electrical Manufacturers Association
67. NFPA National Fire Protection Association
68. NLMA National Lumber Manufacturers' Association
69. NRCA National Roofing Contractors Association
70. NTMA National Terrazzo and Mosaic Association
71. PCA Portland Cement Association
72. PCI Precast/Prestressed Concrete Institute
73. PDI Plumbing and Drainage Institute

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74. PEI Porcelain Enamel Institude
75. PG&E Pacific Gas and Electric Company
76. PS U. S. Product Standard
77. SMACNA Sheet Metal and Air Conditioning Contractors National Association, Inc.
78. SSPC Steel Structures Painting Council
79. SWI Sealant and Waterproofers Institute
80. TCA Tile Council of America
81. UBC Uniform Building Code of the International Conference of Building Officials
82. UL Underwriters Laboratories Inc.
83. UMC Uniform Mechanical Code
84. UPC Uniform Plumbing Code
85. USBPR United States Bureau of Public Roads
86. WCLA West Coast Lumbermen's Association
87. WCLIB West Coast Lumber Inspection Bureau
88. WH Warnock Hersey
89. WIC Woodwork Institute of California
90. ACEH Alameda County Health Agency – Environmental Health
91. ACFCD Alameda County Flood Control District
92. ACWD Alameda County Water District
93. AGC Associated General Contractors
94. AI The Asphalt Institute
95. AITC American Institute of Timber Construction
96. APWA American Public Works Association
97. ASCE American Society of Engineers
98. BBC Basic Building Code, Building Officials and Code Administrators International
99. CBC California Building Code
100. CBSC California Building Standards Commission
101. Cal-OSHA California Occupational Safety and Health Administration
102. COF City of Fremont
103. FFD Fremont Fire Department
104. FMC Fremont Municipal Code
105. ICC International Code Council
106. ISO International Organization for Standardization
107. LSD Landscape Standard Details
108. NACE National Association of Corrosion Engineers

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109. NBS National Bureau of Standards

110. OSHA Occupational Safety and Health Administration (Federal)

111. PSD Park Standard Details

112. USD Union Sanitary District

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

3.01 MEASUREMENT AND PAYMENT

Full compensation for conforming to the provisions in this Section, "**Reference Standards**", 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 42 19

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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. Field samples and site mockups are specified in under Special Conditions, Section 01 43 36 - Field Samples and Mockups.

B. Contractor's quality control requirements are specified under 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.

a. 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 <u>INSPECTION AND TESTS BY THE CITY</u>

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

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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.

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

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 43 36 Field Samples and Mock-Ups

PART 1GENERAL

1.01 SECTION INCLUDES

A. Field samples and mock-ups.

B. Nonconformance.

C. Removal after completion.

1.02 FIELD SAMPLES AND MOCK-UPS

A. Field samples and mock-ups will be prepared at the Worksite by the Contractor as specified in the various Sections of these Specifications. Affected finish work will not be started until the Engineer has approved the field samples and Worksite mock-ups in writing.

B. Construct and prepare field samples and Worksite mock-ups at designated locations at the Worksite or on the structure as directed by the Engineer.

C. The Contractor will have product manufacturers inspect and approve field samples and mock-ups that involve their materials, for proper application or installation of the materials in accordance with their respective instructions and recommendations for the conditions or circumstances involved in the application or installation.

D. The Contractor will make arrangements with the respective product manufacturers to provide job or field service.

E. The Contractor will construct or prepare as many additional samples and mock-ups as may be required, as determined by the Engineer, until desired features, textures, finishes, and colors are obtained. Approved samples and mock-ups will serve as the standards of quality for the various affected units of work.

F. Preserve approved field samples and mock-ups for comparison purposes until the affected work is completed and accepted by the City. Finished work will match the approved field samples and mock-ups.

1.03 NONCONFORMANCE

A. Completed work that does not exactly match approved field samples and mock-ups will be rejected, and will be replaced with work that does exactly match the approved field samples and mock-ups at the Contractor's expense.

B. If the Contractor elects to start work before the Engineer has approved the related field samples or mock-ups, the Contractor does so at the risk of having the work rejected by the Engineer without compensation.

1.04 REMOVAL AFTER COMPLETION

Field samples and mock-ups will be removed from the Worksite and structures after completion and acceptance of the affected work or otherwise as directed by the Engineer.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

3.01 MEASUREMENT AND PAYMENT

Full compensation for conforming to the provisions in this Section, "**Field Samples and**

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Mock-Ups”, 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 36

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SECTION 01 45 00 Quality Control

PART 1 GENERAL

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 32 19 “Submittal Procedures”

B. Section 01 43 00 “Quality Assurance”

C. Section 01 45 00 “Quality Control”

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 Building Department and Fire Department Inspections required by permit are separate code inspections than QA/QC inspections by the Owner. Inspections by representatives of the City as the Owner do not satisfy the permit authorities.

C. The authorized representative of the Engineer on the project site shall be those representatives or consultants designated by the 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).

D. 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 Engineer or the City.

E. 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

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Specifications by coordinating, supervising, testing and inspecting the work and by utilizing only suitably qualified personnel.

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.

1.06 LABORATORIES

A. Laboratory QC testing shall be conducted by qualified testing laboratories, hired through task order by the City, or performed by the City itself at its laboratory.

1.07 QC SURVEYOR

A. The Contractor shall employ or retain a California-licensed surveyor and associated field and office staff to perform a conformance survey to verify the Contractor's survey layouts, control points, etc.

B. The QC Surveyor shall make the surveys necessary to develop the Record Drawings.

C. The QC surveyor need not be the Lead Surveyor.

1.08 CONTRACTOR'S QUALITY CONTROL TESTING

A. All construction processes, procedures, and workmanship shall be inspected by the Contractor's construction Quality Control (QC) inspectors. Inspection observations, measurement, results, non-conformances, and corrective actions shall be documented on forms acceptable to the City. Inspection observation and

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documentation shall include description of construction activity and location by Contract Specifications Section.

B. All materials are subject to inspection, sampling, and testing at any time before Final Acceptance of the Work.

1. References in the Contract to a test designation of the American Society for Testing and Materials (ASTM) or other recognized national organization shall mean the latest revision of that test method or specification for the work in effect on the day the Request for Proposals (RFP) for the Work is dated, unless otherwise noted.

2. Materials will be sampled and tested by the Contractor's construction QC testers and samplers. Copies of all test results will be furnished to the Contractor's Representative, the QA Manager, and the City. The exception to this is when a test is done for the Contractor as process control assuring that its process and materials source is producing an acceptable product. Process control tests usually occur when an operation is begun and when changes occur in the source of materials or method of production.

3. The City may observe any testing performed by the Contractor's construction QC testers and samplers. If the City observes a deviation from the specified sampling or testing procedures, the City shall verbally describe the observed deviation to the Construction QC Manager, followed by a written Non-Conformance Report (NCR) covering the deviation to the Construction QC Manager and Contractor's Representative within twenty-four hours.

1.09 SAMPLING AND TESTING

A. Unless otherwise specified, all sampling and testing shall be in accordance with the methods prescribed in the current standards of the 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 Engineer will assure the City that the quality of the workmanship is in full accord with the Contract Documents.

B. Laboratory Tests:

1. All laboratory testing shall be performed by an independent, qualified testing laboratory retained by task order by the City, or performed by the City itself at its laboratory.

1.10 TIME OF INSPECTIONS AND TESTS

A. 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.

B. Whenever the 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 48 hours in advance of beginning any such work of backfilling, burying, casting in concrete, hiding, covering, or making inaccessible any portion of the Work to be inspected, so that the required inspections can be scheduled and performed. Failure of the Contractor to notify the Engineer at least 48 hours in advance of any such inspections shall be reasonable cause for the

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Engineer to require sufficient delay in the Contractor's schedule to allow time for such inspections and any remedial or corrective work required, and all costs of such delays, including its impact or effect upon other portions of the Work shall be borne by the Contractor.

C. Provide timely coordination for inspection by permit and code authorities.

1.11 CITY OF FREMONT'S MONITORING

A. The City will verify that milestones are met in accordance with the Contractor's schedule of milestones and will verify quantities of any unit priced work items.

B. A monthly audit of milestones and quantities of any unit priced work items will be performed and any required correction will be made to the subsequent progress pay estimate.

C. This review and audit will assure that the milestone achievement and correct quantities are shown.

D. Documents for payment of Change Orders must also contain sufficient information to satisfy an audit.

1.12 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.

1.13 CONTRACTOR SCHEDULING AND NOTICE TO THE CITY

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A. The Contractor shall notify the City in writing by Friday noon of each week of planned design reviews and construction activities, including fabrication, for the following two weeks to allow the City to schedule its resources. The Contractor will deliver this information at the weekly coordination meeting where related discussion will occur.

B. For activities (such as, fabrication) occurring out of the immediate Contract area (beyond 100 miles of the City), the Contractor shall give the City at least 21 Days of notice of planned work.

1.14 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.

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

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.

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

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

1.16 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.

1.17 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.

1.21 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.

1.22 FINISHED TOLERANCES

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

1. Walls: Finished wall surfaces shall be plumb and shall have a maximum variation of 1/8 inch in 8 feet when a straightedge is laid on the surface in any direction, and no measurable variation in any 2-foot direction.

2. Ceilings: Finished ceiling surfaces shall present true, level, and plane surfaces, with a maximum variation of 1/8 inch in 8 feet when a straightedge and water

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level are laid on the surface in any direction, and no measurable variation in any 2-foot direction.

3. Concrete Floors: Tolerances for concrete floors and pavement are specified in Contract Specifications Section, 03 30 00, Cast In Place Concrete.

4. Finished Floors: Finished floors shall be level to within plus or minus 1/8 inch in 10 feet. Where floor drains occur, slope finished floor 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 01 45 00

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SECTION 01 45 23 Testing and Inspection

PART 1 GENERAL

1.01 RELATED SECTIONS

A. General Conditions, Article 7.8

B. Special Conditions, Section 01 45 00 "Quality Control"

C. Caltrans Standard Specifications, 2015

1.02 SCOPE

A. Testing is not a duty of the City and is solely at the discretion of the Project 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.

B. At the City's discretion, testing will be performed by the City's testing laboratory and staff, or by an independent testing laboratory, currently on call through an existing Master Service Contract which shall include:

1.03 REFERENCES

A. California Test: As described in the Caltrans Standard Specifications, and required for Permeable aggregate base and other project specific activities

1.04 TESTING QUALITY ASSURANCE AND QUALITY CONTROL

A. 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.

B. Selection of test sites and samples shall be determined in the field by the City Project Inspector.

C. Test results:

1. If test samples fail to meet requirements of Contract Documents, materials or equipment shall be subject to removal and replacement by Contractor with materials or equipment meeting requirements of Contract Documents.

2. If initial tests are defective, costs of retesting shall be borne by Contractor.

D. Unless otherwise specified, 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.

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

F. 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.

G. Verification of Quality: Work shall be subject to verification of quality by City or their designated representative in accordance with provisions of the General Conditions of the Contract.

1. Contractor shall cooperate by making Work available for inspection by City, or

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their designated representatives
2. Such verification may include field inspection as required.
3. Provide access to all parts of the Work.
4. Provide all information and assistance, as required, for verification of quality by City or Architect/Engineer.
5. Contract modifications, if any, resulting from such verification activities shall be governed by applicable provisions in the General Conditions of the Contract.

H. Limitations on Inspection, Test and Observation: Neither employment of independent testing and inspection agency nor observations by Architect/Engineer shall in any way relieve the Contractor of obligation to perform Work in full conformance to all requirements of Contract Documents.

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

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

K. Acceptance of Non-Conforming Work: Acceptance of nonconforming Work, without specific written acknowledgement and approval of the City, shall not relieve the Contractor of the obligation to correct such Work.

L. Contract Adjustment for Non-Conforming Work: Should City determine that it is not feasible or in City's interest to require non-conforming Work to be repaired or replaced, an equitable reduction in Contract Sum shall be made by agreement between City and Contractor. If equitable amount cannot be agreed upon, a Construction Change Directive will be issued and the amount in dispute resolved in accordance with applicable provisions of the Caltrans Standards.

1.05 INSPECTIONS AND TESTS BY CITY

A. Inspections and Tests by Governing Authorities: Contractor shall cause all tests and inspections required by City to be made for Work under this Contract.

1. Such authorities include Engineering Department and similar agencies.

2. Except as specifically noted, scheduling, conducting and paying for such inspections shall be solely the Contractor's responsibility.

B. The contractor shall coordinate with the City Project Inspector to arrange all scheduling and on-site inspection and testing as needed to satisfy building permit requirements for the project.

C. It is the responsibility of the contractor to coordinate as needed and described herein and elsewhere in these special provisions to arrange for testing and inspection. The contractor shall notify the City Project Inspector when permitted work is ready for specified tests and inspections.

D. Contractor is required to provide the City with **a minimum of 24 hours notice** for test and inspection required the following work day.

E. If the City chooses to engage a special inspection and testing firm to perform compaction testing, the following are the Laboratory responsibilities:

1. Provide qualified personnel at site. Cooperate with Architect and Contractor in performance of services. Architect may direct laboratory as to location of field tests.

2. Perform specified inspection, sampling, and testing in accordance with specified standards.

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3. Ascertain compliance of materials with requirements of Contract Documents.
4. Promptly notify Architect and Contractor of observed irregularities or non-conformance of work or products.
5. Perform additional inspections and tests required by Architect.

F. Test and Inspection Reports: After each inspection and test, one copy of report shall be promptly submitted each to Architect/Engineer, City, City's field representative, Contractor and to agency having jurisdiction (if required by Code).

1. Reports shall clearly identify 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 shall indicate specified or required values and shall include statement whether test results indicate satisfactory performance of products.
3. Samples taken but not tested shall be reported.
4. Test reports shall confirm that methods used for sampling and testing conform to specified test procedures.
5. When requested, testing and inspection agency shall provide interpretations of test results.
6. Verification reports shall be prepared and submitted, 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. Verification reports shall be submitted at intervals not exceeding 6 months, at Substantial Completion of the Project, and at all times when Work of Project is suspended.

G. Contractor Responsibilities in Inspections and Tests:

1. Advanced Notification: Refer to Article 7.8 (B) of the General Conditions.
2. Deliver to laboratory or designated location, adequate samples of materials proposed to be used which require advance testing, together with proposed mix designs.
3. Cooperate with testing and inspection agency personnel, City's field representative, Landscape Architect/Engineer. Provide access to Work areas and off-site fabrication and assembly locations, including during weekends and after normal work hours.

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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.

5. Provide, at least 15 days in advance of first test or inspection of each type, a schedule of tests or inspections indicating types of tests or inspections and their scheduled dates.

1.06 ADDITIONAL TESTING AND INSPECTION

A. Refer to Article 7.8 (C) "Responsibility for Costs"

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

3.01 MEASUREMENT AND PAYMENT

Full compensation for conforming to the provisions in this section "**Testing and Inspection**", not otherwise provided for, shall be considered included in the prices paid for the various line items of work requiring testing and no additional compensation will be allowed therefor.

END OF SECTION 01 45 23

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SECTION 01 55 00 Site Access and Storage

PART 1 GENERAL

1.01 GENERAL

A. The Contractor shall take all necessary precautions for the protection of the Work and the safety of the public. The Contractor shall, at the Contractor's elective option, station guards, or other deterrent devices, as may be required to deter vandalism or theft, including but not limited to barricades, fencing and other obstructions, and security lighting. The Contractor shall secure any open access points to the project area during all hours when Contractor is not actively engaged in the performance of the Work.

1.02 RELATED SECTIONS

A. Refer to General Conditions, Article 2.2, Article 7.2, Article 7.3, Article 7.5 and Article 7.9 regarding staging and temporary facilities.

B. Mobilization, found elsewhere under Special Conditions

1.03 HIGHWAY LIMITATIONS

A. The Contractor shall make its own investigation of the condition of available public and private roads and of clearances, restrictions, bridge load limits, and other limitations affecting transportation and ingress and egress to and from the project site. It shall be the Contractor's responsibility to construct and maintain any access or haul roads required for its demolition operations.

B. All hauling by motor vehicles shall be confined to truck routes, except where otherwise authorized in writing by the Engineer. Truck routes are those shown on the map titled "City of Fremont Truck Routes, Adopted by City Council 4-26-1988" incorporated into these specifications, and as designated in the Fremont Municipal Code. The Contractor is responsible for acquiring all oversize/overweight vehicle permits from agencies having jurisdiction when transporting materials or equipment with size and weight exceeding established hauling criteria.

1.04 CONTRACTOR'S WORK, STAGING, AND STORAGE AREA

A. At or before the pre-construction meeting the contractor shall submit to the Supervising Construction Coordinator, as part of the Site Operations Work plan (SOW) required per Section 01 32 19 "Submittal Procedures", a Project site plan, drawn to scale, indicating the proposed layout and use of the site for access and staging. At minimum the plan will show the location and configuration of temporary construction fencing / tree protection fencing and gates, site access, storage, staging, temporary offices, subcontractor parking, storm water runoff control measures, and access for contractors doing work under concurrently under other contracts.

B. The Contractor shall make its own arrangements for any necessary off-site storage or shop areas necessary for the proper execution of the Work. Off-site shall be defined as any area outside the temporary fencing required. If the site is located on public property, the Contractor shall submit a site plan, drawn to scale, of the proposed storage, trailer, and/or staging site for the Engineer's approval. If the site is on private property, the Contractor shall submit evidence of the property owner's approval of the use of the site.

C. During construction, to the best extent possible, the Contractor shall maintain ingress and egress in to the parking lots to allow for continued public use.

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1.05 TEMPORARY USE OF PUBLIC FACILITIES

A. Street Use: Nothing herein shall be construed to entitle the Contractor to the exclusive use of any public street, alley, way, or parking area during the performance of the Work hereunder, and it shall so conduct its operations as not to interfere unnecessarily with the public's use of the surrounding public area, or the authorized of the City, utility companies, or other agencies in such streets, alleys, ways, or parking areas.

B. Fire hydrants on or adjacent to the Work shall be kept accessible to fire fighting apparatus

C. Temporary provisions shall be made by the Contractor to assure the use of the sidewalks and the proper functioning of all gutters, sewer inlets, and other drainage facilities.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

3.01 MEASUREMENT AND PAYMENT

Full compensation for conforming to the provisions in this section **"Site Access and Storage",** 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 01 55 10

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SECTION 01 56 00 Protection of Existing Facilities

PART 1 GENERAL

1.01 EXISTING FACILITIES

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. Potholing: The Contractor shall verify the exact locations and depths of all utilities shown and the Contractor shall make exploratory excavations of all utilities that may interfere with the Work. All such exploratory excavations shall be performed as soon as practicable after Notice to Proceed and, in any event, a sufficient time in advance of demolition to avoid possible delays to the Contractor's works. When such exploratory excavations show the utility location as shown to be in error, the Contractor shall notify the City.

C. The number of exploratory excavations shall be that number which is sufficient to determine the alignment and grade of the utility

D. All reference markings made by the Contractor shall be done with spray chalk or approved equal, and shall be removed by the Contractor when no longer needed.

E. The Contractor is responsible for any and all damages resulting from insufficient weather protection. Contractor is to coordinate exterior work to avoid damage.

F. 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

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restored by the City at the Contractor's expense after all contract work has been completed.

1.04 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.

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.

1.05 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:

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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 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.

1.04 TREES, MOWING IRRIGATION, AND OTHER VEGETATION WITHIN PROJECT LIMITS

A. General:

The Contractor shall exercise all necessary precautions so as not to destroy or damage any trees, or other vegetation, including that landscaping material lying within the project limits, and shall not trim or remove any trees unless such trees have been approved for trimming or removal by the City. All existing trees and other vegetation, which become damaged during demolition, shall be trimmed or replaced by the Contractor in consultation with a certified arborist to the satisfaction of the City and/or agency. Tree trimming and replacement shall be accomplished as approved and directed by the Engineer.

B. City Tree Preservation Requirements, Tree Survey Standards, Arborist Analysis Report Standards and Standard Tree Preservation notes from the City Landscape Development Requirements and Policies are attached (pages 4-7) plus Sheet 8 depicting standard tree protection fencing.

C. Contractor protection of existing trees, including protective fencing around the tree drip line is required.

D. Replacement:

The Contractor shall immediately notify the City and/or other jurisdictional agency if any tree is damaged by the Contractor's operations. Refer to Section 01530 for repair compensation. If, in the opinion of the City or said other agency, the damage is such that replacement is necessary, the Contractor shall replace the tree at its own 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 one of equal

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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 Historical Tree List.

E. Mowing:

Contractor shall be responsible for the adequate watering, mowing, disease control and/or fertilizing, pest abatement (if necessary), and other maintenance of lawn within the limits of work, and affected by the placement of the temporary construction fence. The temporary construction fence may, in some cases, bifurcate lawn areas or interrupt irrigation to the lawn. The contractor is responsible for continuing adequate irrigation at all times. Affected lawn within or adjacent to the temporary construction fence shall be maintained by the contractor, including mowing no less than once every two weeks, or to maintain a lawn height of no greater than 6" at any time. This shall include areas a minimum of ten (10) feet outside the project limits of work temporary fencing. At no point shall City crews enter the project limits of work to perform maintenance and mowing during the construction period. If City crews are required to enter the site, at the request of the Contractor, or at the direction of the City, due to negligence of the Contractor to perform adequate mowing, the Contractor shall be charged on a time and materials basis, by the City, and the cost for performing mowing and maintenance shall be retained from their contract, and deducted.

F. Irrigation:

All irrigation elements, equipment and components within the project limits, and those elements, equipment and components outside the project limits of work, indicated to remain in working order, shall be the responsibility of the contractor to remain, and be maintained, in working order over the duration of the project, including the plant establishment period. This includes all equipment connected to components within the project limits of work to be removed, relocated, or re-routed. At no point shall City crews enter the project limits of work to perform maintenance on the irrigation system. If City enters the site, at the request of the Contractor, or at the direction of the City due to negligence of the Contractor to perform maintenance, keep the system running, and adequately water existing lawn, trees, and other plant material, the Contractor shall be charged on a time and materials basis, by the City, and the cost for performing said work shall be retained from their contract, and deducted.

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

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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).

1.06 TREE PROTECTION FENCING

A. Refer to Section 1 56 39 "Tree Protection".

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.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

3.01 MEASUREMENT AND PAYMENT

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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.
B. Payment for **"Temporary Construction Fencing"** shall be per Section 01 56 26 "Temporary Construction Fencing".
C. Payment for **"Temporary Tree Protection"** shall be per Section 01 56 39 "Tree Protection"

END OF SECTION 01 56 00

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SECTION 01 56 26 Temporary Construction Fencing

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Temporary Construction Fencing.

PART 2 PRODUCTS

2.01 TEMPORARY CONSTRUCTION FENCING

A. Temporary construction fences and gates shall be furnished, installed, maintain, and relocated at the project site by the Contractor, as shown on the plans and as specified in these specifications and special provisions, and as directed by the Project Inspector, or Supervising Construction Coordinator.

B. The contractor shall be responsible for adjusting the layout of the fences as necessary to accommodate its work, to accommodate other contractors doing work, and accessing the site and building(s).

C. Temporary construction fencing shall be placed around the work area intended for use by the Contractor. A portion of the property is available for use by the Contractor for staging. The Contractor shall submit a plan showing the location of their trailer and staging area for review by the City.

D. Temporary construction fencing and gates shall be chain link, type CL-6, six feet (6') high, as a minimum and shall conform to the specifications for permanent fencing of similar character as provided in Section 80, "Fences" of the Standard Specifications and these special provisions. Construction fencing and gates shall be simple to install, maintain, relocate, and remove. Concrete footings for metal posts will not be required. The temporary fences and gates shall be of a type that extends fully to the ground. The Contractor may upgrade the fence in height or quality to meet the conditions at the site.

E. The second paragraph of Section 80-4.02, “Construction,” of the Standard Specification is amended to read as follows:

> “Posts shall be installed by the Contractor so as to fulfill the requirements outlined in this section and shall be crowned at the top to shed water.”

F. Materials may be commercial quality providing the dimensions and sizes of said materials are equal to, or greater than, the dimensions and sized specified by the Standard Specifications.

G. Used materials may be used providing such used materials are good, sound, and are suitable for the purposed intended. The Contractor shall be the approval of the Engineer prior to installing construction fencing and gates using used materials.

H. The Contractor shall get approval from the Engineer for location of temporary fences and gates prior to installing any materials.

I. Temporary construction fencing that are damaged from any cause including vandalism during the progress of the work shall be immediately repaired or replaced by the Contractor at this expense. Any damage caused by the use of temporary fences and gates to existing features including, but not limited to, existing turf areas, holes in the ground, damage to existing vegetation, etc. shall be repaired or replaced by the Contractor at this expense. If holes are caused by the use of temporary fences and gates, they shall be backfilled in accordance with the provisions in the second paragraph of Section 15-1.02, “Preservation of Property,” of the Standard Specifications.

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PART 3 EXECUTION

3.01 SPECIAL CONDITIONS OF THE SITE

A. The area to be set aside for the use of the Contractor is indicated on the Drawings as "Limit of Work" and “Staging Area” Except for sub-surface utility work, curb and gutter, temporary roads and any other work specifically shown or noted, the Contractor shall confine his operations within the limits-of-work so indicated.

B. Work shall not proceed for the site or buildings until all temporary construction fencing is installed.

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 construction fencing at all times.

B. The Contractor shall take all steps necessary to prohibit any part of the premises, the buildings, or structures 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.

3.03 REMOVAL

Maintain all temporary construction fencing as long as needed for the safe and proper completion of the work. Remove all such temporary construction fencing as rapidly as progress of the work will permit.

3.04 FINAL SITE CLEAN-UP

See Section 01 77 00 “Closeout Procedures”.

3.05 MEASUREMENT AND PAYMENT

The linear foot unit price paid for **“Temporary Construction Fencing”** shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work covered in this section, complete and in place as shown on the plans, as required by the Special Provisions, and as required by the Engineer.

END OF SECTION 01 56 26

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SECTION 01 56 39 Tree Protection

PART 1 GENERAL

1.01 DESCRIPTION

A. Section includes protecting and maintaining existing trees, not specifically designated for removal, affected by this Work, whether or not tree trunk is located within project site. Include pruning and remedial work, protection and irrigation during removal work, site work and construction.

B. Tree Protection Measures shall be applied to all Landscape Trees designated for preservation with tree protection fencing as indicated on plans. These measures shall include but not be limited all items listed within the “Tree Preservation Notes” and the “Tree Preservation Detail” including all Tree Protection fences.

C. General: The Contractor shall exercise all necessary precautions so as not to destroy or damage any trees, or other vegetation, including that landscaping material lying within the project limits, and shall not trim or remove any trees unless such trees have been approved for trimming or removal by the City or other jurisdictional agency. All existing trees and other vegetation, which become damaged during demolition, shall be trimmed or replaced by the Contractor in consultation with a certified arborist to the satisfaction of the City and/or agency. Tree trimming and replacement shall be accomplished as approved and directed by the Engineer.

D. Replacement: Refer herein to “Tree Replacement”

E. All trees to be preserved and protected shall be watered by whatever means necessary to keep the trees in a healthy condition.

1.02 RELATED SECTIONS

A. Section 02 41 00 “Demolition”

B. Section 31 00 00 “Earthwork”

C. Landscape Standard Details, LSD-9 and LSD-10, or most current revision.

1.03 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. "Critical Root Zone" is defined as a minimal distance from the trunk where roots must be protected from construction related activities

E. “Root Pruning”: All pruning shall be done by a State of California Licensed Tree Contractor (C61/D49). All pruning shall be done by Certified Arborist or Certified Tree Worker in accordance with the Best Management Practices for Pruning (International Society of Arboriculture, 2008-Revised) and adhere to the most recent editions of the American National Standard for Tree Care Operations (Z133.1) and Pruning (A300).

F. 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

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City's Arborist to maintain the health and structure of trees affected by overlay, curb, and gutter work within the scope of this project.

G. Certified Arborist or Certified Tree Worker: A worker that has been certified by the International Society of Arboriculture (ISA), in compliance with ISA standards, as experienced and capable of tree trimming and root pruning per the ISA guidelines, or the requirements as defined herein.

H. Landscape Standard Details (LSD) – Included as part of the Fremont City Standard Details for Improvements within Public Right of Way; Approved by City Council, Resolution No 2006-31, April 1985; amended December 13, 2011; and last revised September 5, 2012.

I. 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.

1.04 QUALITY ASSURANCE

A. 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 the full construction period until the entire project is completed and accepted by the City and through completion of the maintenance period.

B. Qualifications of workmen: Trimming shall be performed only by a certified arborist, or certified tree worker, certified by the International Society of Arborists; in compliance with ISA or ANSI standards. Contractor shall be responsible for obtaining and scheduling arborist, and shall have an arborist on site continuously while existing trees or roots are being pruned or remedial work is being performed. Arborist must be approved by the City of Fremont in writing.

C. Reference Standards: Published specification, standards, tests, or recommended methods of trade industry apply to work of this section.

D. International Society of Arboriculture (ISA) "Guide for Establishing Values of Trees and Other Plants," prepared by the Council of Tree and Landscape Appraisers.

1.05 JOB CONDITION

A. Contractor shall install tree protection fencing before any construction equipment enters the site, and must not be removed during the demolition or grading process. Fencing can be adjusted during the demolition, grading and construction activities.

B. Sequencing schedule: Coordinate and cooperate with other trades to enable the work to proceed as rapidly and efficiently as possible.

1.06 GUARANTEE

A. Contractor shall guarantee that all plants covered by the provisions of this Section will be healthy and in flourishing condition of active growth one year from the date of final completion.

B. During the warranty period the Contractor shall be liable for damages to all trees covered by the provisions of this Section.

PART 2 PRODUCTS

2.01 TRUNK WRAP PROTECTION

A. 2 x 4 wood slats, orange plastic construction fencing, and wire ties shall be used as trunk wrap protection fencing for all trees within the Project scope of work area, plus 10 foot beyond scope of work area. Trunk wrap protection shall be continuously maintained and repaired as necessary. See City Standard Detail LSD-10. See LSD-

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9, City Standard Tree Protection fencing for additional tree protection notes. Where discrepancies arise, contact City's Landscape Architect for resolution.

B. Fencing shall remain until project is complete and it shall be removed when authorized by the Engineer.

C. Fence Relocation: During the course of construction, relocation of the fence may be required to facilitate construction. Contractor shall request authorization to relocate fence. Requests for Authorization shall be in writing to the Engineer 48 hours prior to anticipate relocation at no cost to the City.

2.02 TREE BARK MULCH

Prior to beginning construction, install tree protection fencing. For trees being protected using LSD-9 immediately after fencing is installed, cover the entire soil area inside the fence with a three-inch thick layer of mulch, holding the mulch back from the tree trunk a minimum of 6 inches. Mulch shall be Sun-up Walk-on bark, or approved equal.

PART 3 EXECUTION

3.01 TREE PROTECTION AND TREE PRESERVATION

A. Tree Preservation Notes per city LSD-9 and LSD-10:

1. Current standard detail at city engineering division shall prevail.
2. Tree protection measures must be in place before construction, demolition and/or grading activities commence. City of Fremont will stop construction if tree protection measures are not in place and maintained throughout the construction period.
3. Trees called out for preservation shall be fenced at the drip line. Fencing may occur at the combined drip lines of groves of trees. Place a three-inch thick layer of bark mulch beneath drip lines of trees to be preserved. Keep bark mulch back from the tree trunk a minimum of 6 inches.
4. No grading shall occur within the drip lines/fenced area of existing trees unless required by the plans, or the nature of the work.
5. No construction materials or construction vehicles may be stored within the drip lines/fenced area of existing trees.
6. Construction vehicles or machinery may not pass between two or more existing trees identified for preservation if their canopies are within 10 feet of touching. Additional fencing may be required by the city as needed.
7. The contractor is required to have an arborist certified by the International Society of Arboriculture (ISA), approved by the city, on site if site construction efforts require removal of existing roots or branch pruning. Roots approved for cutting must be cut cleanly with a saw. Ripping or shredding roots subject to fine/penalty.
8. Unauthorized tree removal is subject to replacement equal to the appraised value of the tree lost per Fremont Municipal Code (FMC) 4-5108.
9. The contractor is required to water, fertilize and attend to other maintenance needs of existing trees to maintain healthy growth throughout the construction period. An earthen berm measuring minimum 6 feet in diameter, and 6 inches in height shall be constructed at the base of each tree to function as a temporary watering basin during the construction period. Trees shall be watered according to weather and tree species requirements.

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10. If trees are being relocated: relocation of existing trees shall occur under the observation and direction of a certified arborist approved by the city of Fremont.

11. Trunk wrap protection shall occur for trees situated in small tree wells or sidewalk planters. This form of protection will be allowed by approval from senior landscape architect only.

B. Contractor shall install tree protection before any construction equipment enters the site, and must not be removed during the demolition or grading process. If fencing is installed, fencing can be adjusted during the demolition, grading and construction activities.

C. During the course of construction, relocation of the fence may be required to facilitate construction. Contractor shall request authorization to relocate fence. Requests for Authorization shall be in writing to the Engineer 48 hours prior to anticipate relocation at no cost to the City.

3.02 PROTECTION OF TREES

A. Water: Provide ample water supply of potable quality and sufficient quantity for all operations required in this section. The contractor shall provide a schedule to the Project Manager outlining the proposed watering schedule for trees affected by construction.

B. Trees shall not be allowed to deteriorate and shall be maintained in a healthy and vigorous condition during the course of construction and maintenance period.

C. During the course of construction, the Contractor shall take all necessary precautions, as outlined herein, to protect the existing trees to be preserved from injury or death. Protection shall be given to the roots, trunk, and foliage of all existing trees to remain. Trees, subject to the provisions of this Section, which have been injured, or may be affected by construction, shall be assessed by the City's Arborist, and then repaired immediately by a certified tree worker, under the direction of the City's Arborist. Repair may include removal of rough edges and sprung bark and severely injured branches, or other necessary work, as determined by the City's Arborist.

D. Irrigation system servicing trees that will be affected by construction shall be repaired, replaced, or relocated according to the plans, within 30 days of removal. If the existing irrigation system is turned off, removed, or out of service for more than 30 days, all trees shall be hand watered, or watered by what ever means necessary to keep the trees in a healthy and vigorous condition during the course of construction and maintenance period.

E. Trunk Wrap Protection shall be installed for the protection of existing trees to be preserved.

1. Work within the immediate area of a trunk wrap protected tree area shall not release the Contractor from any of the provisions specified herein for the protection of existing trees to be preserved.

2. During the course of construction, no roots larger than two inches in diameter shall be cut without prior written approval the Engineer.

F. During construction, the existing site surface drainage patterns shall not be altered within the area.

G. Take necessary measures to maintain healthy living conditions for existing trees to be preserved. Such measures shall include but not limited to periodic washing of leaves for removal of dust, irrigation, redistribution of bark mulch, etc.

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H. Do not permit the following within drip line of any existing tree to be preserved.

1. Storage or parking of automobiles or other vehicles.
2. Stockpiling of building materials or refuse of excavated materials.
3. Skinning or bruising of bark.
4. Use of trees as support posts, power poles, or signposts; anchorage for ropes, guy wires, or power lines; or other similar functions.
5. Dumping of poisonous materials on or around trees and roots. Such material includes but is not limited to paint, petroleum products, contaminated water, or other deleterious materials.
6. Cutting of tree roots by utility trenching, foundation digging, placement of curbs and trenches, and other miscellaneous excavation without prior approval of the Engineer and monitored by a certified arborist.
7. Damage to trunk, limbs or foliage caused by maneuvering vehicles or stacking material or equipment too close to the tree.
8. Compaction of the root area by movement of trucks or grading machines; storage of equipment, gravel, earth fill, or construction supplies.
9. Excessive water or heat from equipment, utility line construction, or burning of trash under or near shrubs or trees.
10. Damage to root system from flooding, erosion, and excessive wetting and drying resulting from dewatering and other operations.

3.03 IRRIGATION SYSTEM

A. If system is in place, protect existing irrigation system service point from damage.

B. If repair or relocation is required, make repairs, or perform relocation, ensure it is automated, and re-activate the system in order to water trees that may be affected by excavation, root pruning or crown thinning.

C. Set up a watering program to ensure that existing trees are provided with adequate water to prevent drying out during construction

3.04 REPAIR COMPENSATION/TREE REPLACEMENT

A. 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 or said other agency, the damage is such that 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.

B. The size of trees shall not be less than 1-inch diameter nor less than 6 feet in height.

C. 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 one 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 Historical Tree List.

3.05 MAINTENANCE

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Contractor shall be responsible to perform periodic inspections of existing trees to be preserved and submit written proposals to the Engineer for additional maintenance work as may be required to ensure the health and general well-being of the trees. Contractor shall retain, at the direction of the Engineer, a certified arborist to perform or monitor this work.

3.06 MEASUREMENT AND PAYMENT

The linear foot price paid for **"Temporary Tree Protection**", shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals and for doing all the work covered in this Section, including placement of bark mulch, related maintenance, and the relocation of fencing to facilitate construction, 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 therefor.

END OF SECTION 01 56 39

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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 including
   a. Air quality and air emissions control
   b. Dust and debris
   c. Clean up
   d. Disposal and Completion

B. Erosion and sediment control (SWPPP), refer to Section 01 57 23 Statewide Construction General Permit (Erosion & Sediment Control)

C. American National Standards Institute (ANSI) S1.4: Specification for Sound Level Meters.

1.02 SECTION INCLUDES

A. Traffic plan and controls.

B. Pedestrian and patron controls.

C. Construction operations under traffic.

D. Portable changeable message sign.

E. Pollution abatement.

F. Dust control.

G. Rubbish control.

H. Mud control.

I. Noise and vibration control.

J. Federal Water Pollution Control Act.

K. Chemicals.

1.03 RELATED SECTIONS AND REFERENCES

A. Section 01 06 00 - Regulatory Requirements.

B. Section 01 57 23 – Statewide Construction General Permit (Erosion and Sediment Control)

C. State of California, Department of Transportation (Caltrans), Standard Specifications 2015.

D. State of California, Department of Transportation (Caltrans), California Manual of Uniform Traffic Control Devices (California MUTCD) Part 1, Temporary Traffic Control.

E. State of California, Vehicle Code.

F. State of California Construction General Permit Order 2009-0009-DWQ (as amended by 2010-0014-DWQ and 2012-006-DWQ) or most current version.

G. California Regional Water Quality Control Board San Francisco Bay Municipal Regional Stormwater NPDES Permit, Order No. R2-2015-0049.

H. American National Standards Institute (ANSI) S1.4: Specification for Sound Level Meters.

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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 32 19 Submittals Procedures.

B. Noise and Vibration Monitoring Plan as described in Part 1.12, herein.

1.06 PEDESTRIAN AND PATRON CONTROLS

A. Pedestrian Handling Plan

1. The Contractor will prepare a pedestrian handling plan for the Work within property to reflect any changes in pedestrian and patron paths including the accessible path. The accessible path will be as determined in accordance with the requirements of California Building Code and the Americans with Disabilities Act and Architectural Barriers Act Accessibility Guidelines. The pedestrian handling plan will include drawing(s) showing proposed pedestrian handling devices including temporary signage and wayfinding signs. The Contractor will submit the plan for review and approval by the Engineer. All pedestrian handling devices and signage will be in compliance with the accessibility requirements of the California Building Code and the Americans with Disabilities Act and Architectural Barriers Act Accessibility Guidelines.
2. Include pedestrian handling plans for each phase of the work requiring different pedestrian diversion patterns and methods of control. Include for each phase detailed schedules for performance of work and include proposed pedestrian handling devices.
3. Where overhead protection is required for walkways during construction, the requirement for Covered Walkways of Chapter 33 of California Building Code will be followed.

B. Work Area Controls

a. All construction work within and around the facilities will be separated from the public with appropriate barriers to prevent public access to construction areas and to contain construction hazards.

b. When the construction work is not within the Worksite perimeter fence, a barrier will be placed around the construction work area to prevent public access to the work area and to protect the public from construction operations. The area to be enclosed within barriers will not encroach into an exit path nor block the access path to elevators, escalators or stairways. Barriers on the platform level will not be closer than 7 feet from the platform edge. Barriers on the concourse level will not interfere with access to fare gates or automatic fare collection vending equipment unless approved by the Engineer in writing.

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c. A barrier that will be removed at the end of the work hours or work shift is a short- term barrier. Work performed within a short-term barrier must be able to be safely secured and not present a hazard to the public when the barrier is removed. Short- term barriers can be portable crowd control barriers, traffic delineator connected with rails, etc. to form a solid barrier, or other field constructed barriers approved by the Engineer.

d. A barrier that protects work that cannot be safely secured, is a hazard to the public, or remains in place after the end of the work hours or work shift is a long-term barrier. Long-term barriers will be a minimum of 8 feet in height. Long-term barriers will be constructed in accordance with the Barrier Design requirements of Chapter 33 of the California Building Code, and will be constructed with fire resistant materials. The use of fire retardant treated lumber and plywood is acceptable. Long-term barriers will be painted and maintained free of graffiti; paint color to be selected by the Engineer.

1.07 TRAFFIC PLAN AND CONTROL

A. The Contractor will prepare a traffic control plan required for the Work. The traffic plan will include drawings showing proposed traffic control devices including temporary signage and temporary pavement markings and striping. Traffic control shall conform to the provisions of Part 6, Temporary Traffic Control of the latest California Manual on Uniform Traffic Control Devices.
B. The Contractor shall furnish, install, operate, maintain, and remove when no longer required, all traffic control and protective devices required for the approved traffic plan.
C. The traffic control plan will be submitted to the Engineer in accordance with Article 15 – Special Conditions, Section 01 33 00 Submittal Procedures.

1.08 CONSTRUCTION OPERATIONS UNDER TRAFFIC

A. “Construction equipment” is defined as all types of equipment, vehicles, and tools used in connection with construction work. The term “workers” includes every person or firm performing work in or adjacent to public streets.
B. When in traffic lanes, all vehicles and equipment will be operated at normal traffic speeds. If this is not practicable, a slow moving vehicle emblem will be displayed in accordance with the California Vehicle Code. Construction equipment will not be parked in any lane intended for use by normal traffic. Equipment parked or stored at the work site will be behind a guard rail, barrier, curb, or other protective device.
C. One-Way Traffic: No construction equipment will be operated in traffic lanes, except in the designated direction of travel for respective lanes.
D. Equipment Travel:
   1. No construction equipment other than that designated and used for general highway transportation will be moved on streets during hours of darkness or periods of adverse weather conditions that reduce normal visibility.
   2. Any construction equipment or material required for construction operations which exceeds the maximum vehicle dimensions specified in the Motor Vehicle Code, will be moved only in accordance with established State and local regulations. No such oversize load will be moved over public streets without first obtaining approval of the appropriate jurisdictional authority.
E. When flagging is required, provide certified flaggers and flagging in accordance with the requirements of the California MUTCD, Part 6
F. All temporary control devices in connection with construction work will be removed at the close of the work day, unless the state of the work is such that warning devices are still needed and are adapted for night closing.

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1.09 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.

1.10 EROSION AND SEDIMENT CONTROL

A. This project requires a water pollution control plan and compliance with all “Related Sections.” Refer to Section 01 57 23, Statewide Construction General Permit.

B. Best Management Practices, as published by the Alameda Countywide Clean Water Program, are incorporated into this specification and are to be followed during the construction/deconstruction activities on this project.

1.11 WATER POLLUTION CONTROL

A. This project requires a Water Pollution Control Plan, but does not require submission to SMARTS.

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. Removal of Temporary Structures: Erosion and sediment control structures and facilities shall be removed from the Jobsite upon completion of the affected work.

D. 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.

1.12 DUST CONTROL

A. Refer to Article 7.9 of the General Conditions

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.

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C. Upon failure of the Contractor to remove the nuisance dust as specified in Paragraph B within 2 hours after notification by the Supervising Construction Coordinator, the City may order that such work be done by others, and all costs therefore shall be deducted from monies owned or to be owed the Contractor.

D. It is understood that the provisions in Section 10, “Dust Control” will not prevent the Contractor from applying water or dust palliative for his convenience if he so desires; however, the Contractor shall endeavor, whenever possible to restrict the use of water to control dust for his convenience due to the current need to conserve water.

E. As a part of the SWPPP, the Contractor shall submit a Dust Control Plan describing proposed methods and equipment to be used for dust control, street sweeping and cleaning operations.

F. Contractor shall provide dust control at all times, including holidays and weekends, as required to abate dust nuisance on and about the Jobsite which is a result of construction activities.

G. Quantities and equipment for dust control shall be sufficient to effectively prevent dust nuisance on and about the Jobsite; and when weather conditions warrant, sprinklering equipment shall be on hand at all times for immediate availability.

H. 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.

I. Complaints from the public shall be reported to the City Inspector, City Engineer or Project Manager and shall be acted on immediately.

J. 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.

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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 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.

K. Where earthwork operations are in progress, keep exposed earth surfaces dampened continuously. Also, keep dirt accessways and roads dampened continuously.

L. If portions of the Jobsite are temporarily inactive or abandoned for whatever reason, provide dust control and abatement continuously during such periods of inactivity.

M. 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.

1.13 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.

1.14 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

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streets. Spillage resulting from hauling operations along or across any public traveled way shall be removed immediately.

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.

1.10 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 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.

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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.

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,	70	60

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including hotels	
Affected Commercial Areas	At All Times
Semi-residential/commercial areas,	65
including schools	
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,	80	70
including hotels		
Affected Commercial Areas	At All Times	
Semi-residential/commercial areas,	80	
including schools		
Commercial areas with no nighttime residency	85	

1.11 FEDERAL WATER POLLUTION CONTROL ACT

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.

1.12 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.

1.13 AIR QUALITY

A. The Contractor will implement the basic construction mitigation measures recommended by the Bay Area Air Quality Management District (BAAQMD). Emission reduction measures will include, at a minimum:

1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) will be watered two times per day.

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2. All haul trucks transporting soil, sand, or other loose materials offsite will be covered.
3. All visible mud or dirt track-out onto adjacent public roads will be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
4. All vehicle speeds on unpaved roads will be limited to 15 MPH.
5. All construction equipment to be maintained and properly tuned in accordance with manufacturer's specifications. All equipment will be checked by a certified mechanic and determined to be running in proper condition prior to operation.
6. Idling times will be minimized either by shutting off equipment when not in use or reducing the maximum idling time to five minutes (as required by the California Airborne Toxics Control Measure).
7. Publicly visible signs will include BAAQMD's phone number to ensure compliance with applicable standards.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

3.01 MEASUREMENT AND PAYMENT

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.

END OF SECTION 01 57 19

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SECTION 01 57 23 Statewide Construction General Permit (Water Pollution Control Plan)

PART 1 GENERAL

1.01 GENERAL

A. Water pollution control shall conform to the provisions of Section 7.19 "Environmental Control" of these General Conditions and the following Special Conditions and these Project Specifications.

B. This project requires a Water Pollution Control Plan, but does not require submission to SMARTS.

C. Best Management Practices, as published by the Alameda Countywide Clean Water Program, are incorporated into this specification and are to be followed during the construction/deconstruction activities on this project.

1.02 RELATED SECTIONS

A. Section 7.19 of the General Conditions

B. Erosion, sediment, noise, dust, and exhaust control requirements are specified in Contract Specifications Section, 01 57 19, Temporary Controls.

C. California State Water Resources Control Board (SWRCB): Order No. 2009-0009-DWQ.

D. Section 401 of the Clean Water Act Section, Water Quality Certification issued by the Regional Water Quality Control Board (RWQCB).

E. 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/.

F. Land Disturbance Activities Order No. 2009-0009-DWQ, NPDES NO. CAS000002.

G. Fremont Municipal Code (FMC) Chapter 11 - "Storm Water Management and Discharge Control Ordinance."

H. City's Stormwater NPDES (National Pollutant Discharge Elimination System) Permit No. CAS612008.

I. Construction General Permit, 99-08-DWQ.

J. Federal Water Pollution Control Act (Clean Water Act)

1.03 SUBMITTALS

A. General: Refer to Contract Specifications Section 01 30 00, Submittals.

B. Erosion and Sediment Control or Water Pollution Control Plan, and Site Map(s) as described herein.

1.04 FEDERAL WATER POLLUTION CONTROL ACT

Refer to Section 01 57 19, Temporary Environmental Controls.

1.05 WATER POLLUTION CONTROL PLAN

A. A Water Pollution Control Plan shall be submitted by the Contractor to the Engineer for approval prior to proceeding with any work on this project. This plan shall be designed to implement the BMP's already defined in the plan set (fiber rolls, stabilized construction entrance, drain inlet protection, etc.) and any other BMP's the Contractor deems necessary to keep dirt, debris, and construction waste away from

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storm drains and local waterways. Contractor shall implement and maintain the plan, and or update the plan to provide temporary erosion and sediment control (Water Pollution Control Plan) for the duration of the project.

B. Contractor shall implement and maintain temporary erosion and sediment control for the project as detailed in the most recent version of the Erosion Control and Sediment Control Field Manual for California, and the most recent California Stormwater Quality Association (CASQA) BMP Handbook, Construction, for the entire duration of the project.

PART 2 PRODUCTS

A. Best Management Practice (BMP) products shall be as specified in the most recent CASQA BMP Handbook, Construction.

PART 3 EXECUTION

3.01 EXECUTION OF WATER POLLUTION CONTROL PLAN

A. Erosion and sediment control work shall consist of applying BMP's to control the discharge of stormwater pollutants from the project site. BMP's shall be used to cover all temporary erosion and sediment control situations that arise during construction including unanticipated field conditions year-round. These erosion and sediment control measures shall control and contain erosion-caused silt deposits and provide for the safe discharge of silt-free storm water into existing and proposed storm facilities.

B. The Water Pollution Control Plan shall be designed to ensure the project site is protected during all storm events for the entire duration of the project.

C. 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.

D. The Water Pollution Control Plan must be approved by the Engineer prior to any construction work commencing on this project, as required by Section 2.5 of the General Conditions and Section 01 30 00, Submittals, of the Project Specifications.

E. 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.

F. 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.

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G. Erosion and Sediment Control: 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.

H. Removal of Temporary Structures: Erosion and sediment control structures and facilities shall be removed from the Jobsite upon completion of the affected work.

I. FEDERAL WATER POLLUTION CONTROL ACT

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.

3.02 MEASUREMENT AND PAYMENT

The lump sum price paid for conforming to the provisions in this section "**Statewide General Construction Permit (Erosion Control Plan)**" shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals for doing the work covered in this section, including development of a Water Pollution Control Plan, and implementation of all necessary BMP's, on-going maintenance of BMP facilities for the duration of the contract, complete in place as shown on the plans, as required by these Special Provisions, and as directed by the Project Engineer, and no additional compensation will be allowed therefor.

END OF SECTION 01 57 23

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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 25 00 "Substitution Procedures"

B. Section 01 32 19 "Submittal Procedures"

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.

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

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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 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

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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.

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 01 60 00

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SECTION 01 71 13 Mobilization and Temporary Facilities

PART 1 GENERAL

1.01 RELATED SECTIONS

A. General Conditions, Article 7.2 (E)

B. Section 01 55 00 “Site Access and Storage”

C. Section 01 56 26 “Temporary Construction Fencing”

D. Section 02 41 00 “Demolition”

E. Caltrans Standard Specifications, May 2015

1.02 DESCRIPTION

Work includes:

A. 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; haul roads; enclosures such as tarpaulins, barricades, and canopies; sanitary facilities; scaffolding and 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.

B. Mobilization will include mobilization of all construction equipment, materials, supplies, appurtenances, facilities, and the like, staffed and ready for commencing and prosecuting the Work; and the subsequent demobilization and removal from the Worksite of said equipment, appurtenances, facilities, and the like upon completion of the Work.

C. Mobilization will also include assembly and delivery to the Worksite of equipment, tools, materials, and supplies necessary for the prosecution of work which are not intended to be incorporated in the Work; the clearing of and preparation of the Contractor's staging area; the complete assembly, in working order, of equipment necessary to perform the required Work; personnel services preparatory to commencing actual Work; and all other preparatory work required to permit commencement of the actual work on construction items for which payment is provided under the Contract.

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 SUBMITTALS

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General Arrangement and Layout Drawings showing arrangement of all temporary facilities including all offices, parking, material storage warehouses, shops, material laydown, staging and storage areas, fences, and roads, within 30 Days of Notice to Proceed.

1.06 GOVERNING LAWS

Temporary facilities shall be in compliance with applicable federal, State, county, municipal, and local utility laws, rules, and regulations. Nothing in these Contract Documents shall be construed to permit work not conforming to such codes and regulations.

1.07 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.

1.08 DEMOBILIZATION

A. Upon completion of the Work, remove construction tools, apparatus, equipment mobile units and buildings, unused materials and supplies, and personnel from the Worksite.

B. Restore all areas utilized for mobilization to their original, natural state or, when called for in the Contract Documents, complete such areas indicated.

PART 2 PRODUCTS

2.01 TEMPORARY UTILITIES

A. The Contractor shall notify all Utility Companies of their Work. Notice will give sufficient time for inspection and disconnect of the utilities by the said Utility Companies.

B. The contractor shall pay all charges of gas, electric, and telephone utilities for temporary connections, disconnections and service to the work.

C. Provide safe distribution of required utilities to the job areas for use of all trades.

D. The contractor shall pay all charges of water, sewage and drainage for temporary services and connection/disconnection charges to the work. The City will pay for all permanent service charges for electrical, water, sewer and storm drainage.

2.02 TEMPORARY WATER

A. Provide, maintain and pay for suitable quality water service required for construction operations.

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.

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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.

2.03 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. Contact PG&E Senior Electrical Estimator, Ariel Maldonado, 510-683-3084 to submit a temporary power application and obtain temporary power, if required for the Contractor's operations.

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.

2.04 TEMPORARY TELEPHONE

Contractor is responsible for providing site telephone and fax as required. Existing telephones at the project site is not available for use. Maintain in the Contractor's field office or in a protected location on the job site for the use of the subcontractors. Superintendent may opt for a cellular phone.

2.05 TEMPORARY SANITARY FACILITIES

A. Provide and maintain required facilities and enclosures. Existing facilities are not available for Contractor's use.

B. Provide adequate fixed or portable chemical toilet conveniences whenever needed for the use of employees, including, washing facilities, and drinking water for the use 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.

C. 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.

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D. Minimum dimensional requirements: Height 90”; Width 67”; Depth 86.5”; seat height: 19”; capacity 68 gallons.

E. Locate sanitary facilities where approved by City staff. To be determined in the field prior to construction and delivery

F. 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.

G. 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.

H. At completion of the Work, sanitary facilities shall be properly disinfected and all evidence of same removed from the Jobsite.

I. 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.

2.06 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. The Contract Drawings also indicate work areas available to the Contractor for storage of materials and for parking of construction equipment. If so indicated, these areas will be provided to the Contractor for the durations indicated in the Contract Specifications. Additional work and storage space, if required, shall be provided by the Contractor at Contractor's expense.

C. These areas will be provided to the Contractor for the durations indicated in the Contract Specifications.

D. 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.

E. 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.

F. Storage areas, construction parking, staging and construction yards shall be illuminated at a level at least 0.25 to 0.50 foot-candles average.

G. No parking or vehicle storage will be permitted in environmentally sensitive areas as identified on the Contract Drawings.

H. The Contract Drawings may indicate work areas available to the Contractor for storage of materials and for parking of construction equipment. If so indicated, these areas will be provided to the Contractor for the durations indicated in the Contract Specifications. Additional work and storage space, if required, shall be provided by

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the Contractor at Contractor's expense.

2.08 ENCLOSED STORAGE AND SHOPS

A. The Contractor shall provide all temporary storage and shop rooms that may be required at the Jobsite for safe and proper storage of tools, materials, and equipment. Construct such rooms only in locations indicated or as approved by the Supervising Construction Coordinator, and so as not to interfere with the proper installation and completion of other work.

B. Remove such rooms within 3 Days of receipt of notices from the Supervising Construction Coordinator that removal is necessary, and incur all expenses for such removal.

C. Storage of gasoline or similar fuels shall conform to National Fire Protection Association (NFPA) regulations and local fire department regulations and shall be confined within definite boundaries apart from buildings as approved by the Supervising Construction Coordinator and the jurisdictional fire marshal.

2.09 PROTECTIVE BARRICADES AND SAFETY PRECAUTIONS

A. Construct and maintain barricades, lights, shoring, 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.

C. Flaggers shall be provided to direct or divert pedestrian or vehicular traffic when necessary.

2.10 PUMPING

Keep the site, excavations, and structures free of accumulation of water at all times, whether from underground seepage, rainfall, drainage, or broken utility lines at no expense to the Owner.

2.11 FIRE PROTECTION

Temporary fire extinguishers shall be provided and available at the job site in accordance with the appropriate NFPA Bulletins and good practice.

2.12 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.

2.13 TEMPORARY ACCESS FACILITIES

A. The Contractor shall construct, maintain, and later remove temporary access bridges, driveways, roadways, and other items needed for Contractor access to and within the Jobsite.

B. Contractor shall be responsible for any damage to streets, curbs and sidewalks due to the use of such facilities, and such damaged portions shall be repaired as required to place them in the same condition as existed prior to the commencement of the work.

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C. Extend and relocate access and parking space usage as Work progress requires. Provide and maintain access to fire hydrants, free of obstructions. Provide means of removing mud from vehicle wheels before entering streets.

D. Contractors shall comply in every respect with applicable Building Codes regarding the use of public streets and sidewalks and provide the proper barricading and lighting of public thoroughfares surrounding the construction activities.

E. Arrange for temporary parking areas on-site for construction personnel.

F. Parking of vehicles by construction personnel shall be limited to areas within the existing parking lot outside the limits-of-work, as designated by the Project Landscape Architect, or on the plans.

G. 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.

H. All areas affected by Contractor-constructed temporary facilities shall be restored to their original condition upon removal of the temporary facilities.

2.14 TEMPORARY PARKING AREAS

A. Extend and relocate access and parking space usage as Work progress requires.

B. Provide and maintain access to fire hydrants, free of obstructions.

C. Provide means of removing mud from vehicle wheels before entering streets.

D. Coordinate and arrange for temporary parking areas on-site to accommodate construction personnel within the existing parking lot outside the limits-of-work, as designated by the Project Landscape Architect, or on the plans.

2.15 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.

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.

2.16 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

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equipment, including reinstallation where applicable, at no additional cost to the District.

2.16 PROGRESS CLEANING AND WASTE REMOVAL

A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.

B. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, prior to enclosing the space.

C. Broom and vacuum clean interior areas prior to start of surface finishing, and continue cleaning to eliminate dust.

D. 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”.

2.17 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 SPECIAL CONDITIONS OF THE SITE

A. The area to be set aside for the use of the Contractor is indicated on the Drawings as "Limit of Work" and “Staging Area” Except for sub-surface utility work, curb and gutter, temporary roads and any other work specifically shown or noted, the Contractor shall confine his operations within the limits-of-work so indicated.

B. Work shall not proceed for the site or buildings until all temporary work such as utilities, barricades, field office and sanitary facilities are furnished and installed.

3.02 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.

3.03 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, the buildings, or structures 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 Architect.

3.04 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.

3.06 FINAL SITE CLEAN-UP

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Prior to final inspection, thoroughly clean the entire site and restore to a neat, acceptable condition. Remove from the entire site all construction waste and unused materials, dunnage, loose rock and stones, excess earth, roots, weeds, and all debris of any description resulting from the work. Hose down and scrub where necessary all new concrete and asphalt pavement and paved walks, and all existing concrete and asphalt pavement and walks dirtied as a result of the work. Thoroughly remove mortar drippings from concrete walks and other pavements, where they occur – do not power spray concrete decks with high pressure.

3.07 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 District's property.

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.

3.08 MEASUREMENT AND PAYMENT

The lump sum price paid for **"Mobilization"** shall include full compensation for furnishing all labor, materials, tools, equipment, incidentals, including "Project Progress Schedule" (Section 01 32 00), temporary facilities, temporary sanitary facilities, and controls for all sites as described herein, and for doing all the work covered in this section, complete and in place as shown on the plans, as required by the Special Provisions, and as required by the Engineer.

END OF SECTION 01 71 13

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SECTION 01 72 23.16 Conformance Surveying

PART 1 GENERAL

1.01 DESCRIPTION OF WORK

A. Conformance Surveying work shall be completed by a Licensed Surveyor and be based on established site bench marks, monuments, lines, and levels necessary for the work covered by this Contract.

B. Conformance surveying shall be done at the contractor's expense to confirm the as built conditions built by the contractor from staking and surveying initially laid out by the City of Fremont.

C. Scope of work:

Providing conformance surveying required for proper completion of the work may include, but may not be limited to:

1. Permeable Pavers and Concrete Finished Surface Elevations and Gradient

1.02 REFERENCES AND STANDARDS

A. Perform work in accordance with all applicable laws, codes, and regulations required by the City of Fremont, County of Alameda, State of California.

B. Reference to "Standard Specification" shall mean the current Standard Specifications of the State of California, Business and Transportation Agency, Department of Transportation, Caltrans.

C. California Code of Regulations, Title 24, current edition, also known as the California Building Code (CBC).

D. Caltrans Surveys Manual, Chapter 12(2012)

E. California Land Surveyor's Act

1.03 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. Related Sections (as applicable)

1. Section 01 32 19 "Submittals Procedures"
2. Section 03 30 00 "Cast-in-Place Concrete"
3. Section 32 11 16 "Aggregate Base Course"

1.04 SUBMITTALS

A. Contractor will be required to submit three (3) hard copies and one (1) electronic copy (in AutoCAD or scaled PDF image) of all conformance surveys for the project. The Contractor shall ensure that all survey data is completed with the supervision of a licensed surveyor. The City Representative shall provide a written response within five (5) working days of receipt of said drawings and identify any areas out of tolerance.

1.05 QUALITY CONTROL AND REWORK

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A. Any portion of the survey that does not conform to the grading tolerance requirements identified in this specification section will be corrected by the Contractor. Areas out of conformance will be resurveyed at the Contractor's sole expense (following the identical procedure stated above) by the Surveyor, and these revised points shall be added to the original digital file for resubmittal, review and acceptance by the City Representative.

B. All delays and costs incurred due to grades out of conformance are the sole responsibility of the Contractor. At any point during construction following acceptance of any portion of the survey by the City, the City reserves the right to recheck the finished surface grades (at no cost to the Contractor) to verify it is still in conformance. It is the Contractor's responsibility to protect the grading and compaction tolerances of the surveyed surface after conformance surveying operations are complete and accepted, and prior to installation of any subsequent materials. Any work identified by the survey that is outside of the acceptable tolerances shall be corrected by the Contractor at its sole expense.

1.06 LINES AND GRADES

A. Primary horizontal and Vertical control has been established by the City. In general, these will consist of the primary horizontal and vertical control points indicated in the Contract Drawings. Work points will be established by the Contractor for all Work related to the project.

1. Datum: The Contractor will be responsible for correctly locating all lines and grades and for performing all measuring as required for the construction and completion of the Work from established reference points and information is shown on the Contract Drawings.
2. Equipment and Personnel: The Contractor's instruments and other survey equipment will be calibrated and maintained in accordance with recognized professional standards, and in proper condition and adjustment at all times. Perform all surveys under the direct supervision of a professional land surveyor or civil engineer currently licensed or registered in the State of California.
3. Field Notes and Records: Furnish the original pages of all survey records to the Engineer at intervals required by the Engineer. Furnish each field notebook to the Engineer when filled or completed.

B. Primary control monuments will be carefully preserved by the Contractor. In case such monuments are destroyed or damaged, they will be replaced at the City's earliest convenience or by the Contractor with written authorization from the Engineer. The Contractor will be charged for the cost of replacing or restoring monuments destroyed or damaged by the Contractor's operations. This charge will be deducted from any monies due or to become due the Contractor as part of the following Progress Payment.

C. The Contractor will temporarily suspend work at such points and for such reasonable times as required for resetting monuments and the Contractor will not be entitled to any additional compensation or extension of time therefore.

D. All other stakes or markers required to establish the lines and grades required for the completion of the Work will be the responsibility of the Contractor.

1.07 SURVEYING ACCURACY AND TOLERANCES IN SETTING SURVEY STAKES

A. Surveying Accuracy: Control traverse field surveys and computations, including surveys of main control lines to determine horizontal and vertical alignment of major structure components, will meet the accuracy requirements for Second Order, Class I Surveys as specified by the National Oceanic and Atmospheric Administration (NOAA). Staking for construction or equipment installations will meet the accuracy

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requirements described in Caltrans Survey Manual, Chapter 12 (2012), "Construction Surveys Tolerances". The tolerances generally applicable in setting survey stakes will be as set forth in Article 1.08.A above. Such tolerances will not supersede stricter tolerances required by the Contract Drawings or Specifications, and will not otherwise relieve the Contractor of responsibility for measurements in compliance therewith.

PART 2 MATERIALS

Not Used

PART 3 EXECUTION

3.01 LAYING OUT THE WORK

A. Contractor shall employ a Registered Civil Engineer or Licensed Land Surveyor (hereafter referred to as Surveyor) to perform any conformance surveying work required by the Contractor.

B. Prior to beginning work, Contractor shall secure the electronic grading plan from the City for use by the Surveyor. The surveyor shall provide all conformance survey drawings. The drawings shall provide both the design elevations and the as-constructed spot elevations. These elevations shall be for comparison to those on the contract documents for the same location. Contractor shall also show the difference in these two numbers. In addition, unique reference numbers shall be assigned to each point for reference purposes. For spacing requirements, refer to specific type of improvement identified in this specification section.

C. Accuracy of all surveys provided in this section shall be to 0.01 feet.

3.02 CONFORMANCE SURVEYING

A. Contractor shall verify that subgrade has been prepared according to specifications with regard to compaction, grade tolerances and is free of debris, non-compactable material, topsoil, or organics prior to beginning work.

B. Prior to acceptance of the subgrade, a conformance survey will be prepared by the Contractor and submitted to the City Representative. The Contractor will be responsible to provide a certified conformance survey prepared by a Licensed Surveyor. The survey shall be based on a 25 foot grid showing the field crown, slope, grade breaks, the center of the subgrade elevation of the subdrain trench edges, the perimeter of the field finished surface, top of curb elevations. The plan shall show the comparison of the design grades versus the as-constructed grades.

C. 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. Contractor shall not install the stone base without written approval by the Supervising Construction Coordinator, City Inspector or Project Landscape Architect to proceed.

D. The finished grades and finished shall not vary from the specified grades more than one-quarter of one inch (¼", or 0.02 ft.) at any location when measured in any direction. .

E. The survey shall be based on a grid showing the finished surface elevations and finished floor elevations.

F. The plan shall show the comparison of the design grades versus the as-constructed grades.

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G. Any portion of the survey that does not conform to the requirements identified above will be corrected by the Contractor. Areas out of conformance will be resurveyed (following the identical procedure stated above) by the Surveyor, and these revised points shall be added to the original digital file for review and acceptance by the City's Representative.

H. All delays and costs incurred due to grades out of conformance are the sole responsibility of the Contractor. It is the Contractor's responsibility to protect the grading and compaction tolerances of the base after conformance survey is complete and prior to installation of the synthetic turf.

I. Finish surface planarity shall be verified, and if necessary adjusted, by the Contractor using string line method. A mason's line held taught between two workman separated by a distance of approximately 40 feet, shall be placed directly on the finished surface, parallel to the direction of greatest slope. A third workman shall check for separations between the mason's line and the finished surface that are equal to or greater than the specified tolerances. Areas of separation shall be outlined with marking paint and the depth of separation indicated.

J. Entire finished surface shall be "walked" with mason's line in increments of approximately 3 feet.

3.03 MEASUREMENT AND PAYMENT

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

END OF SECTION 01 71 23.16

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SECTION 01 74 19 Construction and Demolition Debris Management

PART 1GENERAL

1.01 SUMMARY

A. This section specifies requirements for managing construction and demolition debris, diverting 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 (including CalGreen)
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:

- 100% of the asphalt and concrete through reuse or recycling
- 100% of plant debris to be composted or used as mulch
- 65% 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 approved recycling facilities that clearly indicate the 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 Facility"** means an off-site facility that provides processing of material for recycling, composting or other diversion from landfill and is approved by the City of Fremont. See the attached list for the facilities that are approved. Only these approved facilities may be used.

B. "**Construction and Demolition Debris**" shall mean material generated as a result of construction, repair or demolition on pavement, houses, commercial buildings and other structures, as well as construction job sites, including discarded packaging, containers and waste construction materials. Materials may include a mixture of municipal solid waste and recyclable materials, such as, brick, concrete, scrap wood, scrap metal, sheet rock, cardboard, packaging and rubble.

C. "**Divert**" includes reuse and recycling, and to use material for any purpose other than disposal in a landfill or transformation.

D. "**Generator**" means an owner or responsible party (including employees and contractors of generators) of a residential dwelling, business, commercial or residential facility, and construction site, which generates municipal solid waste, organics and recyclable materials as a result of its business, facility or property activity, including construction sites.

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E. "**Hauler**" means any person or entity that transports municipal solid waste, recyclables, organics or other discarded materials.

F. "**Municipal Solid Waste**" means all putrescible and non-putrescible solid, semisolid and liquid wastes, including garbage, trash, refuse, rubbish, ashes, industrial waste, and other discarded wastes, including residue from recycling, composting and other similar processes.

G. "**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 municipal solid waste would otherwise become municipal solid waste. Recyclable materials include single commodity construction and demolition debris.

H. "**Self-Haul**" means generators who transport their own materials by using a vehicle owned by the generator and driven by the generator or their employee, rather than using the hauling services of the City's franchise hauler or a third party hauling company.

I. "**Single Commodity Construction and Demolition Debris**" means soil, asphalt and concrete resulting from construction, remodeling, repair or demolition on pavement, houses, commercial buildings, multi-family dwellings and other structures, including construction job sites and that is source separated from each other and other materials, and contains less than 10% garbage or municipal solid waste. Any hauler who pays their business tax may haul soil, asphalt, and concrete in a debris box.

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 the 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 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 a Republic Services debris box will be required to submit monthly Debris Diversion & Disposal Reports and deliver the material to approved facilities.

1.05 QUALITY ASSURANCE

A. A City of Fremont Business tax (license) is required of all hired persons working in Fremont, including all contractors, subcontractors, and vendors.

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B. Republic Services is the only hauler authorized to haul construction and demolition debris from Fremont. The contractor must subscribe to debris box service with Republic Services for all construction and demolition debris materials, except soil, asphalt and concrete.

C. Alternately, the contractor may self-haul the construction and demolition debris, using their own employees, equipment and vehicles, to an approved recycling facility on the attached list, as long as the debris hauling is an incidental part of construction or demolition services provided by the contractor.

D. Soil, asphalt and concrete resulting from construction, remodeling, repair or demolition on pavement, houses, commercial buildings, multi-family dwellings and other structures, including construction job sites should be source separated from each other and other materials. Any hauler who pays their business tax may haul soil, asphalt, and concrete in a debris box.

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 an estimate of each type of construction debris generated by the project. Items subject to the estimate and diversion requirement include:

a. Asphalt & Concrete

b. Brick/Masonry/Tiles

c. Building Materials (doors, windows, fixtures, etc.)

d. Cardboard

e. Carpet/Padding/Foam

f. Ceiling Tiles (acoustic)

g. Dirt/Soil/Clean Fill

h. Drywall/Sheetrock

i. Electrical Components (light fixtures, cables, etc.)

j. Landscape Debris (Plant & Tree Trimmings)

k. Metal

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l. Mixed C&D (3+ materials in one load that will be taken to an approved facility for recycling)

m. Mechanical Debris (ducts, plumbing fixtures, etc.)

n. Plastic

o. Trash/Garbage

p. Universal waste (thermostats, batteries, fluorescent tubes, etc.)

q. Wood and Pallets

4. All the asphalt/concrete must be reused or recycled. All plant debris must be separated from other materials and composted or used for mulch and delivered only to facilities approved by the city of Fremont. 65% of the remaining debris must be reused or recycled to comply with the CalGreen Building Code. Asphalt, concrete and plant debris do not count toward meeting the 65% diversion requirement.

5. List the name of an approved recycling facility 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. 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 debris generated by the job.

   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 are from a construction site and must be recycled, not landfilled. Inform the debris box vendor that you will require documentation that clearly states the city of origin as Fremont, and 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, used for mulch or biofuel. Alameda County ordinance requires that plant and tree debris is composted.

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Landscape debris shall not be taken out of Alameda County, except to the approved facilities below.

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.

   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:

      1) Pre-demolition/pre-construction meeting

      2) Regularly scheduled job-site meetings

PART 2 – MATERIALS, EQUIPMENT AND FACILITIES

2.01 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.

A. Republic Services is the only approved debris box hauler for materials in Fremont (except for separated loads of concrete, asphalt or soil). It is illegal to subcontract with a third party to haul garbage or other construction debris.

B. Alternately, the contractor may self-haul construction and demolition debris to an approved recycling facility, with some restrictions. Debris removal must be provided incidentally to construction or demolition services provided by the contractor. Contractors can 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)
- A City of Fremont Business tax (license) is required of all hired persons working in Fremont, including all contractors, subcontractors, and vendors.

C. The following facilities are the **only** facilities approved to accept construction and demolition debris for recycling:

Name of Facility	Address	Phone
Fremont Recycling &Transfer Station	41149 Boyce Road, Fremont	(510) 252-0500
Newby Island Landfill	1601 Dixon Landing Road, Milpitas	(408) 432-1234

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Zanker Material Processing Facility	675 Los Esteros Road, San Jose	(408) 263-2384
Davis Street Recycling and Transfer Station	2615 Davis Street, San Leandro	(510) 563-4257
Berkeley Transfer Station	1201 2nd St, Berkeley	(510) 981-7270
Vasco Road Landfill	4001 N. Vasco Rd, Livermore	(925) 447-0491
Guadalupe Landfill	15999 Guadalupe Mines Road, San Jose	(408) 268-1670

D. Approved services for specific construction debris types:

Type of Material	***Approved Hauling Options***
All Garbage and Construction / Demolition debris	• Republic Services debris box or • Contractor self-haul to approved facility in list
Source separated recyclable material (wood, plant debris/green waste, sheetrock)	• Republic Services debris box or • Contractor self-haul to approved facility in list
Source separated recycling commodity (metal, cardboard)	• Republic Services 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 Services debris box or • Contractor self-haul to approved facility/quarry or • Any approved debris box from inert recycler (Vulcan Materials, etc.)
The following materials cannot be collected in Republic Services debris box containers: asbestos, batteries and other universal waste, hazardous waste, liquids, paint, oils, medical waste, tires, televisions, monitors and appliances containing chlorofluorocarbons(CFCs)	

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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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Waste Handling Plan - Form 1
(Pre-Demolition/Pre-Construction)

Permit BLD/PWC # _____ Project Name: _____

Project Address: _____ Date: _____

Contractor: _____ Contact: _____

Phone: _____ Email: _____

To complete the form:

Place an **"X"** in the box next to each type of material that will be generated from the project

- For materials that will go in a **debris box**, place the **X** in that column
- For materials that the **contractor will self-haul** using their own equipment and vehicles, place the **X** in that column
- For materials that the contractor will self-haul, provide the name of an approved recycling facility where the materials will be delivered. Approved facilities are listed in Section 01505.
- Return form to Project Manager within 10 days of the Notice to Proceed

Material	Republic Services Debris Box	Other Debris Box	Self-Haul by Contractor	Name of Recycling Facility
Asphalt / Concrete / Soil				
Plant or Tree Debris – (100% compost required)				
Cardboard				
Metal				
Mixed Construction & Demolition debris (ie, wood, metal, drywall, plastic)				
Wood – unpainted/pallets				
Garbage				
Universal Waste (thermostats,				
Other:				

Recycling requirements:

- **RECYCLE 100% of asphalt and concrete and non-contaminated dirt/soil.**
- **RECYCLE 65% of remaining materials generated**
- **SEPARATE plant/tree debris from other material, and COMPOST 100% of plant debris**

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SAVE ALL RECEIPTS FOR SUBMITTAL WITH A FINAL DIVERSION REPORT
Failure to provide proper documentation may result in a $1000/ton penalty for each ton not recycled

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 in the Fremont Municipal Code (*Fremont Municipal Code § 8.40-Solid Waste, Recyclables and Organics Management Ordinance www.fremont.gov*).			
DAT	**SUBCONTRACTOR COMPANY NAME**	**FOREMAN NAME**	**SIGNATURE**

All Subcontractors shall comply with the project's Waste Handling Plan, and will provide weight and waste diversion data for their debris. 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.
2. 65% of the remaining 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 from the 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 debris boxes will be delivered to the Fremont Recycling and Transfer Station. As site conditions permit, additional debris boxes should be used for particular phases of construction (e.g., concrete and wood waste) to ensure the highest amount of diversion possible.
7. In the event that the waste diversion rate 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.

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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 65% of remaining items.
Failure to provide documentation will result in a $1000 per ton penalty for each ton not recycled or documented properly.

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		
Other:				
Totals:				

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**	_____

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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 total 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. 65% 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 65% 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. An approved report and the receipts are needed before Final Permit Approval is issued from the City and the Building Inspector. Failure to provide documentation will result in a $1000 per ton penalty for each ton not recycled.

Approved Construction & Demolition 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 St 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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Recommended Handling & Storage Procedures

Item or Material by Division	Suggested Action
02 SITE WORK	
Asphalt Paving	***Salvageable*** - reuse for temporary road construction
Decomposed Granite	***Recyclable***
Aggregate Base	***Recyclable***
Chain Link Fencing	***Salvageable*** - roll up chain link and cut off posts to maximum length allowable - all accessories (tops, clamps, bolts, straps, etc.) should be kept together in a container
Wood Fencing	***Salvageable*** - if possible, dismantle in sections for easy re-erection - cut posts off at ground level
03 CONCRETE	
Cast-in-place Concrete	Recyclable - typically too large for salvage and reuse
Precast Concrete	Recyclable - typically too large for salvage and reuse
04 MASONRY	
Concrete Block	***Salvageable*** - if not concrete filled - recyclable if filled with concrete
Paving Stones	***Salvageable*** - stack and palletize for easy removal
Brick	***Salvageable*** - if set with lime-based mortar - recyclable if set with concrete
Decorative Concrete Block	***Salvageable*** - if not concrete filled - recyclable if filled with concrete

END OF SECTION 01 74 19

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SECTION 01 74 23 Final 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 19, Temporary Environmental 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 mortar droppings from concrete slabs and pavement where they occur. Hose down and scrub clean all concrete flatwork and exposed vertical surfaces of concrete and masonry. Any runoff from this activity must be vacuumed or diverted as necessary away from the underground storm drain system.

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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, **"Final 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 23

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SECTION 01 77 00 Closeout Procedures

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Requirements preparatory to final inspection.

B. Final inspection.

C. Acceptance of the Work and final payment.

1.02 RELATED SECTIONS

A. Article 11 – Completion and Warranty Provisions of the General Conditions.

1.03 REQUIREMENTS PREPARATORY TO FINAL INSPECTION

A. Prior to final inspection, the Contractor will perform or provide the following, as applicable:

1. Temporary facilities, except as may be required for punch list work, will be removed from the site.

2. The site and all applicable appurtenances and improvements will be cleaned as specified in Section 01 74 23 “Final Cleaning”.

3. Record (“As-Built”) drawings and specifications will be completed, signed, and submitted to the Engineer as specified in Section 01 78 39 “Project Record Documents”.

4. Operating instructions for equipment will be properly mounted and posted as specified in Section 01 78 23 - Operation and Maintenance Data.

5. Guaranties and warranties will be submitted to the Engineer, as specified in the General Conditions and various sections of the Specifications, along with required operations and maintenance manuals as specified in Section 01 77 00 “Closeout Procedures”.

B. The Contractor will be represented by its principal superintendent and such Subcontractors and Suppliers as may be necessary to answer the questions of the Engineer's inspection team.

C. Certain elements of the Work, such as mechanical and electrical work, may be scheduled separately at appointed times in order to keep the preliminary inspection more focused and the number of persons in the Engineer’s inspection team to a minimum.

D. From the information gathered from this inspection, the Engineer will prepare a punch list of work to be performed, corrected, or completed.

E. All work on the punch list will be completed by the Contractor prior to requesting the final inspection.

1.04 FINAL INSPECTION

A. When all requirements of the above prepared punch list have been completed, the Contractor will request the final inspection.

B. The request will be made in writing, addressed to the Engineer, at least 14 calendar days in advance of the requested date of the final inspection.

C. The Contractor will be represented by its principal superintendent and such Subcontractors and Suppliers as may be necessary to verify the completion of the Work including punch list items.

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.

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1.05 ACCEPTANCE OF THE WORK AND FINAL PAYMENT

A. Acceptance of the Work will be made in accordance with Article 8.4, and Article 11.1(D) of the General Conditions.

B. Final payment will be made in accordance with Article 11.1(E) of the General Conditions.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

3.01 MEASUREMENT AND PAYMENT

Full compensation for conforming to the provisions in this Section, "**Close-Out Procedures"**, 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 77 00

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SECTION 01 78 39 Project Record Documents

PART 1 GENERAL

1.01 SECTION INCLUDES:
- A. Maintenance of Record Documents.
- B. Drawings.
- C. Specifications.
- D. Submission of documents.

1.02 MAINTENANCE OF RECORD DOCUMENTS
- A. Maintain at the Worksite one copy of the following documents for record purposes:
  1. Conformed Contract Documents.
  2. Change Orders.
  3. Approved Submittals.
  4. Clarifications or Explanatory Details or Request For Information (RFI).
  5. Inspection Reports.
  6. Laboratory Test Records.
  7. Field Test Reports and Records.
  8. Factory Test Reports and Records.
- B. Maintain for record purposes at a location approved by the Engineer, electronic files for those documents which are required to be submitted electronically. Ensure that backups of electronic files are made on a regular basis and stored at a remote location.
- C. Store documents used for record purposes in the Contractor's field office or other approved location, apart from documents used for construction. Do not use record documents for construction or fabrication purposes.
- D. Provide files and racks for storage of documents.
- E. File documents in accordance with the filing format of the Contract Specifications, by Section number and title.
- F. Maintain documents in clean, dry, legible condition.
- G. Label each document "Project Record".
- H. Make documents available at all times for inspection by the Engineer. Make copies of electronic documents available upon Engineer's request.

1.03 DRAWINGS
- A. Record ("As-Built") Drawings (also referred to as "redlines):
  1. Maintain record ("as-built") drawings of all work and subcontracts, continuously as the job progresses. A separate set of prints, for this purpose only, will be kept at the Contractor's field office at all times. One set of full size 22 by 34 inch prints will be maintained for recording "as-built" revisions and special features. At the Contractor's option, an electronically kept set of Conformed Contract Documents may be kept for recording "as-built" revisions. Electronic files shall be in a PDF format. Make documents (either prints or electronic files) available at all times for inspection by the Engineer.
  2. These drawings will be kept up-to-date and are required to be so certified by the Engineer at the time invoices are submitted for progress payments. The Engineer may withhold progress payments if record drawings are not kept current.
  3. The City will furnish the Contractor a complete set of full-size copies of the Contract Drawings for the purpose of making prints for record ("as-built") drawings. At the Contractor's option, the City will furnish the Contractor a complete set of electronic files of the Contract Drawings in PDF format for the purpose of maintaining record ("as-built") drawings electronically.

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4. Deviations from the drawings, utilities and services, mechanical and electrical lines, details, and other work will be incorporated on the record ("as-built") prints in red ink, or in red pencil if sharp, neat, and clearly legible.

5. During the course of construction, identify actual locations to scale in red on the Contract Drawings for runs of mechanical and electrical work, including utilities and services, installed in walls, or otherwise concealed. Deviations from the Drawings will be shown in detail. Locate main runs, whether wiring, piping, conduit, ductwork, or drain lines by dimension and elevation. Shop Drawings may be used to reflect record ("as- built") conditions, in which case the appropriate Contract Document will be marked to refer to such Shop Drawings as part of the record ("as-built") configuration.

6. No work will be permanently concealed until the required information has been recorded.

7. Where the Contract Drawings are not of sufficient size, scale, or detail, the Contractor will furnish its own drawings for incorporation of details and dimensions.

8. The final submittal of record ("as-built") drawings will be stamped "Project Record", signed and dated in blue ink by the Contractor, and will be delivered to the Engineer, in a hard copy and electronically, prior to the final inspection as specified in Section 01 77 00, Closeout Procedures.

B. Change Orders:

1. Changes to the Contract Drawings as the result of Change Orders will be incorporated on the prints, and these changes will be identified by Change Order number and effective date.

2. When revised Contract Drawings are issued as the basis of, or along with, Change Orders, these revised drawings will be incorporated into the record ("as-built") set and identified with Change Order number and effective date. Drawings deleted by Change Order will not be part of the record ("as-built") set. The City will furnish the Contractor with reproductions and electronic files of such revised City-furnished Contract Drawings.

C. Submittals:

1. One complete set of approved Submittals in PDF format will be collected and maintained for record purposes.

2. Pages of catalog cuts will be clear, legible, and permanent. These catalog cuts will become the property of the City.

3. Shop drawings will be electronic. These drawings will become the property of the City.

4. Submittals will be filed and maintained electronically.

5. Submittals will be delivered to the Engineer electronically.

D. Electronic Documents: Record (“as-built”) information, as applicable, will be recorded on an electronic copy of those documents which are required to be submitted electronically.

1. For those drawings which are required to be submitted electronically, submit three complete sets of half-size (11 by 17 inch, unless otherwise required) hard copy originals plotted on 20 lb. bond paper, zero solvent. The image will be pressure-fused using a laser or LED plotter. Inkjet plotter is also acceptable. Sepia, blue or brown lines are not acceptable.

2. Record documents for each submittal which was required to be prepared and submitted electronically will include two CD-ROMs of the electronic version. Electronic files will include a matrix or document showing how the files are set up and how to access them. Include no extraneous files. Folder arrangement must be clear and understandable and subfolders are to be used only when necessary.

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1.04 SPECIFICATIONS

A. Contract Specifications:

1. The specifications for record purposes will be filed in one or more large-ring, 3-ring binder or binders. An electronic copy of the record specifications shall be provided in PDF format.

2. Information, changes, and notes will be recorded in the specifications in blank areas, such as page margins or the backs of opposite pages, or on separate sheets inserted in the binder. All such information, changes, and notes will be legibly recorded with red pen or red printing as appropriate.

3. In applicable specification sections, record the manufacturer, trade name, catalog number, and supplier of each product and item of equipment actually furnished and installed, including manufacturer and supplier's address and telephone number.

4. The record specifications will be complete and will include all applicable Contract Documents other than drawings.

B. Change Orders:

1. Change Orders will be incorporated into the front of the record specifications in reverse chronological order. Use appropriate page dividers to identify Change Orders and to separate Change Orders from the Specifications.
2. In addition, changes to the Specifications effected by Change Order will be legibly annotated on the affected page or pages of the Specifications or adjacent thereto.

1.05 SUBMISSION OF DOCUMENTS

A. At completion of the Work, and before requesting final inspection, deliver Worksite record documents to the Engineer.

B. For record ("as-built") drawings, submit 2 blackline prints (1 full size and 1 half-size), and one electronic (pdf) copy with revisions incorporated on the prints in red ink. For those documents which are required to be maintained electronically, submit 1 full size plot and 1 half-size plot of drawings, hard copies of 8 1/2 by 11 inch documents, and electronic files on CD-ROM.

C. Software:

1. Submit all documentation, licenses, and electronic media associated with the purchase of commercially available software furnished to the City under this Contract. The documentation and media will be submitted in appropriate storage containers or in the original media packaging.

2. Where development of User's Guides is specified, User's Guides will be submitted.

3. Unless otherwise specified, documentation will be prepared in accordance with recognized industry standards for such documentation as approved by the Engineer.

D. Record documents, separate from Contract Drawings, will be delivered neatly and efficiently filed and packaged in appropriate file storage cabinets or boxes, 12 inches by 16 inches in size.

E. Submission of record documents will be accompanied with a transmittal letter, in triplicate, containing the following information:

1. Date of submission.

2. Project title and number.

3. Contractor's name and address.

4. Title and number of each record document.

5. Certification that each document as submitted is complete and accurate.

6. Signature of Contractor, or its authorized representative.

PART 2 PRODUCTS

Not Used.

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PART 3 EXECUTION

3.01 MEASUREMENT AND PAYMENT

Full compensation for conforming to the provisions in this Section, **"Project Record Documents"**, 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 78 39

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DIVISION 2 – EXISTING CONDITIONS

SECTION 02 41 00 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 10 Site "Site Access and Storage".

B. Photographically document existing site. Refer to Section 01 32 30 "Photographic Documentation".

C. Installation of temporary construction fencing and gates/ tree protection fencing and temporary tree wrap protection.

D. Remove and dispose decomposed granite, base rock and subgrade soil, within limit of work as indicated on plans to a depth of 12 inches.

E. Sawcut, remove and dispose of concrete paving, curb and gutter to nearest joint within limit of work as indicated on plans.

F. Alternate 1 – Remove and dispose of the top 6" of decomposed granite area which include decompose granite and compacted Class 2 aggregate base per plans, re-compact and re-test compaction of remaining existing base and re-establish 95% compaction as needed to install concrete paving to established grades.

G. Alternate 2 – Remove and dispose of the top 6" of decomposed granite area which include decompose granite and compacted Class 2 aggregate base per plans, re-compact and re-test compaction of remaining existing base and re-establish 95% compaction as needed to install concrete paving to established grades.

1.02 RELATED SECTIONS

A. Section 01 00 00 "Supplemental to the General Requirements"

B. Section 01 56 00 "Protection of Existing Facilities"

C. Section 01 74 19 "Construction and Demolition Debris Management"

D. Section 03 11 00 "Concrete Formwork"

E. Section 03 30 00 "Cast in Place Concrete"

F. Public Safety: Refer to the Special Provisions herein, Section 01 00 00 "Supplemental to General Conditions - Supplemental" and Caltrans Standard Specifications, 2015.

1.03 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 74 19 "Construction and Demolition Debris Management".

1.04 JOB CONDITIONS

A. Underground utilities exist in work areas; use extreme caution.

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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 trees, 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.

1.05 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

2.00 TEMPORARY CONSTRUCTION FENCING AND GATES

A. Refer to Section 01 56 26, "Temporary Construction Fencing" for further information.

B. Construction fencing and gates shall not be unwired after completion of demolition, but will remain in place through the next phase of construction.

C. Existing perimeter fencing along the east side of the property (bordering the parking lot) may be used temporarily in place of construction fencing to secure the site until demolition or construction takes place in that area.

2.01 TREE PROTECTION FENCING

A. Refer to Section 01 56 39 "Tree Protection" for additional information and execution.

2.02 DUST ABATEMENT/DUST CONTROL

A. Dust control shall conform to the provisions in Section 01 57 19 "Temporary Environmental Controls" of these Project Specifications.

PART 3 EXECUTION

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3.00 TEMPORARY CONSTRUCTION FENCING AND GATES

A. As first order of work, the contractor shall install all temporary construction fencing to secure the site and staging area.

B. Temporary Construction Fencing shall be installed independently of Tree Protection Fencing. Refer to Section 01 56 26 “Temporary Construction Fencing”.

C. As described in Section 01 00 00, the contractor shall be responsible for adjusting the layout of the fences as necessary to accommodate their work, and to accommodate other contractors doing work, accessing the site, accessing any buildings, and protecting adjacent trees and their root zones.

D. No additional payment will be made for adjusting the layout of the temporary construction fencing or tree protection fencing.

3.01 TREE PROTECTION FENCING

A. Refer to Section 01 56 39 “Tree Protection” for additional information.

3.02 INSPECTION

A. 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.

B. Do not commence Demolition Work until unsatisfactory conditions have been corrected.

3.03 PROTECT EXISTING DRAINAGE STRUCTURES AND CONFIRM FUNCTIONALITY

A. 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.

3.04 DEMOLITION OF DECOMPOSED GRANITE AND BASE ROCK

A. The general area of decomposed granite removal is shown on the Plans.

B. All material removed and not reused shall be disposed of in accordance with the provisions in Section 01 74 19, “Construction and Demolition Debris Management” found in these Specification.

C. The removed decomposed granite material and base rock shall be disposed of off-site at an approved recycling facility. Refer to the requirements of Section 01 74 19, “Construction and Demolition Debris Management”.

D. This work shall consist of removing existing decomposed grainte surfacing and underlying base material as shown on the plans and in conformance with these special provisions in order to achieve new subgrade and subbase for new permeable paver or concrete surfacing.

E. The outline of the any surface material to remain shall be neat and uniform. Damage to pavement that is to remain in place shall be repaired to a condition satisfactory to the Engineer, or the damaged pavement shall be removed and replaced with new concrete as ordered by the Engineer. Repairing or removal of damaged pavement outside of the pavement designated to be removed by the Engineer shall be replaced at the Contractor's expense and will not be measured or paid for.

F. The material remaining in place, after removing surfacing and base to the required depth, shall be graded to a plane, watered, and compacted. The finished surface of the remaining material shall not extend above the grade established by the Engineer.

3.05 DEMOLITION OF CONCRETE CURB, GUTTER AND CONCRETE SIDEWALK

A. The general area of concrete removal is shown on the Plans.

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B. All material removed and not reused shall be disposed of in accordance with the provisions in Section 01 74 19, “Construction and Demolition Debris Management” found in these Specification.
C. The removed concrete material shall be disposed of off-site at an approved recycling facility. Refer to the requirements of Section 01 74 19, “Construction and Demolition Debris Management”.
D. This work shall consist of removing existing concrete surfacing and underlying base material as shown on the plans and in conformance with these special provisions in order to achieve new subgrade and subbase for new concrete surfacing
E. The outline of the concrete material to remain shall be neat and uniform. Damage to pavement that is to remain in place shall be repaired to a condition satisfactory to the Engineer, or the damaged pavement shall be removed and replaced with new concrete as ordered by the Engineer. Repairing or removal of damaged pavement outside of the pavement designated to be removed by the Engineer shall be replaced at the Contractor's expense and will not be measured or paid for.
F. The material remaining in place, after removing surfacing and base to the required depth, shall be graded to a plane, watered, and compacted. The finished surface of the remaining material shall not extend above the grade established by the Engineer.
G. Concrete material removal shall be performed without damage to any portion that is to remain in place. All damaged adjacent concrete, which is to remain in place, shall be removed and replaced as designated by the Engineer at the Contractor’s expense. Removal of concrete material shall conform to Section “Sawcutting” found below and elsewhere in these Special Provisions.

3.06 SAWCUTTING

A. All existing pavement edges shall be saw cut as noted on the plans and as directed by the Engineer.
B. Sawcutting shall be done joint to joint.
C. 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 Engineer.

3.07 DUST CONTROL

A. Dust control shall conform to the provisions in Section 18, "Dust Palliatives" of the Standard Specifications and these Special Provisions, Section 01 00 00 “General Conditions - Supplemental”.

3.08 UTILITIES AND FACILITIES TO REMAIN AND BE PROTECTED

A. 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.
B. Utility boxes to be adjusted shall include all clean outs, man holes, downspouts, rim frames, and utility boxes not subject for removal, and as described on the plans.
C. 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.

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3.09 CLEAN-UP

A. 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.

3.010 STOCKPILING, OFF-HAUL AND DISPOSAL OF SUBGRADE MATERIAL

A. All material removed from the site shall be disposed of legally in accordance with Caltrans Standard Specifications, 5-1.20B(4) and per Section 01 74 19 "Construction and Demolition Debris Management".

B. No stockpiles shall remain when all excavation and off haul work is completed.

3.011 REGULATIONS

A. Comply with all Federal, State, and Local Agency hauling and disposal regulations.

3.10 MEASUREMENT AND PAYMENT

A. Payment for "**Temporary Construction Fencing**" shall be per Section 01 56 26 "Temporary Construction Fencing".

B. The cubic yard cost price paid for **"Excavate and Dispose of Decomposed Granite and Aggregate Base Rock (F)"** shall include full compensation for the demolition of various items 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 Engineer or their designee.

C. The linear foot price paid for "**Sawcut Concrete Paving, Curb and Gutter**" shall include full compensation for the sawcutting of various items as covered by this section, and shall include furnishing labor, materials, tools, equipment and incidentals for doing all the work, complete in place as shown in plans, as required by these Special provisions, and as directed by the Engineer or their designee .

D. The square foot price paid for **"Remove Concrete Paving"** shall include full compensation for the demolition of various items 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 Engineer or their designee .

E. The linear foot price paid for **"Remove Curb and Gutter"** shall include full compensation for the demolition of various items 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 Engineer or their designee.

F. If Alternate 1 is awarded, the square foot cost for "**Remove and Dispose of Decomposed Granite and Aggregate Base Rock (F)**" shall include full compensation for furnishing all labor, materials, tools, equipment, demolition, disposal, installation, and incidentals; for doing all work covered in this section, complete in place as shown on the plans, as required by the Special Provisions, and as required by the Engineer or their designee.

G. If Alternate 2 is awarded, the square foot cost for "**Remove and Dispose of Decomposed Granite and Aggregate Base Rock (F)**" shall include full compensation for furnishing all labor, materials, tools, equipment, demolition, disposal, installation, and incidentals; for doing all work covered in this section, complete in place as shown on the plans, as required by the Special Provisions, and as required by the Engineer or their designee.

END OF SECTION 02 41 00

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DIVISION 3 - CONCRETE

SECTION 03 11 00 Concrete Formwork

PART 1 – GENERAL

1.01 SCOPE

Supply and install all formwork for all cast-in-place concrete as shown on the plans and as specified herein.

1.02 COORDINATION

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. 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 so that provision for their work can be made without delaying the project.

C. Cutting and/or patching made necessary by failure or delay in complying with these requirements shall be done at no cost to the City.

1.03 CLEAN-UP

During the progress of the work and at the completion of the work, the Contractor must conform to the requirements of Division 1, General Requirements of these Special Provisions.

PART 2 – MATERIALS

2.01 MATERIALS

A. Forms for Slabs and Exposed Concrete: Forms for flat, exposed surfaces shall be 5-Ply Exterior B-B (Concrete Form) panels conforming to the requirements of U.S. Department of Commerce Product Standard PS 1-66. See requirements for thickness hereinafter. Panels with raised or separated face veneers shall not be used for exposed concrete.

B. Form Facing Material

1. Provide non-porous surface such as steel, plastic, or high-density overlaid plywood with watertight joint seals to prevent leakage.
2. Plywood panels shall have a smooth surface treatment to prevent any development of bond or adhesion to concrete and to seal plywood surfaces against moisture.

C. Form Ties: Fiberglass rods tinted to match concrete.

D. Form Release: Burke Form Sealer, manufactured by W.J. Burke Company, or approved equal, shall be used and shall be applied in strict accordance with the manufacturer's directions, or approved equal.

E. Rough Hardware: Nails, bolts, screws, anchors, etc., as shown or needed shall be furnished and set.

PART 3 – EXECUTION

3.01 WORKMANSHIP

A. Footings shall rest on firm, undisturbed or compacted soil at a minimum depth below finish or natural grade as stated on the plans.

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B. Forms for concrete shall be complete and of such strength and construction as to prevent any spread, shifting, or settling of same when concrete is deposited therein and tight enough to avoid any leakage or washing out of cement mortar from the concrete.

C. All forms and false-work shall be designed in a manner so that the stresses in the different members can be determined, including the details. They shall have sufficient rigidity so as to resist deflection more than one-eighth inch (1/8") between supports after the concrete has been placed therein, and to assure a smooth and even appearance of the surfaces. Any plywood forms shall be not less than one-quarter inch (1/4") thick. If necessary to prevent deflections, plywood shall be backed with other material.

D. Bolts, rods and other approved devices shall be used for internal ties and spreaders. These shall be of such construction that when the forms are removed, no metal shall be within one inch (1") of an exterior face.

E. Pipes exceeding one-third (1/3) of slab thickness shall not be placed in structural concrete unless approved by the Engineer. Pipes may be placed through structural concrete in sleeves, but may not be embedded therein.

F. Special care shall be taken that forms are true to the required lines, grades and surfaces so as to give a uniform neat and workmanlike finish to all concrete surfaces and to make form supports of sufficient strength, properly braced and on adequate foundations so that there shall be no settling or distortion when the weight of concrete is added.

G. All dirt, chips, sawdust, rubbish, water etc., shall be completely removed from the forms by water hosing and air pressure before any concrete is deposited therein. No wooden ties nor blocking shall be left in concrete except where indicated for attachment of other work.

H. Any wood forms other than plywood shall be thoroughly water soaked before placing any concrete. The wetting of forms shall be started at least twelve (12) hours before concreting.

I. Upon removal of forms, all bolts, wires for anchoring, etc., shall be either removed, cut off to lengths as directed or left in place for anchorage of other work as specified.

J. When a concrete pour has been stopped for a sufficient length of time so that shrinkage or warp has separated the forms and the concrete, provisions shall be made to draw the forms into firm contact with the concrete before placing additional concrete. Care must be taken to prevent any shoulder or ledge being formed at a cold joint.

K. Forms to be reused shall be in good condition and shall be thoroughly cleaned before being reused.

L. Construction details shall be in conformance with the Standard Specifications and City of Fremont Standard Detail for curb, gutter and sidewalk, except where modified herein, or as detailed on the plans.

M. Construction joints shall be made and located generally as indicated on the plans and in a manner so as not to impair the strength of the structure and only at locations as approved by the Engineer.

N. Anchor bolts shall be set into concrete the distance specified by the manufacturer.

3.02 MEASUREMENT AND PAYMENT

A. Payment for Concrete Formwork is considered to be included in the contract price paid for **"Concrete Curb and Gutter", "Trench Drain with Concrete"** "**6" over 6" Concrete Paving", "6" Concrete Paving over Existing Aggregate Base"** (Alternate 1 and 2) and **"4" Concrete Paving over Existing Base"** (Alternate 1) and no separate payment will be made therefor.

END OF SECTION 03 11 00

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SECTION 03 20 00 Concrete Reinforcement

PART 1 GENERAL

1.01 SCOPE

Supply and install all reinforcing steel as shown and called for on the plans, and in these special provisions.

1.02 COORDINATION

This Contractor and other trades whose work makes it necessary for them to cooperate, shall coordinate their work so as not to interfere with each other. Interferences between items of various Trades shall be resolved before any concrete is poured.

1.03 STORAGE

Reinforcement shall be stored in a manner that will avoid excessive rusting or coating with grease, oil, dirt or other objectionable materials.

1.04 CLEAN-UP

During the progress of the work and at the completion of the work, the Contractor must conform to the requirements of Division 1, General Requirements of these Special Provisions.

PART 2 MATERIALS

2.01 REINFORCING BARS

A. Reinforcing Steel bars shall be deformed bars, Intermediate Grade, and shall conform to Section 52 “Reinforcement” of the 2015 Standard Specifications and “Standard Specifications for Billet-Steel Bars for Concrete Reinforcement” (ASTM A615, Grade 40).

B. Supports for reinforcing bars in footings shall be of sufficient strength to adequately support the bars, and shall be of the type approved by the Engineer.

C. Supports or spacers for bars in walls shall be such that exterior face of wall will not be marred when forms are stripped and final finish has been completed.

D. Supports for reinforcing bars shall be corrosion-resistant types at locations in contact with exposed surfaces.

E. Tie wire shall be No. 16 American Wire Gauge or heavier, black annealed.

F. Miscellaneous Reinforcing Accessories: Spacers, chairs, ties, and other devices necessary for properly placing, spacing, supporting, and fastening reinforcement in place.

2.02.1 DOWELING

A. Dowels shall conform to Section 52 “Reinforcement” of the 2015 Standard Specifications

B. Dowels shall be twelve (12”) inches long, #4 deformed bar, spaced twenty-four (24”) inches on center, and extend a minimum of four (4") inches into the existing concrete.

C. Epoxy for doweling shall conform to the provisions in Section 95, "Epoxy," of the Standard Specifications. The Contractor shall prepare the pavement surface prior to application according to the manufacturer’s recommendations.

2.03 WELDED WIRE FABRIC OR MESH

A. Reinforcing Mesh shall be ASTM specification A-185, 6” squares, #10 gauge wire, flat sheets, uncoated finish, and conform to the requirements of Section 52 “Reinforcement” of the 2015 Standard Specifications.

PART 3 EXECUTION

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3.01 WORKMANSHIP

A. All work shall comply with the requirements set forth in the “Manual of Standard Practice for Detailing Reinforced Concrete Structures”, published by the American Concrete Institute except where more exacting requirements are specified in the Contract Documents.

B. Bars shall be accurately bent and placed as indicated on the plans.

C. Bars shall be securely fastened and supported so that they may be walked upon without displacement and to prevent movement during placing of concrete.

D. Any construction joints in members added by the Contractor shall be reinforced as directed by the Engineer at no additional expense to the City.

3.02 CONNECTION TO EXISTING CONCRETE

A. Wherever sidewalk, mow band or curb is removed, the entire section of sidewalk or curb between deep joints shall be removed and replaced. Horizontal dowels for proposed curb, gutter and sidewalk to be tied into existing curb, gutter and sidewalk to connect new work to existing.

B. Epoxy rebar into drilled holes. Dowels shall be placed prior to placement of new adjacent concrete.

3.03 PLACING REINFORCING STEEL OR WELDED WIRE FABRIC

A. Reinforcement shall be placed in accordance with the details in the drawings.

B. Reinforcement shall be accurately placed and securely tied at intersections with No. 16 gauge black annealed wire. It shall be maintained in proper position by chairs, bar supports, or other approved devices. Bars in footings shall be supported on precast concrete blocks.

C. Bars shall lap 30 diameters at splices. Splices in adjoining horizontal bars shall be staggered at least six feet (6'). Where this is not feasible, submit suggestions for the Engineer’s consideration. Horizontal bars shall be hooked around corners not less than 24 diameters, with a minimum of twelve inches (12") as per typical details.

D. Welding of rebar is not permitted unless approved by the Engineer.

E. Concrete protection of reinforcement shall be not less than the following:

1. Three inches (3") where concrete is poured against ground or poured against forms, but may be in contact with ground.

F. Clear distance between bars shall be not less than one and one-half inches (1-1/2") or one and one-half (1-1/2) bar diameters, not less than one and one-third (1-1/3) times the maximum size of coarse aggregate. Wherever conduits, piping, inserts, sleeves, etc. interfere with the placing of reinforcing steel as shown or called for, the Contractor must consult the Engineer and secure from them the method of procedure before pouring any concrete.

G. Reinforcing Fabric/Mesh in concrete flatwork shall be supported on precast concrete blocks. No hooking of mesh is allowed.

3.04 MEASUREMENT AND PAYMENT

Payment for “**Concrete Reinforcement**” is considered to be included in the contract price paid for various concrete items of work that require reinforcement and 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 the Special Provisions, and as required by the Engineer, and no separate payment will be made therefor.

END OF SECTION 03 20 00

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SECTION 03 30 00 Cast In Place Concrete

PART 1 GENERAL

1.01 SCOPE

A. Supply and install all cast-in-place concrete work as shown on the plans. The work shall include, but shall not necessarily be limited to, the following:

1. 6” over 6” Concrete Paving
2. Concrete Curb and Gutter
3. Concrete at Trench Drain
4. If Alternate 1 is awarded, 6” Concrete Paving over existing 6” aggregate base.
5. If Alternate 1 is awarded, 4” Concrete Paving over existing aggregate base.
6. If Alternate 2 is awarded, 6” Concrete Paving over existing 6” aggregate base.

1.02 DOCUMENTS

A. Plans

B. Related Sections

1. Section 03 11 00 “Concrete Formwork”
2. Section 03 20 00 “Concrete Reinforcement”

C. Caltrans

1. 2015 Standard Specifications, Section 26 “Aggregate Bases” and Section 90 “Concrete”.

1.04 REFERENCES

A. American Concrete Institute:

1. ACI 117 - Standard Specifications for Tolerances for Concrete Construction and Materials; American Concrete Institute International; 2006.
2. ACI 211.1 - Standard Practice for Selecting Proportions for Normal, Heavyweight, and Mass Concrete; American Concrete Institute International; 1991 (Reapproved 2002).
3. ACI 304R - Guide for Measuring, Mixing, Transporting, and Placing Concrete; American Concrete Institute International; 2000
4. ACI 305 - Hot Weather Concreting.
5. ACI 306 - Cold Weather Concreting.
6. ACI 308R - Guide to Curing Concrete; American Concrete Institute International; 2001.

B. American Society for Testing and Materials:

1. ASTM C 33 - Standard Specification for Concrete Aggregates; 2007.
2. ASTM C 39/C 39M - Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens; 2005.
3. ASTM C 94/C 94M - Standard Specification for Ready-Mixed Concrete; 2007.
4. ASTM C 150 - Standard Specification for Portland Cement; 2007.
5. ASTM C 260 - Standard Specification for Air-Entraining Admixtures for Concrete; 2006.
6. ASTM C309 - Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete; 2007
7. ASTM C 494/C 494M - Standard Specification for Chemical Admixtures for Concrete; 2008.

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8. ASTM C 618 - Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete; 2005.
9. ASTM C 979 - Standard Specification for Pigments for Integrally Colored Concrete; 2005.
10. ASTM D 994 - Standard Specification for Preformed Expansion Joint Filler for Concrete (Bituminous Type); 1998 (Reapproved 2003).

1.05 SUBMITTALS

A. Product Data: For each type of manufactured material and product indicated.

B. Color: Submit product data and manufacturer's instructions for material and product indicated:
   1. Color additives.
   2. Curing compounds.
   3. Form facing materials.
   4. Form release agents.
   5. Proprietary cleaning agents.
   6. Surface retarders.
   7. Epoxy Grout
   8. Dowels and welded wire fabric

C. Samples:
   1. Test Panel: 14 days prior to placement prepare a sample panel at the site, using approved materials. One test panel shall be constructed for each specified concrete mix and finish. Each panel shall be 6-foot x 6-foot square and installed as specified herein. All edge conditions and surface finishes should be included in the mock-up. If the test panel does not meet the specifications contained herein and in the project details, 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 approved, the contractor shall retain the test panel during construction as the standard for judging the completed work.
   2. On the basis of review of the samples, the Project Landscape Architect may require minor modifications to be made. Upon request, re-submittal may be required at no cost to City.
   3. Remove mock-up when directed by City's Authorized Representative.

1.06 QUALITY ASSURANCE

A. Perform work of this section in accordance with ACI 301 and ACI 318.

B. Follow recommendations of ACI 305R when concreting during hot weather.

C. All work shall be accomplished using Caltrans 2010 Standard Specifications as a reference and standard for quality and performance.

C. So-called flat spots or bird baths in the finished surface will not be acceptable. Surfaces must drain and shall not vary more than 1/8 inch in 5 feet on any paved area.

D. Perform work in accordance with ACI 301, Section 6 - Architectural Concrete, and the Standard Specifications as a reference and standard for quality and performance.

E. Conform to ACI 305 during hot weather.

F. Conform to ACI 306 during cold weather.

G. Obtain each material from same source and maintain high degree of consistency in workmanship throughout Project.

H. Installer Qualifications: Concrete work shall be by firm with five years experience with work of similar scope and quality.

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I. Cure time and Concrete Testing: Minimum cure time will be 7 days before placement of synthetic safety surfacing or other. No work which places stress, tension, or loading on new concrete prior to 7 days. Contractor will proceed at their own risk if work is to occur prior to 7 days cure time.

1.07 PRODUCT DELIVERY

A. Weight and 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.

1.08 COORDINATION

A. 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.

1.09 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 direction of the Engineer 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 by the Engineer, and then only after acceptable temporary utility service or irrigation lines have been provided.

1.10 LAYOUT OF WORK

Refer to Section 01 00 00, "Supplemental to the General Conditions", for information regarding layout of work.

1.11 TOLERANCES

A. Over-excavating beyond the established excavation lines done for the Contractor's convenience shall be backfilled at the Contractor's expense.

B. Grade to a tolerance of plus or minus one tenth (0.1) of a foot under paved areas.

1.12 DISPOSAL

All materials removed shall be disposed of in accordance with Article 15, Section 01 50 50

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"Construction and Demolition Debris Management".

1.13 CLEAN-UP

During the progress of the work and at the completion of the work, the Contractor must conform to the requirements of Division 1, General Requirements of these Special Provisions.

PART 2 MATERIAL

2.01 PORTLAND CEMENT CONCRETE MIXES

A. General: All concrete, unless otherwise specifically permitted by the Engineer, shall be ready mixed in accordance with ASTM C94.

B. Cement: Portland cement shall conform to ASTM C150, Type II Modified, and shall be the product of one manufacturer.

C. Aggregate: Normal weight shall comply with ASTM C33.

D. Concrete Paving and Trench Drain Concrete Curb:

1. Concrete shall be Class II concrete and may contain 15% to 40% flyash (Type IP (MS) Modified), with a minimum 28-day compressive strength of 2,500 psi, in conformance with Section 90 "Portland Cement Concrete" of the Standard Specifications, 2015 Edition, and shall have a maximum slump of 3 inches (3") and a maximum aggregate size of 3/4 inch (3/4").
2. Mix shall contain 1 lbs lamp black per cubic yard.

E. Concrete Curb and Gutter (at parking Lot):

1. Concrete shall be 6 sack, 4000 psi, minimum 28-day compressive strength.
2. Mix shall contain 1 lbs lamp black per cubic yard.

2.02 PROPORTIONING AND DESIGN OF MIXES

A. Submit concrete mix design for City 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 City Engineer. Color of all exposed concrete shall match color of adjacent existing concrete when dry.

2.03 CONCRETE REINFORCEMENT

A. Concrete reinforcement shall conform to the requirements of Section 03 20 00 "Concrete Reinforcing" of these Special Provisions.

2.04 DOWELS, BARS AND WELDED WIRE FABRIC

A. Refer to Section 03 20 00 "Concrete Reinforcing"

2.05 EPOXY GROUT

A. Epoxy shall conform to the provisions in Section 95, "Epoxy," of the Standard Specifications. The Contractor shall prepare the pavement surface prior to application according to the manufacturer's recommendations.

B. Non-Shrink Grout: Master Builders "Embeco," Grace "Vibrofoil," Hallemite "PorRok," or approved equal.

C. Grout Color: Shall match adjoin walkway.

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2.06 CURING COMPOUND

A. Curing compound shall comply with ASTM C309.

B. Provide W-1000 Clear Cure & Seal manufactured by **Davis Colors**, or approved equal.

2.07 FORMS

A. Refer to Section 03 11 00, “Concrete Formwork”.

2.08 EXPANSION FELT, JOINT CAPS AND BACKER ROD

A. At all transitions from flat concrete work to vertical concrete work, or placement of pre-cast elements, place ½” expansion felt in the cold joint between the two pours.

B. Top of the expansion felt shall be capped with a zip strip or equal, backer rod and caulk.

C. Pre-molded strips, non-extruding and resilient bituminous type, 3/8” thick joint filler for concrete conforming to ASTM D1751, unless otherwise noted on the plans ad shall conform the Section 51 “Concrete Structures” of the 2006 Standard Specifications.

D. Expansion Joint material shall be 3/8” asphalt impregnated compressible filler material per ASTM D-994, or approved equal.

E. Expansion Joint Cap: A 3/8” polystyrene expansion cap with a removable top, VoidCap, or approved equal, can be placed over all types of expansion joint. Constructed of Heavy-duty PVC with UV inhibitors that shield the cap from the damaging ultra-violet (UV) rays from the sun.

F. Backer Rod: ¼” closed cell, highly flexible, polyethylene foam placed in the void of the expansion joint cap. Backer rod by Grainger, HPI Products Corporation, or approved equal.

G. Concrete joint sealant: Shall be installed where horizontal concrete joints meet vertical walls, and shall be gun-grade silicone, or approved equal; suitable to form a dry water barrier. Color to match mortar joints.

2.09 CONCRETE JOINT SEALANT

A. Sealant, where specified or shown in the plans, shall be installed on all concrete joints, both vertical and horizontal and shall be gun-grade silicone, or approved equal; suitable to form a dry water barrier. Color to match mortar joints.

B. Product shall be a premium-grade, high-performance, moisture-cured, 1-component, polyurethane-based, non-sag elastomeric sealant. Meets Federal specification TT-S-00230C, Type II, Class A. Meets ASTM C-920, Type S, Grade NS, Class 25; Sikaflex 1a, or approved equal.

C. Sika colors, or approved equal, shall be submitted for review and approval before application.

D. When utility boxes are within colored fields, joints shall be sealed with the noted color above for the specific concrete color.

E. Joint sealant shall not be used on the City Sidewalk in the public right of way.

2.10 AGGREGATE BASE

A. Refer to Section 32 11 16 “Aggregate Base Course” for information.

PART 3 EXECUTION

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3.01 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.

3.02 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. For reinforcement and doweling, refer to Section 03 20 00 “Concrete Reinforcement”.

C. 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. Ground water shall be removed until the completion of the work.

D. 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.

E. Concrete placement, once started, shall be carried on as a continuous operation until the section of approved size and shape is completed. Pour cut-offs must be of approved detail and location.

F. 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 re-handling 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.

G. Concrete that has partially hardened shall not be deposited in the work.

H. All concrete shall be thoroughly and properly compacted using approved mechanical vibrators.

I. Internal vibration must be by direct action in the concrete. Each pour shall be vibrated until the water shows indications of rising, but not until the water has risen.

J. Along the faces of the forms, suitable tools shall be used during the pour to force large particles away from the forms and bring mortar 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.

3.03 PARK STANDARD CONCRETE PAVING FINISHES AND EDGES

A. Concrete Paving and trench grate curbs: **Medium Broom Finish** - Medium hair broom, non-slip finish. Brooming shall be perpendicular to the path of travel and so executed that the corrugations thus produced will be uniform in character and width. Edges of concrete paving shall have a 6 inch wide smooth trowelled finish around all edges and along deep joints.

B. All flange marks resulting from tooling of edges shall be trowelled out and designated finish shall continue in its entirety to the beginning of the radius at the edge of the concrete.

C. If flange marks remain after concrete has set, all joints and edges shall be ground smooth.

D. Concrete flatwork shall be constructed with medium broom finish unless otherwise indicated on the plans. Surfaces shall be troweled smooth then given a transverse scored texture by drawing a hair broom across the surface. The operation shall follow immediately after the first steel troweling and while the surface is still sufficiently soft to be marked by the broom. The texturing shall be run in a continuous motion from edge to edge or joint to joint.

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E. Thickened Edges: Shall be placed where indicated on the drawings, and shall be included and paid for as part of “concrete paving”.

3.04 CONCRETE PAVING, CURB AND CONCRETE CURB AND GUTTER.

A. Curb, gutter, and concrete paving, shall conform to the provisions in Section 73, "Concrete Curbs and Sidewalks," of the Standard Specifications and these special provisions.

B. Portland Cement Concrete shall conform to mix described in 2.01.A, and the provisions in, Section 90, “Concrete," of the Standard Specifications and these special provisions.

C. Type “B” curb and gutter (modified) shall be installed and finished in accordance with the project plans and details, the City Standard Details and Specifications.

D. Parking Lot Concrete Curb:
   1. 6” curb shall be constructed as specified in these Special Provisions and as directed by the Engineer.
   2. The exposed height of the PCC 6” Curb and gutter to match existing.
   3. Existing subgrade beneath PCC 6” Curb and gutter **shall** be compacted to ninety percent (90%) minimum relative compaction and as directed by the Engineer.

3.05 FINISHES ON FORMED SURFACES

A. Acid wash concrete surfaces after curing as necessary to remove effervescing mineral deposits.

B. If any rock pockets or honey combing has occurred, refer herein to sacked finish repair.

3.06 DEEP JOINTS

A. Location and detail of Deep Joints shall be as indicated on the plans, or as specified, and shall be installed to 1/4 depth of the slabs or thickness of curbs and gutters, unless otherwise noted.

B. Deep Joints shall be tooled with ¼” radius edging tool.

C. At the Project Inspector’s discretion, with consultation with the Project Landscape Architect, deep joint locations may be relocated in the field in order to control cracking.

D. The contractor may also suggest changes to deep joint locations, but these changes must be suggested 1 week prior to pouring concrete in order to allow the Project Inspector and Project Landscape Architect time to evaluate and approve the proposed changes.

3.07 DEEP JOINTS

A. Concrete paving and mow bands shall be constructed with deep joints as shown on the plans. Deep joints shall be 1/4 of the depth of the concrete and may be made with a ¼” radius edging tool.

B. Concrete paving shall have deep joints placed minimum every 10 feet, unless otherwise stated, and score joints between deep joints

C. Mow bands shall have deep joints placed a minimum of 4 feet on center

D. At the Project Inspector’s discretion, deep joint locations may be relocated in the field in order to control cracking.

E. The contractor may suggest changes to deep joint locations, but these changes must be suggested 1 week prior to pouring concrete in order to allow the Project Inspector and Project Landscape Architect time to evaluate and approve the proposed changes.

3.08 CONCRETE REPAIR – SACKED FINISH

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A. If concrete has integral color, the contractor shall include the appropriate color, at the appropriate weight, in the sacking mortar. Contractor shall determine the appropriate weight and mix.

B. Repair and patch tie holes, honeycombs and defective areas and trowel too smooth finish. Remove fins and other projections completely and smoothed.

C. Thoroughly wet surface to prevent absorption.

D. Coat entire surface with sacking mortar as soon as surface of concrete approaches surface dryness.

E. Thoroughly and vigorously rub mortar over area with clean burlap pads to fill all voids.

F. While mortar is still plastic but partially set (so it cannot be pulled from voids) sack-rub surface with dry mix of sacking mortar (leave out water). There should be no discernable thickness of mortar on concrete surface, except in voids; all surfaces should be uniformly textured.

G. Immediately begin a continuous moist cure for 72 hours.

3.09 PROTECTION AND CURING

A. If the Contractor elects to use the curing compound method for curing concrete, the curing compound shall be curing compound as specified in Section 90-1.03B(3) "Curing Compound Method," of the Standard Specifications. The curing compound shall be applied in a manner that will provide a complete coating of all exposed faces of the concrete surface.

B. 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 at no cost to the City.

C. All forms shall be kept sufficiently wet to prevent drying out of the concrete.

D. All concrete surfaces shall be cured in conformance with the Standard Specifications after concrete is deposited.

E. Slabs and exposed corners of concrete shall be protected from traffic or use which will damage them in any way.

F. Concrete shall be cured per the manufacturer's instructions and per Section 90-7.01B of the Standard Specifications.

G. Maintain concrete between 65° and 85°F (18° to 29°C) during curing.

H. Apply per manufacturer's recommendations after all bleed water and surface sheen has evaporated, finishing has been completed and concrete has achieved initial set.

I. Apply to surfaces that are dry or damp, but not wet

J. Protect surrounding structures from overspray.

K. Apply when ambient and surface temperature is above 45°F (7°C) and expected to remain above that for at least 12 hours.

L. Apply with an airless or pump sprayer that is free of any resin, oil or solvent residue.

M. Use sprayer on lightest setting for maximum atomization of spray. Ordinary pump canister sprayers for garden or construction use will NOT atomize adequately. Use canister sprayers designed for application of wood finishes or form release agents with the smallest available flat fan spray tip (.10) to (.30 GPM).

N. Apply a thin coat uniformly over the surface. Fog lightly over sloped surfaces or impressions to prevent runs and streaks

O. Do not allow sprayer to spit or sputter. Unclog nozzle and re-pressurize before continuing.

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P. If clogging continues, empty sprayer back into jug. Clean and flush sprayer with hot water. Then pour sealer through fine strainer or cheesecloth when refilling sprayer.

Q. Allow 24 hours to dry completely after application is complete.

R. If efflourescence appears, it will be the contractor's responsibility to contact the concrete supplier, or Davis color representative, to determine the best method for cleaning the concrete surface. Potential surface treatment chemicals are SuperBlue, by EZChemUSA, P.O. Box 1485 • Canton, GA 30169 • (T)770-479-1764 • www.ezchemusa.com

3.10 PATCHING AND CLEANING

A. After forms are removed, the Engineer shall inspect all concrete surfaces. All surface defects, including projecting fins, bolts, form ties, nails, etc., not necessary for the work, shall be removed or cut back one inch (1") from the surface, and joint marks and fins in exposed work shall be smoothed off and cleaned as directed and to the satisfaction of the Engineer.

B. Use the same patching materials and techniques that were approved on test panel.

C. Clean exposed concrete surfaces and adjoining work stained by the leakage of concrete to meet the approval of the Engineer.

D. Efflorescence: Remove efflorescence as part of final cleaning.

E. Use least aggressive cleaning techniques possible.

F. Wear protective eye wear, gloves, and clothing suitable to work and as required by cleaner manufacturer.

G. If proprietary cleaning agents are used, test cleaning agent on a small, inconspicuous area, and check effects prior to proceeding. Begin cleaning and wash from edge to edge. Thoroughly rinse afterwards with clean water. Follow cleaner manufacturer's instructions.

3.11 TOLERANCES

A. All concrete work shall be water tested in the presence of the Project Inspector or Project Engineer before final acceptance to ensure there will be no ponding water and the surfaces drain adequately.

B. Minor variations in appearance of colored concrete, which are similar to natural variations in color and appearance of uncolored concrete, are acceptable.

C. As with any natural material, some variation in appearance is a normal design feature of concrete, whether colored or not. It is normal for the color of concrete to lighten as it cures; allow up to 28 days for process to occur.

3.12 WORKMANSHIP

A. Concrete shall be constructed on a graded and prepared subgrade and rock base as shown on the plans and as specified in these Special Provisions and in accordance with Caltrans 2015 Standard Specifications except that references to measurement and payment shall not be applicable to this work.

B. The concrete work shall conform to the requirements of Division XI "Materials" of these Special Provisions and the 2015 Standard Specifications.

C. Defective Work: Remove and replace (R&R), when directed by the Engineer, all surfaces which show excessive shrinkage cracks, spalling, or other defects in workmanship.

3.13 DOWELED CONNECTION TO EXISTING CONCRETE

G. Refer to Section 03 20 00 "Concrete Reinforcement".

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3.14 WELDED WIRE FABRIC AND REINFORCING BARS

A. Refer to Section 03 20 00 “Concrete Reinforcement”

3.15 MEASUREMENT AND PAYMENT

A. The contract linear foot price paid for “**Concrete Curb and Gutter**” shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work covered in this section, including, but not limited to, expansion joints, formworks, reinforcement complete in place as shown on the plans, as required by the Special Provisions, and as required by the City’s Engineer or their designee.

B. The contract square foot price paid for “**6” over 6” Concrete Paving**” shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work covered in this section, including, but not limited to, Class 2 aggregate base, expansion joints, formworks and reinforcement, raising or lowering of existing utility or irrigation boxes (as needed) complete in place as shown on the plans, as required by the Special Provisions, and as required by the City’s Engineer or their designee.

C. The price paid for concrete work surrounding trench drain is considered included in the contract unit price paid for “**Trench Drain with Concrete**” and no additional price will be paid therefor. See Section 33 42 36 “Trench Drain”.

D. If Alternate 1 is awarded, the square foot cost for “**6” Concrete Paving over Existing Aggregate Base**” shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work covered in this section, including, but not limited to, expansion joints, formworks and reinforcement, raising or lowering of existing utility or irrigation boxes (as needed), replacement of damaged stabilized decomposed granite adjacent to the new concrete paving, complete in place as shown on the plans, as required by the Special Provisions, and as required by the Engineer or their designee.

E. If Alternate 1 is awarded, the square foot cost for “**4” Concrete Paving over Existing Aggregate Base**” shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work covered in this section, including, but not limited to, expansion joints, formworks and reinforcement, complete in place as shown on the plans, as required by the Special Provisions, and as required by the City’s Engineer or their designee.

F. If Alternate 2 is awarded, the square foot cost for “**6” Concrete Paving over Existing Aggregate Base**” shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work covered in this section, including, but not limited to, expansion joints, formworks and reinforcement, raising or lowering of existing utility or irrigation boxes (as needed),replacement of damaged stabilized decomposed granite adjacent to the new concrete paving, complete in place as shown on the plans, as required by the Special Provisions, and as required by the Engineer or their designee.

END OF SECTION 03 30 00

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DIVISION 4 - MASONRY

SECTION 04 21 00 Brick Pavers (ALTERNATE 1)

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Clay brick pavers.

B. Mortar Setting bed.

C. Concrete sub-base

1.02 RELATED REQUIREMENTS

A. Section 03 11 00 “Concrete Formwork”

B. Section 03 20 00 “Concrete Reinforcement”

C. Section 03 30 00 “Cast In Place Concrete”

1.03 SYSTEM DESCRIPTION

A. Paving and Setting Bed: To accommodate vehicular and pedestrian traffic.

1.04 SUBMITTALS

A. See Section 01 32 19 “Submittal Procedures” for submittals procedures.

B. Product Data: Provide data on characteristics of paver unit, special shapes, dimensions, setting and jointing materials.

C. Materials: Provide the City with cut sheet for mortar material and 4 samples of the proposed brick that represents the potential range of color. Sample shall be submitted prior to competing mock-up.

D. Maintenance Materials: Provide the following for City's use in maintenance of project.
1. See Section 01 60 00 “Product Requirements”, for additional provisions.
2. Extra Repair Pavers: 10 each of each type and size.

1.05 QUALITY ASSURANCE

A. Pavers shall meet or exceed the requirements of ASTM C1272-17.

B. Paver Manufacturer Qualifications: Company specializing in manufacturing the Products specified in this section with minimum three years documented experience.

C. Installer Qualifications: Company specializing in performing the work of this section with five (5) years experience.

1.06 CITY STOCK SUPPLY OF PERMEABLE PAVERS

A. In addition to Scope of Work supply of brick pavers, the contractor shall also provide to the City, a City Stock Supply of each paver type. They shall be from the same batch and make as those utilized for the Scope of Work. Amounts shall be as follows:

1. Brick Paver : 15 each brick piece.

B. City Stock Supply shall be delivered, at the same time as the Scope of Work pavers, on completely wrapped pallets labeled with manufacturer, paver type, name, color size and project name. Contractor is responsible for delivery of the wrapped pallets to the City Corp Yard and

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shall coordinate with City's Engineer or their designee delivery time and location and acceptance of City Stock Supply Pavers.

1. Damaged City Stock Supply shall be rejected out right and will the responsibility of the Contractor to remove and dispose of.

C. City Stock Supply of permeable pavers shall not be used for Scope of Work Installation in this construction project and is considered completely separate from the supply of permeable pavers needed for the Scope of Work.

1.07 MOCK-UP

A. See Section 01 43 36 "Field Samples and Mock-ups" for general requirements for mock-up.

B. Install mortar bed, mortar joints and brick pavers in mock up area and accessories to pattern indicated.

D. Mock-up may remain as part of the Work.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Brick Pavers:
1. Pacific Clay; Product: Sunset Red, Bear Path Brick Paver 4"x8"x2-5/8".
2. Substitutions: See Section 01 25 00 "Product Substitution Procedures"

2.02 PAVER MATERIALS

A. Pavers: Extruded fire clay, fired to the following characteristics:
1. Compressive Strength: min. 7,000 psi.
2. Moisture Absorption (maximum): 11 percent.
3. Size (nominal): 4 x 8 x 2-5/8 inches.
4. Color: Sunset Red.
5. Weight: 6.3 lbs each
6. Coverage: 4.5 pcs per SF (3/8" mortar joints)

2.03 MORTAR SETTING BED

A. Mortar setting bed mix shall be Type S with minimum compressive strength of 1,800 PSI.

2.04 MORTAR JOINT MATERIAL

A. Mortar joint material shall be Laticrete Permacolor Select or approved equal. Color to match surrounding concrete.

B. Shall meet ANSI A118.7

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify substrate is ready to support pavers and imposed loads.

B. Verify gradients and elevations of substrate are correct.

3.02 MORTAR SETTING BED AND JOINT MATERIAL

A. install per manufacturer's specifications

3.03 CLEANING

A. Do not clean pavers until pavers and mortar are dry.

B. Clean soiled surfaces using cleaning solution. Do not harm pavers, joint materials, or adjacent

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surfaces.

C. Use non-metallic tools in cleaning operations.

D. Rinse surfaces with clean water.

E. Broom clean paving surfaces. Dispose of excess sand.

3.04 PROTECTION

A. Do not permit traffic over unprotected paver surface.

B. Protect paver surface with sheets of plywood.

C. Do not permit traffic for 48 hours after pavement placement.

3.05 MEASUREMENT AND PAYMENT

A. If Alternate 1 is awarded, the linear foot price paid for "**Brick Sailor Band in Concrete**" shall include full compensation for furnishing all labor, materials, tools equipment, and incidentals and for doing all the work, including mortar setting, mortar joints, and City stock supply, complete and in place as shown on the plans as required by these Special Provisions, and as directed by the Engineer.

B. Concrete work associated with brick pavers shall be paid as part of the square foot cost for "**6" Concrete Paving over Existing Aggregate Base**" under Alternate 1, and no additional payment will be made therefor.

END OF SECTION 04 21 00

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DIVISION 31 - EARTHWORK

SECTION 31 00 00 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.
3. Refer to Section 01 74 19 “Construction and Demolition Debris Management” for potential locations to deliver excavated soils.

B. Work Specified Under Other Sections:

1. Section 01 45 23 “Testing and Inspection”
2. Section 01 74 19 “Construction and Demolition Debris Management”
3. Section 02 41 00 “Demolition”
4. Section 03 30 00 “Cast in Place Concrete”
5. Section 31 05 19 “Geotextile”
6. Section 32 11 23 “Drainage”
7. Section 32 11 16 “Aggregate Base Course”

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.

1. Standard Specifications

Where referred to in these Specifications, "Standard Specifications" shall mean the California Caltrans Specifications, 2015 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

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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. 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.
      b. Slopes Steeper than 4:1
         1) Plus or minus 0.5'.

D. Definitions
   1. Rough Grading
      a. Removal of all organics and surface materials and the manipulation, grading and export of the native soils, organics and surface materials to achieve subgrade and positive drainage.
   2. 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 permeable pavers or concrete paving, or accepting imported topsoil. Subgrade shall be the bottom of any excavation graded to achieve positive drainage for any drainage structure, or footing, prior to the placement of permeable paver or 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

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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.
   a. 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. See Section 01 45 23 “Testing and Inspection”

PART 2 MATERIALS

2.01 EXISTING SOIL SAMPLING AND ANALYSIS

A. Refer to Appendix D “Soil Testing”. Report is only ‘For Reference Only’.

2.02 NATIVE SUBGRADE

A. Native subgrade shall be tested and compacted as indicated in these specifications.

B. Native subgrade should be compacted at moisture content above optimum.

2.03 EXISTING TRENCH BACKFILL

A. During excavation to subgrade, trench backfill shall be used to recondition existing trenches where encountered.

B. Refer to Section 32 11 23 “Drainage” for additional information on trench backfill material.

2.04 ROUGH GRADING

A. After removal of existing decomposed granite and aggregate base to native subgrade, removal of additional soil will be necessary in order to achieve new subgrade at a 12” depth to accept proposed permeable pavers section.

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B. Excavation to subgrade shall be included in the various line items requiring rough grading including but not limited to decomposed granite surfacing, concrete paving, curb and gutter.

PART 3 EXECUTION

3.01 EARTHWORK

A. The earthwork shall be conducted in accordance with City of Fremont and applicable grading ordinances.

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 the City, and the City therefore finds it necessary to field verify the grades, the contractor will be charged accordingly. Refer to Section 01 72 40 "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 01 72 40 Conformance Survey for additional requirements.

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 01 00 00 "Supplemental to the General Conditions" 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.

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3.04 SITE PREPARATION

A. Site preparation shall begin with the removal of decomposed granite, aggregate base, concrete, debris and other designated materials from areas to be graded. Refer to Section 02 41 00 “Demolition” for additional information.

B. If encountered, tree roots shall not be removed without consulting the City Arborist. Clearing and grubbing shall extend to the outside of the proposed excavation and fill areas.

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 protected from damage and clarified on plans.

3.05 EXISTING UTILITY TRENCH EXCAVATIONS AND BACKFILL

If the utility trench is exposed during demolition, Contractor shall preserve and protect trench. Any work to repair trench shall be per as follows:

A. 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

B. Compaction: Trench backfill shall be compacted to a minimum of 90% relative compaction as determined by the City of Fremont dry density test method.

C. 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 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.

3.06 ROUGH GRADING AT PAVED AREAS, PAVED AND PERMEABLE/PERVIOUS AREAS

A. After the removal of decomposed granite paving and aggregate base, rough grading, excavation and fill shall include, but not be limited to:

1. The removal of fill material in areas designated for excavation to achieve new subgrade, prior to placement of Class 2 permeable base rock material.
2. Any excavation needed to obtain final subgrades.
3. Excavation in areas to attain proposed subgrade in order to accept placement of permeable base, and any other features requiring placement of permeable material.

B. Subgrade areas should be stripped and scarified to a 6” depth prior to placement of geotextile fabric and base rock.

C. Rough grading and excavation shall be performed to the lines and grades indicated on the drawings, as contained in these specifications, and as required to prepare for placement of permeable base rock material.

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 vibratory equipment.

F. Excavated material shall be off-hauled and disposed of legally.

G. Subgrade shall be sloped as indicated on the plans, unless otherwise noted.

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H. Where forming is required, excavation shall be sufficient to permit placing and removal of forms. Unnecessary unauthorized excavation shall not be made.

I. Excavations shall be kept free of water during excavation and until concrete work and backfilling are complete.

J. The soil subgrade should be moisture conditioned and compacted at or above over optimum water content. Relative compaction values are based on the laboratory test procedure ASTM 01557-02.

K. The subgrade shall be excavated to create positive slopes toward the proposed trench drain. However, the intent of the permeable paver area is for on-site water retention.

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 material approved by the City Engineer, without additional expense to the city.

M. Compacted subgrade shall be non-yielding under construction traffic, including a loaded ten-wheel truck such as a water or dump truck, in all pavement areas. Removal and subsequent replacement of some material (i.e. areas of excessively wet materials, unstable subgrade, or pumping soils) may be required to obtain the minimum 95 percent compaction to the recommended depth of 12 inches.

N. Entire project or individual field area shall be rough graded at one time. No earthwork operation shall occur for partial field areas without receiving direction from the Owner or prior written approval from the City Engineer or City's Geotechnical Engineer.

O. 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.

3.07 OBSERVATION AND REMOVALS

A. Materials that are considered unsuitable shall be excavated under the observation of the City's Project Inspector in accordance with the recommendations presented in this section.

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 subgrade, as evaluated in the field by the City's Project Inspector, is exposed.

C. Excavated materials shall be off hauled and disposed of off-site.

3.08 COMPACTION REQUIREMENTS

A. Subgrade compaction requirement below permeable pavers shall be 90% with moisture at or above optimum water content.

B. Aggregate base compaction requirement below concrete shall be 90% minimum to 95% maximum with moisture at or above optimum.

C. Compaction is 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.

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D. Optimum moisture shall be evaluated by ASTM D 1557.

E. 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 dessication cracking, should be scarified, moisture conditioned, and re-compacted as per the requirements above.

3.14 HAND EXCAVATION AROUND TREES

A. Excavate within the drip line and root zone of the existing trees to achieve new subgrade for proposed permeable pavers or concrete walkway.

B. Excavate to new subgrade to accommodate full permeable paver or concrete section per the project plans and details.

C. When excavation is to occur around, and within the drip line of trees, as indicated on the plans, all excavation work shall be done by hand within the tree root zone, or by using a water or vacuum excavator to minimize damage to root system where roots are encountered. Mechanical excavation will not be allowed.

D. Hand dig, or water/vacuum excavate a trench at the edge of the area where excavation will be required to construct paving, curb and gutter and permeable pavers. Depth of the trench should be determined by the depth of the excavation required, to construct the permeable paving, curb and gutter, or concrete paving.

E. Main lateral roots and taproots shall not be cut. Smaller roots that interfere with installation of new work may be cut with prior approval as described elsewhere herein.

F. Roots shall be completely exposed to at least 2 inches below the bottom of the roots. Main lateral roots and taproots shall only be pruned under the direction of the City's Arborist. An attempt shall be made to preserve all roots 1/2" diameter and larger. Roots less than two (2) inches in diameter that interfere with installation of new work, may be cut and removed after field review and approval of such proposed cuts by the City's Arborist.

G. Roots shall be remain in permeable areas where possible. Permeable rock section shall be adjusted to accommodate roots to remain.

H. If roots area exposed, exposed roots shall not be allowed to dry out before permanent backfill is placed. Temporary earth cover shall be provided, or roots shall be packed with peatmoss and covered with a layer of burlap and temporarily supported and protected from damage until covered with backfill. The cover over the roots shall be wetted twice a day, during day and evening, at the contractor's expense, and no additional payment shall be made therefore.

I. The above excavations should be carried out by a certified arborist or certified tree worker, and monitored by the City's Arborist. At that time, the City's Arborist should evaluate any damage which has already occurred and the extent of the root damage that would be required to construct the proposed improvements. It will be determined at that time whether the tree is a satisfactory candidate for preservation. If the tree is to be preserved, the City's Arborist should direct and monitor the pruning of roots and removal of loose bark as needed.

3.15 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

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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.

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.
- Observe installation of subsurface drainage.
- Perform field density tests to evaluate fill and subgrade compaction.
- Observe pier drilling and shallow foundation excavations for bearing materials and cleaning prior to placement of reinforcing steel and concrete.
- Observe placement of reinforcing steel for drilled piers.

3.17

3.18 MEASUREMENT AND PAYMENT

A. Payment for rough grading as related to "**Permeable Paver A and B**", "**Concrete Curb and Gutter**", "**Trench Drain with Concrete**", "**6" over 6" Concrete Paving**", and if awarded, "**6" Concrete Paving over Aggregate Base**" (Alternate 1 and 2) and "**4" Concrete Paving over Existing Aggregate Base**" (Alternate 1), is considered to be included in the contract price paid for those items and no additional payment will be made therefor.

END OF SECTION 31 00 00

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DIVISION 32 - EXTERIOR IMPROVEMENTS

SECTION 32 11 16 **Aggregate Base Course**

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Aggregate base rock below trench drain, under concrete, as needed per plans and as alternate work.

1.02 RELATED DOCUMENTS

A. Section 03 30 00 “Cast-in-place Concrete”

B. Section 31 00 00 “Earthwork”

C. Caltrans Standard Specifications, 2015.

1.03 REFERENCE STANDARDS

A. AASHTO

1. AASHTO M 147 - Standard Specification for Materials for Aggregate and Soil-Aggregate Subbase, 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).

B. ASTM

1. ASTM C 136 - Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates; 2006.
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 D2434: Standard Test Method for Permeability of Granular Soils (Constant Head); 2006.
5. ASTM D 2922 - Standard Test Methods for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth); 2005.
6. ASTM D 3017 - Standard Test Method for Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth); 2005.

1.04 SUBMITTALS

A. Refer to Section 01 32 19 “Submittal Procedures”.

B. Samples: 5 lb sample of each type of aggregate.

C. Submit samples at least fifteen (15) days prior to the use thereof.

D. Materials Sources: Submit name of imported materials source.

E. Compaction Density Test Reports.

1.05 DELIVERY, STORAGE, AND HANDLING

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A. When necessary, store materials on site in advance of need.

B. Verify that survey bench marks and intended elevations for the Work are as indicated.

1.06 MATERIAL TESTING FOR RECYCLED MATERIAL

A. The blending of recycled and natural materials in some cases has failed to produce a consistent material which will meet City specifications. All existing and proposed material must meet the established City of Fremont and Caltrans specifications standard. Aggregate material delivered for construction of streets or trench backfill that does not meet City standards will be rejected and required to be removed from the job and replaced with suitable material.

B. To confirm continued compliance of materials commonly used in the City or to establish a track record for newly proposed materials, in accordance with Section 6-1.01 of Caltrans Standard Specifications, the City reserves the right to inspect, sample, or test materials at the source of supply or other locations after the contractor and supplier of the material have assured the Engineer of their cooperation and assistance. The word "Engineer" refers to the City Engineer in the City Standard Specifications. Also in accordance with the California Department of Transportation, contract administration procedures, Local Programs Manual, samples will be taken from locations such as stockpiles, conveyors and chutes, and windrows

C. The specifications further state: the number of tests and samples shall be entirely at the discretion of the Engineer and samples of material from local sources' shall be taken by or in the presence of the Engineer, otherwise, samples will not be considered for testing as stated in various paragraphs of Caltrans Standard Specifications.

D. SECTION 6 - CONTROL OF MATERIALS, is as follows:

1. Source of Supply and Quality of Materials - At the option of the Engineer, the source of supply of each of the materials may be approved by the Engineer before the delivery is started. Representative preliminary samples of the character and quantity prescribed shall be submitted ten (10) days prior to start of work by the contractor or producer for examination and tested in accordance with the methods referred to under sample and tests.

2. To ensure consistent uniformity and quality Aggregate bases containing recycled materials must be stockpiled at the quarry sufficient quantities to supply the project it will be used on. Once a stockpile is tested and approved no additional material may be added to it without prior testing and approval by the City.

3. Only materials conforming to the requirements of these specifications and approved by the Engineer shall be used in the work. All materials proposed to be used may be inspected or tested at any time during their preparation and use. If, after trial, it is found that sources of supply which have been approved do not furnish a uniform product, or if the product from any source proves unacceptable at any time, the contractor shall furnish approved material from other approved sources. No material which, after approval, has in any way become unfit for use shall be used in the work.

4. Samples and Tests - Samples of materials and tests performed shall be in accordance with Section 6 of the Standard Specifications. Any additional testing perfomed by the Contractor shall be done at the Contractor's expense.

5. Storage of Materials - Materials shall be stored in accordance with Section 6- of the Standard Specifications.

A. FIELD TESTING FOR PRODUCT COMPLIANCE: To determine if a material will be approved for delivery to a project site, three test samples will be obtained from the quarry as previously noted. The samples will be split with the quarry. The City may permit the quarry to obtain test results from an independent testing lab approved by the City, or the City may

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contract with an independent lab or perform its own tests at the material supplier or project developer's expense. Passing or combinations of pass/fail test results will be handled as follows:

1. If all three samples pass all prescribed tests, the City's Senior Construction Inspector will notify the quarry and/or Developer that the material may be delivered to the project site from that point, additional testing may, at the Inspector's option, be required from the quarry or the project site to insure that a uniform passing material is being delivered.
2. If one of the three trial samples indicates a marginal failure on any facet of any of the prescribed test, the Senior Construction Inspector will require a retest on the City's portion of the split sample containing that specific material in question. If the split sample passes, and if the Engineer approves, the Inspector will permit the material to be delivered to the project site. Additional testing from the quarry and/or site may be required as stated in Item 1 of this section.
3. If one or more of the three trial samples indicates a clear failure on any facet of any of the prescribed tests, the City will reject the material and the material will not be delivered to the project site. The City will not continue sampling or testing until the supplier has provided evidence that quarry operations and the material have changed significantly to provide a clearly passing uniform material.
4. Once a material has been approved for delivery to the project site the Inspector may sample, split, and require tests as aforementioned.
5. In the event a single failure is discovered after testing from the project site, the Inspector will notify the quarry and/or Developer that delivery of material must cease immediately. No further material from that supplier will be delivered to the site until the supplier has provided evidence that quarry operations and the material have changed significantly to provide a consistent passing uniform material. The material already placed may be removed at the Engineer's option. A second failing test from that sample will result in removal of the material from the site.

PART 2 PRODUCTS

2.01 AGGREGATE BASE (AB)

A. Caltrans Class 2 - 3/4 inch aggregate base, conforming to Section 26 of the State of California Department of Transportation Standard Specifications, dated 2015 and shall be placed as base under all concrete, including 4” and 6” concrete paving, concrete curb and concrete gutter and other finished surface materials.

Sieve Size	% Passing ASTM C-33 #67
1-1/2” (37.5 mm)	100
1”	100
¾”	90-100
3/8”	20-55
#4	0-10
#8	0-5
#200	0

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C. Quality Control; Testing for all aggregate base for shall be per Caltrans Standards or per ASTM requirements. If tests indicate materials do not meet specified requirements, change material and retest. Provide materials of each type from same source throughout the Work.

D. Aggregate base shall be compacted to a minimum of 95 percent relative compaction.

E. No separate payment shall be made for aggregate base placed beneath concrete, asphalt concrete, mow bands, deep bands, basketball court. The cost for furnishing aggregate base shall be included in the various line items listed herein

F. Recycled base materials may be submitted, but must be tested and approved by the City before it may be used. See "Material Testing for Recycled Material".

2.02 Refer to Section 32 11 23 "Drainage" for permeable pavers Class 2 Permeable rock sieve analysis.

2.03 SOURCE QUALITY CONTROL

A. Testing for all aggregate base for flatwork shall be per Caltrans Standards

B. Testing for all aggregate base for cast-in-place structures requiring special inspection shall be per ASTM requirements.

C. See Section 01 45 00 "Quality Control", for general requirements for testing and analysis of aggregate base materials.

D. If tests indicate that materials do not meet specified requirements, change material and retest.

E. Provide materials of each type from same source throughout the Work.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify subgrade has been prepared, inspected, gradients and elevations are correct, and is dry.

3.02 PREPARATION

A. Correct irregularities in subgrade gradient and elevation by scarifying, reshaping, and re-compacting.

B. Do not place aggregate on soft, muddy, or frozen subgrade surfaces.

C. Where required, geotextiles shall be in place prior to placement of aggregate base.

3.03 INSTALLATION

A. Imported Class 2 base rock at trench drain opening under permeable paver and under concrete paving and curb and gutter, should be compacted to a maximum 95% relative compaction of maximum dry density unless otherwise stated in the geotechnical report included in these Special Provisions.

B. Compaction criteria will be based on the laboratory procedure ASTM D1557.Proof-roll subgrade immediately prior to commencement of spreading of aggregate base.

C. Spread aggregate over prepared subgrade to a total compacted thickness as shown on the plans and described in the contract specifications.

D. Aggregate base material shall be delivered to the subgrade as uniform mixtures.

E. Each layer shall be spread in one operation.

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F. Material shall be spread upon the prepared subgrade by means of vehicles equipped with approved spreading devices at a uniform quantity.

G. Where the required thickness is 6 inches or less, the base material may be spread and compacted in one layer.

H. Where the required thickness is more than 6 inches, the base material shall be spread and compacted in 2 or more layers of approximately equal thickness, and the maximum compacted thickness of any one layer shall not exceed 6 inches.

I. Level and contour surfaces to elevations and gradients indicated.

J. Add small quantities of fine aggregate to coarse aggregate as appropriate to assist compaction.

K. Add water to assist compaction. If excess water is apparent, remove aggregate and aerate to reduce moisture content.

L. Base shall be firm and unyielding when proof-rolled with heavy, rubber-tired grading equipment prior to continuing construction.

M. Use mechanical tamping equipment in areas inaccessible to compaction equipment.

N. Base material placed in areas inaccessible to the spreading equipment may be spread in one or more layers by any means that will make possible the specified compaction and surface.

O. The base material, after spreading, shall be shaped by means of a blade grader to such thickness that after watering and compacting, the completed base will conform to the required grade and cross section within the tolerances specified.

P. Segregation of aggregate shall be avoided; the base shall be free from pockets of coarse or fine material.

Q. Finished base that does not conform to the foregoing requirements shall be reshaped or reworked, watered, and thoroughly re-compacted to conform thereto.

R. The Contractor shall not allow any completed untreated rock base to be subject to public or construction traffic, except the latter necessary to the completion of the overlying surface courses.

3.04 TOLERANCES

A. Flatness: Maximum variation of 1/4 inch measured with 10 foot straight edge.

B. Scheduled Compacted Thickness: Within 1/4 inch.

C. Variation From Design Elevation: Within 1/2 inch.

3.05 FIELD QUALITY CONTROL

A. See Section 01450 Quality Control, for general requirements for field inspection and testing.

B. Compaction density testing will be performed on compacted aggregate base course in accordance with ASTM D1556 and Method C of ASTM D 1557.

C. If tests indicate work does not meet specified requirements, remove work, replace and retest.

3.06 CLEANING

A. Remove unused stockpiled materials, leave area in a clean and neat condition. Grade stockpile area to prevent standing surface water.

3.07 MEASUREMENT AND PAYMENT

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A. The price paid for "**Class 2 Aggregate Base"** shall be included in the contract unit price paid for the "**Trench drain with Concrete Work**", "**Concrete Curb and Gutter**", "**6" Over 6" Concrete Paving**", "**6" Concrete Paving over Existing Aggregate Base**" (Alt 1 and 2), "**4" Concrete Paving**" (Alt 1), "**Brick Sailor Band in Concrete**" (Alt 1) requiring Class 2 aggregate base rock and no separate payment will be made therefor.

END OF SECTION 32 11 16

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SECTION 32 11 23 Drainage

PART 1 GENERAL

1.01 SUMMARY

A. Furnish all labor, materials, equipment, facilities, transportation and services to complete all storm drainage system improvements and related work as shown on the Drawings and/or specified herein.

B. Coarse aggregate shall conform, except as otherwise provided, to the provisions of Section 26, "Aggregate Bases," of the Standard Specifications and these Special Provisions.

1.02 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. Related Sections
1. Section 01 32 19 "Submittal Procedures"
2. Section 02 41 00 "Demolition"
3. Section 03 30 00 "Cast In Place Concrete"
4. Section 31 00 00 "Earthwork"
5. Section 32 14 43 "Permeable Pavers"
6. Section 33 42 36 "Trench Drains"
7. Section 11A and 11B, City Of Fremont Standard Trench Backfill Specification, Standard Specifications, dated January 1995 (amended).

1.02 DESCRIPTION OF WORK

A. Scope of work shall include, but shall not necessarily be limited to, the following for a complete and functional drainage system:
1. Excavate and backfill as required in Section 31 00 00 "Earthwork"
2. Set grades, construct grades, and compact soils for drainage.
3. Stake proposed elevations in the field for review and approval by the Engineer prior to construction.
4. Install Class 2 permeable aggregate base below permeable pavers.

1.03 REGULATORY REQUIREMENTS AND REFERENCES

A. State of California Department of Transportation Standard Specifications, Current Edition.

B. California Building Code, Current Edition.

1.04 SUBMITTALS

A. Submit cut-sheets or samples of all products to be used in conformance with Section 01 32 19 "Submittals Procedures" and/or applicable Division One and Division Two specifications, General Conditions and Special Provisions.

B. Product Data: Manufacturer's catalog cuts indicating material compliance and specified options.

C. Record Drawings: Accurately record location of new piping, drain structures, and connections to existing systems using horizontal dimensions, elevations, inverts and slope gradients as applicable.

D. Provide two (2), one (1) quart samples of each of the following products:
1. Class 2 Permeable Rock

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2. ¾" Crushed Drain Rock

E. Submit samples at least fifteen (15) days prior to the use thereof.

1.04 TESTING REFERENCES

American Association of State highway and Transportation Officials (AASHTO):

M 252	Standard Specification for Corrugated Polyethylene Pipe, 75mm to 250 mm Diameter
M 294	Standard Specification for Corrugated Polyethylene Pipe, 300mm to 1200 mm Diameter

American Society for Testing and Materials (ASTM):

C 76	Standard Specification for Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe
C 655-09	Standard Specification for Reinforced Concrete D-Load Culvert, Storm Drain, and Sewer Pipe
C 443	Standard Specification for Joints for Concrete Pipe and Manholes, using Rubber Gaskets
D 1784	Specification for Rigid Poly (Vinyl Chloride (PVC) Compounds and Chlorinated Poly (Vinyl Chloride (PCPVC) Compounds
D 1785	Specifications for Poly (Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80, and 120
D 2122	Test Method for Determining Dimensions of Thermoplastic Pipe and Fittings
D 2321	Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity Flow Applications
D 2564	Specifications for Solvent Cements for Poly (Vinyl Chloride) (PVC) Plastic Piping Systems
D 2665	Specification for Poly (Vinyl Chloride) (PVC) Plastic Drain, Waste, and Vent Pipe and Fittings
D 2855	Practice for Making Solvent- Cemented Joints wit Poly (Vinyl Chloride) (PVC) Pipe and fittings
D 3212	Standard Application for Joints for Drain and Sewer Plastic Pipe Using Flexible Elastomeric Joints
F 412	Terminology Relating to Plastic Piping Systems
F 477	Elastomeric Seals (Gaskets) for Joining Plastic Pipe
F 656	Specification for Primers for Use in Solvent Cement Joints for Poly (Vinyl Chloride) (PVC) Pipe and Fittings
F 667	Standard Specification for Large Diameter Corrugated Polyethylene Pipe and Fittings
F 891	Specification for Coextruded Poly (Vinyl Chloride) (PVC) Plastic Pipe With a Cellular Core
F 1417	Standard Test Method for Installation Acceptance of Plastic Gravity Sewer Lines Using Low Pressure Air
F2898-11	Permeability of Synthetic Turf Sports Field Base Stone and Surface system by Non-confined Area Flood Test Method
CAN/CSA B182.8	Storm Sewer and Drainage Pipe and Fittings Polyethylene

1.05 QUALITY CONTROL/QUALITY ASSURANCE

A. Control of Work: Conform to Section 5 of the Standard Specifications, 2015.

B. Control of Materials: Conform to Section 6 of the Standard Specifications, 2015.

1.06 PROTECTION OF PROJECT SITE

A. Make provisions for, and take the necessary precautions to protect existing and new work from damage during entire life of project.

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1.07 DELIVERY, STORAGE, AND HANDLING

A. Store pipe neatly and orderly, stacked and blocked to prevent damage. Cracked, checked, spalled or otherwise damaged pipe shall be removed from site.

B. Use of chain slings shall not be permitted.

C. All piping, fittings and related materials shall be carefully handled at all times.

D. All pipelines, fittings and drainage structures shall be kept clean and closed during construction.

1.08 PROJECT/SITE CONDITIONS

A. Work of this section shall not be executed when site conditions are detrimental to quality of work as determined by the Engineer.

1.09 SEQUENCING AND SCHEDULING

A. Coordinate work of this section with all other work contained in the Contract Documents.

PART 2 PRODUCTS

2.01 TRENCH BACKFILL (If needed – for encountered existing utility trenches)

A. Trench backfill will be used to back fill all trenches containing solid reinforced concrete pipe (RCP) or solid PVC pipe.

B. Gradation requirements for trench backfill, refer to Section 11A and 11B, City Of Fremont Standard Trench Backfill Specification, Standard Specifications, dated January 1995 (amended) or the sieve analysis provided below.

C. Compact to 90% minimum relative compaction.

D. Sand equivalent: 20 min, per CTM 217

E. Sieve Analysis – CTM 202, gray sand

Sieve Size	Sieve Size	Percent Passing
25.0 mm	1”	100
19.0 mm	3/4”	100
12.5 mm	1/2”	100
9.5 mm	3/8”	100
4.75 mm	#4	80
2.36 mm	#8	56
1.18 mm	#16	41
600 um	#30	33
300 um	#50	27
150 um	#100	22
75 um	#200	17.3

2.03 TRENCH DRAINS

A. Refer to Section 33 42 36 “Trench Drain”.

2.04 ¾” CRUSHED DRAIN ROCK

A. Material to be used beneath permeable paver at mouth of trench drain inlet.

B. Sieve Analysis

Sieve Size	Sieve Size	Percent Passing
25 mm	1”	100

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19 mm	¾”	80
12.5 mm	½”	20
9.5 mm	3/8”	11
4.75 mm	#4	4

C. Material shall be clean and crushed angular stone.

D. Compact to 90% minimum relative compaction.

E. Available from (or approved equal):

1. Graniterock, Wilson clean and crushed ¾” Drain Rock, 11711 Berryessa Road, San Jose, CA 95133

2. Lyngso, ¾” Crushed Drain Rock, 345 Shoreway Road, San Carlos, CA 94070

2.05 CLASS 2 PERMEABLE BASE ROCK

A. Material to be used under permeable paver.

B. Permeable aggregate material or stone shall conform to the requirements for Caltrans Class 2 permeable material, as defined in Section 68-2.02F(3) “Class 2 Permeable Material”.

C. Class 2 permeable material must have a sand equivalent value of not less than 75.

D. Drainage/Permeability: minimum 20 inches per hour. Refer to Part 3, “Excavation and Backfill-Biotreatment Trench and Perimeter Trench”, for testing methodology.

E. Relative compaction shall be achieved by uniform distribution and static rolling to assure uniform placement, grade and drainage. Testing shall be coordinated between the contractor and inspector to establish a baseline for testing uniformity.

Sieve Size	**% Passing (CL 2 PERM)**
1”	100
¾”	90-100
3/8”	40-100
#4	25-40
#8	18-33
#30	5-15
#50	0-7
#200	0-3

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PART 3 EXECUTION

3.01 PREPARATION

A. Coordinate the sequence of work.

B. Review proposed staked elevations and proposed limits of excavation in the field with the Project Landscape Architect for approval prior to setting pipe and drain inlets.

C. Adjust proposed elevations as necessary to ensure proper drainage, and to conform to existing rim elevations, with no areas of standing water.

D. Schedule and perform drainage system installation prior to prolonged wet weather periods.

3.02 ROUGH GRADING OF SUBGRADE UNDER PERMEABLE PAVERS

A. Work shall be performed when soils are reasonably dry and not saturated.

B. Refer to Section 31 00 00 “Earthwork”, for additional information.

3.03 30 MIL WATER PROOF SHEETING

A. Sheeting shall be installed according to the sequence required to properly install the material.

B. Sheeting shall not be installed until excavation is complete and approved, and work is complete to the point that other work will not adversely impact the filter fabric.

C. Rolls shall be handled in such a way that they are not damaged or compromised

D. 30 mil water proofing shall be placed on the approved subgrade surface in accordance with the drawings. The water proofing shall be rolled out parallel to the concrete paving.

E. 30 mil water proofing shall be securely anchored and then rolled in such a manner as to continually keep the fabric in tension.

F. Sheeting shall be anchored with 6 inch steel staples placed at 36 inches on center during placement.

G. Adjacent widths of waterproofing sheeting shall have a 8-inch minimum overlap at all edges.

3.04 CLASS 2 PERMEABLE ROCK BASE

A. The specified permeable rock base shall conform to the requirements defined herein this section, and the requirements for Caltrans Class 2 permeable material, as defined in Section 68-2.02F(3) “Class 2 Permeable Material”.

B. The permeable rock base shall be placed and compacted over the subgrade and filter fabric, to the grades specified and elevations shown on the drawings. If the thickness of the planned permeable rock base exceeds 6-inches, the rock shall be placed in horizontal layers not exceeding 6-inches.

C. 3-5 ton roller maximum

D. E. Establish a roll pattern to achieve maximum compaction density and uniformity along a test strip and compact as follows:

1. Make 3 passes with a static roller over the material as placed. Perform a dry density test.

2. Add a small amount of moisture, as agreed upon in the field with the Project Inspector, and make 3 additional passes with a static roller if compaction is not achieved. Perform a second dry density test on the test strip.

3. Add a lesser amount or greater amount of moisture, as agreed upon in the field with the Project Inspector, and make 3 additional passes with a static roller if compaction is not achieved. Perform a third dry density test on the test strip.

4. Compaction readings after the third dry density test should establish the means and methods to achieve compaction for the remainder of the work.

5. This method shall be used to place and compact the leveling course described elsewhere herein.

E. Layers shall be compacted to 90% relative compaction, to finished base elevation with a smooth drum roller, and still maintain permeability, and provide a non-yielding, smooth, flat surface.

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F. Should any segregation of the material occur during any stage of the stockpiling, spreading, or grading, the contractor shall immediately remove and dispose of segregated material and correct or change the handling methods and procedures to prevent any further segregation.

G. Final permeable rock base grades shall conform to the lines and grades as shown on the drawings. Refer to Section 01 72 23.16 “Conformance Surveying” for conformance and verification of slope and grade.

H. The surface of the permeable rock base shall be sloped as shown on the drawings.

I. Field percolation testing shall be conducted in the presence of the Project Inspector Engineer in accordance with the ASTM F2898-11 testing specified herein and described in “Special Inspection and Material Testing”

3.05 MEASUREMENT AND PAYMENT

A. The per cubic yard final pay quantity for **“Class 2 Permeable Aggregate Base (F)”** shall include full compensation for furnishing all labor, materials, tools, equipment, compaction, permeability testing, and incidentals, including importing material and backfill in order to achieve necessary grades to accommodate permeable choker course and permeable paver, installation of 30 mil water proof sheeting, installation of ¾” Crushed Drain Rock at Trench Drain inlet, complete in place as shown on the plans, as required by these Special Provisions, and as directed by the City Engineer or his designee.

END OF SECTION 32 11 23

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SECTION 32 14 43 Permeable Pavers

PART 1 GENERAL

1.01 SUMMARY

A. The work in this section shall consist of excavation, furnishing and placing choker base course, permeable pavers and joint filler.

B. Section Includes

1. Permeable interlocking concrete pavers on permeable base and bedding (choker) course

C. Related Sections

1. Section 02 41 00 “Demolition”
2. Section 03 11 00 “Concrete Formwork”
3. Section 03 20 00 “Concrete Reinforcement”
4. Section 03 30 00 “Cast in Place Concrete”
5. Section 31 00 00 “Earthwork”
6. Section 31 05 19 “Geotextile”
7. Section 32 11 16 “Aggregate Base Course”
8. Section 32 11 23 “Drainage”

1.02 REFERENCES

A. American Society for Testing and Materials (ASTM)

1. C 33, Standard Specification for Concrete Aggregates
2. C 67, Standard Test Method for Sampling and testing Concrete Masonry Units and Related Units.
3. C 131, Standard Test Method for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine.
4. C 136, Method for Sieve Analysis for Fine and Coarse Aggregate.
5. C 140, Standard Test Methods for Sampling and Testing Concrete Masonry Units and Related Units.
6. D 448, Standard Classification for Sizes of Aggregate for Road and Bridge Construction.
7. C 936, Standard Specification for Solid Interlocking Concrete Pavers.
8. C 979, Specification for Pigments for Integrally Colored Concrete.
9. D 698, Test Methods for Moisture Density Relations of Soil and Soil Aggregate Mixtures Using a 5.5-lb (2.49 kg) Rammer and 12 in. (305 mm) drop.
10. 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.
11. D 1883, Test Method for California Bearing Ratio of Laboratory-Compacted Soils.
12. ASTM D 2922 Standard Test Methods for Density of Soil and Soil-Aggregate In-Place by Nuclear Methods (Shallow Depth).
13. D 4254, Standard Test Methods for Minimum Index Density and Unit Weight of Soils and Calculation of Relative Density.
14. ASTM F2898-11, Standard Test method for Permeability of Synthetic Turf Sports Field

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Base Stone and Surface Systems by Non-Confined Area Flood Test

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, 2015.

1.03 SUBMITTALS

A. Submit samples at least 15 days (15) prior to use
B. In accordance with Conditions of the Contract and Section 01 32 19 Submittal Procedures Section.
C. Paver manufacturer's/installation subcontractor's drawings and details:
   1. Subcontractor shall provide shop drawing layout of pavers for the following patterns
      a. Herringbone pattern
   2. Indicate layout, pattern and relationship of paving joints to fixtures, and project formed details.
D. Minimum 3 lb (2 kg) samples of base and bedding aggregate materials.
E. Sieve analysis of aggregates for base and bedding materials per ASTM C 136.
F. Project specific or producer/manufacturer source test results for void ratio and bulk density of the aggregate base.
G. Permeable concrete pavers:
   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.

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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 10 ft (3 x 3 m) paver area. Mock up area shall include double soldier accent
2. Use this area to determine surcharge of the bedding layer, joint sizes, 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 at end of the construction project.

1.05 DELIVERY, STORAGE, AND HANDLING

A. General: Comply with Section 01 60 00 'Product Requirements"

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 CITY STOCK SUPPLY OF PERMEABLE PAVERS

A. In addition to Scope of Work supply of permeable pavers, the contractor shall also provide to the City, a City Stock Supply of each permeable paver type. They shall be from the same batch and make as those utilized for the Scope of Work. Amounts shall be as follows:

1. Permeable Paver A : 70 SF of pavers
2. Permeable Paver B : 8 each paver piece

B. City Stock Supply shall be delivered, at the same time as the Scope of Work pavers, on completely wrapped pallets labeled with manufacturer, paver type, name, color size and project name. Contractor is responsible for delivery of the wrapped pallets to the City Corp Yard and shall coordinate with City's Engineer or their designee delivery time and location and acceptance of City Stock Supply Pavers.

1. Damaged City Stock Supply shall be rejected out right and will the responsibility of the Contractor to remove and dispose of.

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C. City Stock Supply of permeable pavers shall not be used for Scope of Work Installation in this construction project and is considered completely separate from the supply of permeable pavers needed for the Scope of Work.

PART 2 PRODUCTS

2.01 PERMEABLE PAVERS

A. Permeable Paver 'A", 6" x 9" x 3-1/8" thick (80 mm)

Manufacturer: Calstone or approved equal
1155 Aster Avenue, Sunnyvale, CA 94086.
Ph. 408-984-8800

Model: Permeable Quarry Stone, narrow joint

a) Material Standard Comply with ASTM C396

b) Concrete pavers shall have spacer bars on each unit

Color: **Rustic Yellowstone**

a. Color Pigment Material Standard: Comply with ASTM C 979.

B. Permeable Paver 'B'

1. Manufacturer: Basalite or approved equal
605 Industrial Way, Dixon, CA 95620
Ph. 916-217-2665

Model: Plank Pavers, 4.5" x 14.18" x 4" thick (100 mm)

Color: Truckee, 2023 with all sided mirror matrix

2.02 PERMEABLE BASE ROCK

A. Refer to Section 32 11 23 "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 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

No. 8	
Sieve Size	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.

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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

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	85 to 100
No. 8	10 to 40
No. 16	0 to 10
No. 50	0 to 5

F. Aggregate Source: Calstone,1155 Aster Avenue, Sunnyvale, CA 94086. Phone: (408) 984-8800. (Fine #9 Permeable Joint Rock). Or Approved equal.

2.05 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 EARTHWORK

A. The site shall be cleared of existing surface material down to existing subgrade per the requirements of Section 02 41 00 “Demolition”.

B. Subgrade shall not be compacted or scarified.

C. Verify existing subgrade surface drainage slope toward trench drain. Verify that the soil subgrade is free from standing water.

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D. Do not proceed with installation of geotextile, bedding and interlocking concrete pavers until subgrade soil conditions are corrected as directed by the Engineer.

E. Geotextile may be placed after all the above has been completed and verified

3.02 INSTALLATION OF GEOTEXTILE

A. Refer to specifications Section 31 05 19 "Geotextiles".

3.03 INSTALLATION OF PERMEABLE ROCK BASE

A. Refer to Section 32 11 23 "Drainage" for Class 2 Permeable Base Rock.

3.04 INSTALLATION OF PERMEABLE BEDDING (CHOKER COURSE)

A. The specified bedding course shall be placed and compacted over top of the finished and approved permeable rock base to the grades and thicknesses specified on the drawings. Rock shall meet the requirement found herein for ASTM No. 8 stone size.

B. Layers shall be compacted to finished base elevation with a smooth drum roller, and still maintain permeability, and provide a non-yielding, smooth, flat surface.

C. To establish baseline compaction density and uniformity, establish a roll pattern to achieve maximum compaction along a test strip and compact using the same methods as described in "Installation of Permeable Rock Base", Section 32 11 23.

D. Should any segregation of the material occur during any stage of the stockpiling, spreading, or grading, the contractor shall immediately remove and dispose of segregated material and correct or change the handling methods and procedures to prevent any further segregation.

E. Tolerance: Final permeable rock base grades shall conform to the lines and grades as shown on the drawings. The measured grades shall not deviate more than 0.08 feet (±1 inch) from the planned grades and not vary more than 0.04 feet (±1/2 inch) in 10 feet in any direction. Laser grading is recommended.

F. Refer to Section 01 72 40 "Conformance Survey" for conformance and verification of slope and grade at end of the paver installation..

G. Field percolation testing shall be conducted in the presence of the Project Inspector Engineer in accordance with the ASTM testing specified in Section 32 11 23.

3.05 INSTALL PERMEABLE PAVERS

A. 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 ASTM No. 9 stone by sweeping. Stone shall be spread and swept to fill the openings and joints as the compactor is run. Continue sweeping and compacting until the joints are full. Once the joints are full, thoroughly sweep off excess stone from the entire paver area.
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

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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. Do not compact within 6 ft (2 m) of the unrestrained edges of the paving units.
9. 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.
10. All pavers within 6 ft (2 m) of the laying face must be left fully compacted at the completion of each day.
11. The final surface tolerance of compacted pavers shall not deviate more than ±3/8 (10 mm) under a 10 ft (3 m) long straightedge.
12. 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.

3.06 SEALER APPLICATION

A. Surface must be absolutely dry, between 50-80 ^{0}F, clean and free of all substances that may cause a reaction, or impair adhesion and penetration of sealer.
B. Prior to sealing, test for easy absorption of water drops to confirm nothing exists or interfere with proper penetration.
C. Follow manufacturer's application and safety instructions for application of sealer
D. For "sand" joints, spray using solvent resistant equipment and a "fan" tip.
E. First application – slowly sweep an even pattern that obviously darkens the pavers at a comfortable pace.
F. Second Application – use the same technique as the first application at 90 degrees to the first to ensure even coverage.
G. Do not judge effectiveness of application by color. Test as follow: more sealer is needed if water drops absorb (darken) after a few minutes of sitting on the surface. If technique or absorption differences result in an uneven color enhancement with a first application, a second application will blend easily to create an even finish.
H. If additional sealer applications are needed, wait a minimum of 3 hours between applications, to reduce the amount of sealer needed to be applied in the next application.

3.07 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.
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.

3.08 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.

3.09 MEASUREMENT AND PAYMENT

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A. The square foot price paid for **"Permeable Paver A and B"** shall include full compensation for furnishing labor, materials, tools, equipment and incidentals for doing all the work covered in this section, including excavation, geotextile fabric or geogrid, joint filler, City stock supply, repair of damaged unstabalized decomposed granite at existing planting area 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 Engineer.

B. The cubic yard price paid for **"Permeable Choker Course"** shall include full compensation for furnishing labor, materials, tools, equipment, geotextile and incidentals for doing all the work covered in this section, including installation and compaction testing, 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 Engineer.

END OF SECTION 32 14 43

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DIVISION 33 - UTILITIES

SECTION 33 42 36 Trench Drain

PART 1 GENERAL

1.01 RELATED DOCUMENTS

A. Review Contract Documents for requirements that affect work of this section. Specification sections that directly relate to work of this section include, but are not limited to:
B. 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.
C. Refer to all other sections, determine the extent and character of related work, and coordinate all work to produce a complete, properly constructed product.
D. Related Sections
   1. Section 31 00 00 “Earthwork,”
   2. Section 32 11 23 “Drainage”
   3. Section 03 30 00 “Cast in Place Concrete”

1.02 DESCRIPTION OF WORK

A. Scope of work shall include, but shall not necessarily be limited to, set grades, construct grades, and compact soils for placing drainage products.
B. Stake proposed elevations in the field for review and approval by the Project Engineer prior to construction.
C. Install trench drains at locations indicated on the plans.
D. Record as-built elevations and location information on plans to be turned over to the City prior to Final Acceptance.

1.03 SUBMITTALS

A. Product Data: For each type of manufactured material and product indicated.
B. Provide shop drawings based on manufacturers recommendations. Material cannot be procured until a shop drawing is produced by the manufacturer, and review by the City, with no exceptions.

1.04 TESTING REFERENCES

Property	Test Method	Value
ASTM A 536-84	Ductile Iron, grade 65-45-12	
ASTM A48 CL25	Cast Grey iron	
ASTM C579	Compressive Strength, 17,000 psi, Minimum	
ASTM C580	Bending Strength, 4,000 psi Minimum	
ASTM C307	Tensile Strength, 2,000 psi Minimum	
ASTM C140	Moisture Absorption, 0.2% Maximum	
ASTM C267	Chemical Resistance, Pass-Automotive Fluids	
ASTM C666	Freeze/Thaw (1600 Cycles), No Weight Loss	
ASTM G21	Fungi Growth Resistance, Zero Mold Growth	
C 76	Standard Specification for Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe	
C 655-09	Standard Specification for Reinforced Concrete D-Load Culvert, Storm Drain, and Sewer Pipe	
C 443	Standard Specification for Joints for Concrete Pipe and Manholes, using Rubber Gaskets	

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D 618	Practice for Conditioning Plastics and Electrical Insulating Materials for Testing
D 1600	Terminology for Abbreviated Terms Relating to Plastics
D 1784	Specification for Rigid Poly (Vinyl Chloride (PVC) Compounds and Chlorinated Poly (Vinyl Chloride (PCPVC) Compounds
D 1785	Specifications for Poly (Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80, and 120
D 2122	Test Method for Determining Dimensions of Thermoplastic Pipe and Fittings
D 2321	Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity Flow Applications
D 2564	Specifications for Solvent Cements for Poly (Vinyl Chloride) (PVC) Plastic Piping Systems
D 2665	Specification for Poly (Vinyl Chloride) (PVC) Plastic Drain, Waste, and Vent Pipe and Fittings

1.05 QUALITY ASSURANCE

A. Install per the manufacturer's instructions and as indicated on the plans; or by a factory trained and authorized installer.
B. A Certificate of Compliance in conformance with the provisions of these Standard Specifications shall be furnished to the Engineer upon request.

1.06 PRODUCT DELIVERY

A. Weight and 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.

1.07 COORDINATION

A. 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.

1.08 PROTECTION

A. Protect and prevent damage to adjacent properties and improvements that may be caused by the Contractor's operations.

PART 2 PRODUCTS

2.01 TRENCH DRAIN CHANNELS AND GRATES

A. All trench drains shall be poured to self-clean at 2% minimum. If conflicts arise, at the direction of the project inspector and project engineer, the slope can be reduced to a minimum 0.5% in order to achieve proper inlet and outlet height to promote overall function of the drainage system.
B. Inlet and outlet for trench drains are per plans and details.
C. Trench Drain Channels:

Manufacturer: Neenah Foundry, or approved equal
2121 Brooks Avenue, Neenah, WI 54956.
Telephone: 920.725.7000
Fax: 920.729.3661

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Model: Heavy Duty Trench frames with grated covers, R-4999-EX – Type P, Bolted Trench Grate with Type 'B' Integrated Frame, slot openings with ¼" slot openings and ADA compliant.

Size: 17" (a) wide x 24" standard lengths, 15" (c)
Contractor shall verify lengths required in field, prior to ordering. Segments shall be full manufactured sizes and shall not be cut in the field. Install centered in width of existing sidewalk per plans and details.

Finish: Heavy Duty Gray Steel, Class 35-B

PART 3 EXECUTION

3.01 EXCAVATION

A. Coordinate the sequence of work.
B. Cuts shall be clean and neat. Wherever possible vertical cuts shall be made to minimize the possible disturbance to adjacent concrete and landscaped areas
C. Haul excess or unusable material off-site and dispose of properly
D. Compact soil sub-grade for monolithic concrete pour.

3.02 INSTALLATION OF TRENCH DRAIN

A. In accordance with manufacturer's instructions and shop drawings.
B. Utilize manufacturer's approved installation device to assure proper frame joints, drawn tightly together by device.
C. Trench drain and the encapsulating concrete should be isolated from the expansion and contraction stress of the adjacent slabs and deep concrete bands using expansion felt.
D. Finish of the encapsulating concrete shall match the broom finish, or other finish of the adjacent sidewalk and be sloped to drain back toward the trench drain or trash capture device.
E. Bottom slope of the trench drains should maintain a self-cleaning slope or, at minimum slope to drain outlet and parking lot gutter. See plans and details for additional information.

3.04 MEASUREMENT AND PAYMENT

A. The linear foot unit price for "**Trench Drain with Concrete**", as contained in the Unit Price Schedule, and shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals for doing the work covered in this section, including reinforcement, concrete bed, Class 2 aggregate base rock and metal grill, complete in place as shown on the plans, as required by the special provisions, and as required by the Engineer and no separate payment shall be made therefor.

END OF SECTION 33 42 36

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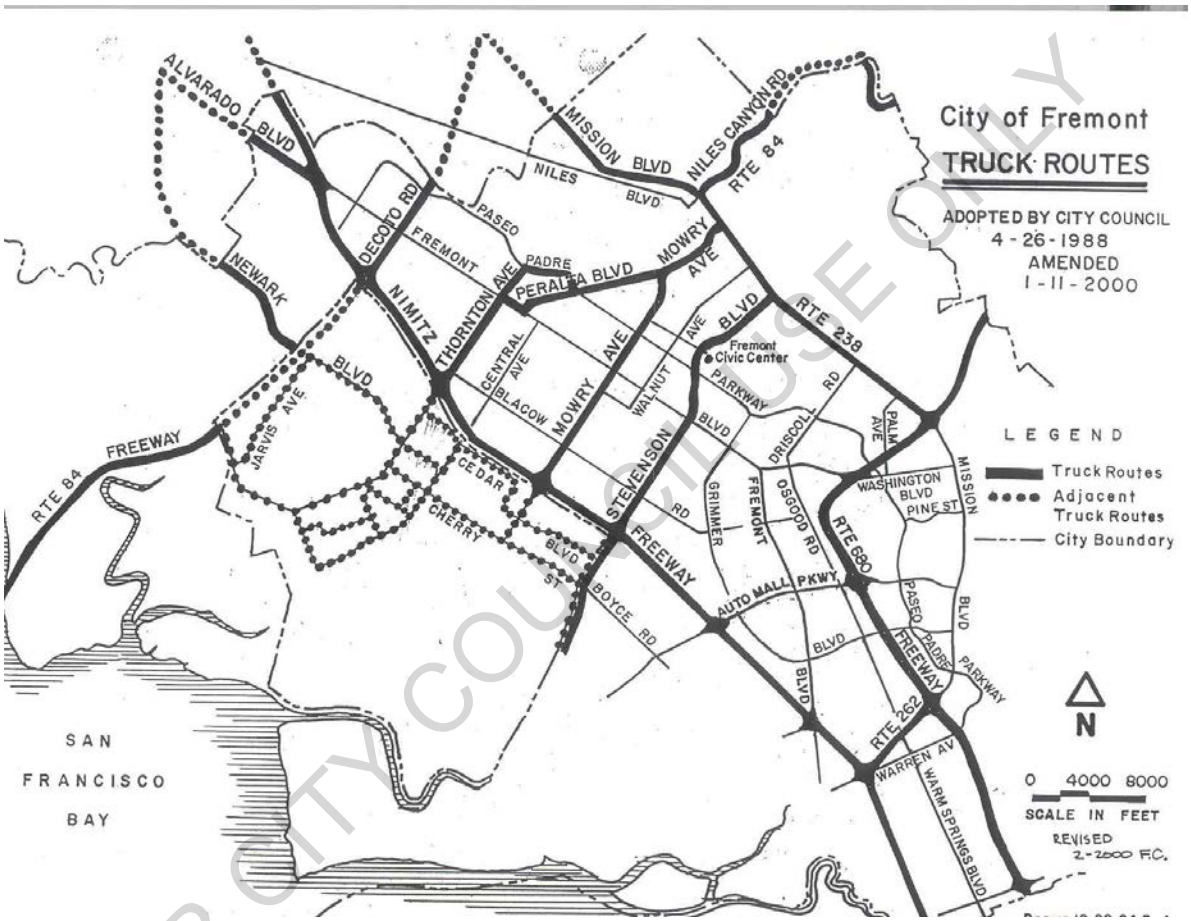
APPENDIX A

TRUCK ROUTES

Truck Routes. Pursuant to City ordinances, use only authorized truck routes. More Info http://www.fremont.gov/Permits/EngineeringPermits/TransportationPermit.htm



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APPENDIX B

SUBCONTRACTOR BUSINESS TAX SHEET STATUS

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Must Be Validated Prior to Final Inspection

SUBCONTRACTOR BUSINESS TAX STATUS SHEET

GENERAL CONTRACTOR'S NAME: _____

JOB ADDRESS: _____ B.P. NUMBER: _____

LICENSE CLASS	SPECIALTY CLASS	NAME OF FIRM / ADDRESS / TELEPHONE	STATE CONTRACTOR'S LICENSE NUMBER
A	General Engineering	( ) -	
B-1	General Contractor	( ) -	
C-2	Insulation/ Acoustical	( ) -	
C-4	Boiler / Water Heater	( ) -	
C-6	Cabinet/ Millwork	( ) -	
C-8	Concrete	( ) -	
C-9	Drywall	( ) -	
C-10	Electrical	( ) -	
C-11	Elevator	( ) -	
C-12	Earthwork/ Paving	( ) -	
C-13	Fencing	( ) -	
C-15	Flooring & Covering	( ) -	
C-16	Fire Protection	( ) -	
C-17	Glazing	( ) -	
C-20	Heat/Vent/ Air Condition	( ) -	
C-21	Bldg Move / Demo	( ) -	
C-23	Ornamental Metal	( ) -	
C-26	Lathing	( ) -	
C-27	Landscape	( ) -	
C-29	Masonry	( ) -	

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LICENSE CLASS	SPECIALTY CLASS	NAME OF FIRM / ADDRESS / TELEPHONE	STATE CONTRACTOR'S LICENSE NUMBER
C-32	Parking/ Hwy. Improvement	( ) -	
C-33	Painting / Decorating	( ) -	
C-34	Pipeline	( ) -	
C-35	Plastering	( ) -	
C-36	Plumbing	( ) -	
C-38	Refrigeration	( ) -	
C-39	Roofing	( ) -	
C-42	Sanitation System	( ) -	
C-43	Sheet Metal	( ) -	
C-45	Electrical Sign	( ) -	
C-46	Solar	( ) -	
C-47	Gen. Manuf. Housing	( ) -	
C-50	Reinforcing Steel	( ) -	
C-51	Structural Steel	( ) -	
C-53	Swimming Pool	( ) -	
C-54	Tile	( ) -	
C-55	Water Conditioning	( ) -	
C-57	Well Drilling	( ) -	
C-60	Welding	( ) -	
C-61	Limited Specialty	( ) -	

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NOTE: Final Inspection and/or Utility Release shall not be authorized until this form has been completed and returned to the Building Inspection Office.

Prepared by: _____ Date: _____

APPENDIX C

POTHOLING REPORT

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EXARO

Technologies Corporation

City of Fremont - Jennie Suen

2/23/2018

FOR CITY COUNCIL USE ONLY

EXARO Technologies Corporation
1831 Bayshore Highway
Burlingame, California
Mario Lopez
Office (650)777-4324
Cell: (408)221-5090
mle@exarotec.com

~ Delivering Excellence with a Sense of Urgency ~ ™

Subsurface Utility Report	
Client	City of Fremont - Jennie Suen
Project #	18-1019
City	Fremont
Date	2/23/2018

EXARO Technologies Corporation

Pothole # 1

Utility	Depth	Material	Soil Type	Location		
			Hard dirt, rock	37592 Niles Blvd - Both sides for Passenger Depot		
Cut Size	1' X 1'	Asphalt Thickness	0	Concrete Thickness	0	
Location Reference	Granite: 1.5-2" Thick; Agragate Thickness 16"; Hit dirt at 18". Cleared 18". SE side of passenger depot.					

Picture 1

Picture 2

Picture 3

Picture 4

FOR CITY COUNCIL USE ONLY

Subsurface Utility Report	
Client	City of Fremont - Jennie Suen
Project #	18-1019
City	Fremont
Date	2/23/2018

EXARO Technologies Corporation

Pothole # 2

Utility	Depth	Material	Soil Type	Location		
	0.00		Hard rock, dirt	37592 Niles Blvd - Both sides for Passenger Depot		
Cut Size	1' X 1'	Asphalt Thickness	0	Concrete Thickness	0	
Location Reference	Granite: 1.5-2" Thick; Agragate Thickness 12"; Hit dirt at 14". Cleared 18". SE side of passenger depot.					

Picture 1

Picture 2

Picture 3

Picture 4

CITY COUNCIL USE ONLY

Subsurface Utility Report	
Client	City of Fremont - Jennie Suen
Project #	18-1019
City	Fremont
Date	2/23/2018

EXARO Technologies Corporation

Pothole # 3

Utility	Depth	Material	Soil Type	Location		
	0.00		Hard dirt, rock	37592 Niles Blvd - Both sides for Passenger Depot		
Cut Size	1' X 1'	Asphalt Thickness	0	Concrete Thickness	0	
Location Reference	Granite: 1.5-2" Thick; Agragate Thickness 12"; Hit dirt at 14". Cleared 18". SE side of passenger depot.					

Picture 1

Picture 2

Picture 3

FOR CITY COUNCIL USE ONLY

Subsurface Utility Report	
Client	City of Fremont - Jennie Suen
Project #	18-1019
City	Fremont
Date	2/23/2018

EXARO Technologies Corporation

Pothole # 4

Utility	Depth	Material	Soil Type	Location		
	0.00		Hard dirt, rock	37592 Niles Blvd - Both sides for Passenger Depot		
Cut Size	1' X 1'	Asphalt Thickness	0	Concrete Thickness	0	
Location Reference	Granite: 1.5-2" Thick; Agragate Thickness 16"; Hit dirt at 18". Cleared 18". SE side of passenger depot.					

Picture 1

Picture 2

Picture 3

Picture 4

CITY COUNCIL USE ONLY

Subsurface Utility Report	
Client	City of Fremont - Jennie Suen
Project #	18-1019
City	Fremont
Date	2/23/2018

EXARO Technologies Corporation

Pothole # 5

Utility	Depth	Material	Soil Type	Location		
	0		Hard dirt, rock	37592 Niles Blvd - Both sides for Passenger Depot		
Cut Size	1' X 1'	Asphalt Thickness	0	Concrete Thickness	0	
Location Reference	Granite: 1.5-2" Thick; Agragate Thickness 13"; Hit dirt at 15". Cleared 18". NW side of passenger Depot					

Picture 1

Picture 2

FOR CITY COUNCIL USE ONLY

Subsurface Utility Report	
Client	City of Fremont - Jennie Suen
Project #	18-1019
City	Fremont
Date	2/23/2018

EXARO Technologies Corporation

Pothole # 6

Utility	Depth	Material	Soil Type	Location		
	0		Hard dirt, rock	37592 Niles Blvd - Both sides for Passenger Depot		
Cut Size	1' X 1'	Asphalt Thickness	0	Concrete Thickness	0	
Location Reference	Granite: 1.5-2" Thick; Agragate Thickness 11"; Hit dirt at 13". Cleared 18". NW side of passenger Depot					

Picture 1

Picture 2

FOR CITY COUNCIL USE ONLY

Date:	2/23/2018
Utility Data Prepared for:	**City of Fremont - Jennie Suen**
Project:	18-1019
Location:	Fremont

EXARO Technologies Corporation ®

PH #	Street	Cut Size	Asph	Conc.	Soil	Utility	Material	Depth	Location Reference
1	37592 Niles Blvd - Both sides for Passenger Depot	1' X 1'			Hard dirt, rock				Granite: 1.5-2" Thick; Agragate Thickness 16"; Hit dirt at 18". Cleared 18". SE side of passenger depot.
2	37592 Niles Blvd - Both sides for Passenger Depot	1' X 1'			Hard rock, dirt				Granite: 1.5-2" Thick; Agragate Thickness 12"; Hit dirt at 14". Cleared 18". SE side of passenger depot.
3	37592 Niles Blvd - Both sides for Passenger Depot	1' X 1'			Hard dirt, rock				Granite: 1.5-2" Thick; Agragate Thickness 12"; Hit dirt at 14". Cleared 18". SE side of passenger depot.
4	37592 Niles Blvd - Both sides for Passenger Depot	1' X 1'			Hard dirt, rock				Granite: 1.5-2" Thick; Agragate Thickness 16"; Hit dirt at 18". Cleared 18". SE side of passenger depot.
5	37592 Niles Blvd - Both sides for Passenger Depot	1' X 1'			Hard dirt, rock				Granite: 1.5-2" Thick; Agragate Thickness 13"; Hit dirt at 15". Cleared 18". NW side of passenger Depot
6	37592 Niles Blvd - Both sides for Passenger Depot	1' X 1'			Hard dirt, rock				Granite: 1.5-2" Thick; Agragate Thickness 11"; Hit dirt at 13". Cleared 18". NW side of passenger Depot

Foreman	Frank Gomez
Technician	Michael Patton

Timesheet	Date	Hours	OT	Per Diem	Check		Check		Additional Equipment/Material used
Monday					Arrow Board	☐Check Box	Equip. Rental	☐Check	
Tuesday					Bag patch	☐Check Box	Generator	☐Check	
Wednesday					Class II	☑Check Box	Pk nails & shiners	☐Check	
Thursday					Cement mixer	☐Check Box	Vibra-plate	☐Check	
Friday	2/23/2018	8			Core drill	☐Check Box	Flat bed #	☐Check	
Saturday					Core machine	☐Check Box	Toyota #	☐Check	
Sunday					Cutback	☐Check Box	Vac rig # 4	☑Check	

FOR CITY COUNCIL USE ONLY

APPENDIX D

SOILS REPORT

FOR CITY COUNCIL USE ONLY

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01300-A SUBMITTAL TRANSMITTAL FORM

SUBMITTAL TRANSMITTAL

Submittal Description: Backfill Source

Submittal No:[1] 008

Spec Section: Field Directive #6

	Routing	Sent	Received
AGENCY: City of Fremont	Contractor/CM	11/08/07	
PROJECT: Niles Town Plaza Soil Remediation Project	CM/Engineer		
	Engineer/CM		
CONTRACTOR: Pacific States Environmental Contractors	CM/Contractor		

We are sending you ☒Attached ☐Under separate cover via _____.

☒Submittals for review and comment

☐Product data for information only

Remarks: _____

Item	Copies	Date	Section No.	Description	Review action[a]	Reviewer initials	Review comments attached
1	5	11/8//07	FD #6	Eden Pointe Loam			

[a]Note: NET = No exceptions taken; MCN = Make corrections noted; A&R = Amend and resubmit; R = Rejected Attach additional sheets if necessary.

Contractor

Certify either A or B:

☐A. We have verified that the material or equipment contained in the submittal meets all the requirements, including coordination with all related work, specified (no exceptions)

☒B. We have verified that the material or equipment contained in this submittal meets all the requirements specified except for the attached deviations.

No.	Deviation
1	PH = 7.61 (requirement = 5.5 to 7.5)
2	Sieve Result: Silt 35% (requirement = 10% to 30%)
3	Sieve Result: Silt + Clay = 55% (requirement = 25 to 50%)

Certified by: _____

Contractor's Signature

[1]See paragraph 01300-1.04 A, Transmittal Procedure.

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McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

TERRASEARCH Inc.	Client Project ID: # 10188.E3; Eden Pointe	Date Sampled:	09/28/07
257 Wright Brothers Ave.		Date Received:	09/28/07
Livermore, CA 94550	Client Contact: Cheryl Blychester	Date Reported:	10/05/07
	Client P.O.:	Date Completed:	10/05/07

WorkOrder: 0709690

October 05, 2007

Dear Cheryl:

Enclosed are:

1). the results of 2 analyzed samples from your **# 10188.E3; Eden Pointe project,**

2). a QC report for the above samples

3). a copy of the chain of custody, and

4). a bill for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions please contact me. McCampbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Best regards,

Angela Rydelius, Lab Manager

FOR CITY COUNCIL USE ONLY

TSIL 0704690

Chain of Custody

Reference No. ____
Page 1 of 1

ENVIRONMENTAL • GEOTECHNICAL • SPECIAL INSPECTION • MATERIALS TESTING

TERRASEARCH INC.

257 WRIGHT BROTHERS AVENUE, LIVERMORE CALIFORNIA 94551 PHONE: (925) 243-6692

Sample ID	Date	Time	Matrix	Preserv.	No. Containers	TPH Gasoline (EPA 8020/8015) w/ BTEX (8020)	TPH as DIESEL	Total Extractable Petroleum Hydrocarbons (3550/8015)	EPA Method 8080 (Pesticides/PCB's)	EPA Method 8260 (Volatile Organics)	EPA Method 8270 (Semi Volatile Organics)	EPA Method 418.1 (Total Recoverable Hydrocarbons)	Metal As Hg, Pb	CAM 17	Asbestos PLM		
Grab 1 (S1, 1.0, C1)	9/28/07	12:45	Soil	ice	4	X		X	X	X	X			+	+		
Grab 2 (S2, 1.0, C2)	—	1:10	↓	↓	4	X		X	X	X	X			+	+		

ICE #: 172
GOOD CONDITION ✓ APPROPRIATE ✓
HEAD SPACE ABSENT ___ CONTAINERS
DECHLORINATED IN LAB ___ PRESERVED IN LAB ___
PRESERVATION VOAS | O&G | METALS | OTHER

Project Information		Sample Receipt	
Project Name:	Eden Pointe	Total no. of containers	8
Project No.:	10188.03	Head Space	
Site Location:	Eden Ave / Portola Rd, Hayward	Temperature	
Project Manager:	Cheryl Bly-Chester	Conforms to record	
Sampler's Signature:		Report Level	
		( ) Routine	( ) Level 2
		( ) Level 3	( ) Level 4

Turn Around Time (Please Circle One): Standard 5-Day 24-hr 48-hr 72-hr Others

Special Instructions/Comments: Ethical Cleanup

Relinquished By:	Relinquished By:	Relinquished By:
Company: Terrasearch Inc.	Company:	Company:
Time: 2:17 Date: 9/28/07	Time: Date:	Time: Date:
Place: Pittsburg	Place:	Place:
Printed Name: A. Marie Mateen	Printed Name:	Printed Name:
Signature:	Signature:	Signature:
Relinquished By:	**Relinquished By:**	**Relinquished By:**
Company: McCampbell Analytical	Company:	Company:
Time: 2:09 Date: 9/28/07	Time: Date:	Time: Date:
Place: Pittsburg	Place:	Place:
Printed Name: Maria Venegas	Printed Name:	Printed Name:
Signature:	Signature:	Signature:

FOR CITY COUNCIL USE ONLY

McCampbell Analytical, Inc.
1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0709690 **ClientID: TSIL**

☐ EDF ☐ Excel ☐ Fax ☑ Email ☐ HardCopy ☐ ThirdParty

Report to:
Cheryl Blychester
TERRASEARCH Inc.
257 Wright Brothers Ave.
Livermore, CA 94550

Email: cherylblyc@terrasearchinc.com
TEL: (925) 243-666 FAX: (925) 243-666
ProjectNo: # 10188.E3; Eden Pointe
PO:

Bill t
Angelica Garcia
TERRASEARCH Inc.
322 Piercy Road
San Jose, CA 95138
agarcia@terrasearchinc.com

Requested TAT: 5 days

Date Received 09/28/2007
Date Printed: 09/28/2007

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below) 1	2	3	4	5	6	7	8	9	10	11	12
0709690-001	Comp-1(S,A,B,C,D)	Soil	9/28/2007	☐	A	A	A	A	A	A	A					
0709690-002	Comp-2(S2A,B,C,D)	Soil	9/28/2007 1:10:00	☐	A	A	A	A	A	A	A					

Test Legend:

1	8081PCB_S	2	8260B_S	3	8270D_S	4	ASBESTOS_S	5	CAM17MS_S
6	G-MBTEX_S	7	TPH(DMO)WSG_S	8		9		10	
11		12							

Prepared by: Kimberly Burks

Comments:

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

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Telephone: 877-252-9262 Fax: 925-252-9269

Sample Receipt Checklist

Client Name: TERRASEARCH Inc.
Date and Time Received: 9/28/2007 2:32:44 PM
Project Name: # 10188.E3; Eden Points
Checklist completed and reviewed by: Kimberly Burks
WorkOrder N°: 0709690 Matrix Soil
Carrier: Client Drop-In

Chain of Custody (COC) Information

Chain of custody present?	Yes ☑	No ☐
Chain of custody signed when relinquished and received?	Yes ☑	No ☐
Chain of custody agrees with sample labels?	Yes ☑	No ☐
Sample IDs noted by Client on COC?	Yes ☑	No ☐
Date and Time of collection noted by Client on COC?	Yes ☑	No ☐
Sampler's name noted on COC?	Yes ☑	No ☐

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	NA ☑
Shipping container/cooler in good condition?	Yes ☑	No ☐	
Samples in proper containers/bottles?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature	Cooler Temp: 17.2°C		NA ☐
Water - VOA vials have zero headspace / no bubbles?	Yes ☐	No ☐	No VOA vials submitted ☑
Sample labels checked for correct preservation?	Yes ☑	No ☐	
TTLC Metal - pH acceptable upon receipt (pH<2)?	Yes ☐	No ☐	NA ☑

Client contacted: Date contacted: Contacted by:

Comments:

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Telephone: 877-252-9262 Fax: 925-252-9269

TERRASEARCH Inc.	Client Project ID: # 10188.E3; Eden Pointe	Date Sampled:	09/28/07
257 Wright Brothers Ave.		Date Received:	09/28/07
	Client Contact: Cheryl Blychester	Date Extracted:	09/28/07
Livermore, CA 94550	Client P.O.:	Date Analyzed:	09/28/07

Organochlorine Pesticides (8080 Basic Target List) + PCBs*

Extraction Method: SW3550C Analytical Method: SW8081B/8082A Work Order: 0709690

Lab ID	0709690-001A	0709690-002A			Reporting Limit for DF =1	
Client ID	Comp-1(S,A,B,C,D)	Comp-2(S2A,B,C,D)				
Matrix	S	S			S	W
DF	2	20				
Compound	**Concentration**				mg/kg	µg/L
Aldrin	ND<0.0020	ND<0.020			0.001	NA
a-BHC	ND<0.0020	ND<0.020			0.001	NA
b-BHC	ND<0.0020	ND<0.020			0.001	NA
d-BHC	ND<0.0020	ND<0.020			0.001	NA
g-BHC	ND<0.0020	ND<0.020			0.001	NA
Chlordane (Technical)	ND<0.050	ND<0.50			0.025	NA
a-Chlordane	ND<0.0020	ND<0.020			0.001	NA
g-Chlordane	ND<0.0020	ND<0.020			0.001	NA
p,p-DDD	ND<0.0020	ND<0.020			0.001	NA
p,p-DDE	ND<0.0020	ND<0.020			0.001	NA
p,p-DDT	ND<0.0020	ND<0.020			0.001	NA
Dieldrin	ND<0.0020	ND<0.020			0.001	NA
Endosulfan I	ND<0.0020	ND<0.020			0.001	NA
Endosulfan II	ND<0.0020	ND<0.020			0.001	NA
Endosulfan sulfate	ND<0.0020	ND<0.020			0.001	NA
Endrin	ND<0.0020	ND<0.020			0.001	NA
Endrin aldehyde	ND<0.0020	ND<0.020			0.001	NA
Heptachlor	ND<0.0020	ND<0.020			0.001	NA
Heptachlor epoxide	ND<0.0020	ND<0.020			0.001	NA
Hexachlorobenzene	ND<0.020	ND<0.20			0.01	NA
Hexachlorocyclopentadiene	ND<0.040	ND<0.40			0.02	NA
Methoxychlor	ND<0.0020	ND<0.020			0.001	NA
Toxaphene	ND<0.10	ND<1.0			0.05	NA
Aroclor1016	ND<0.050	ND<0.50			0.025	NA
Aroclor1221	ND<0.050	ND<0.50			0.025	NA
Aroclor1232	ND<0.050	ND<0.50			0.025	NA
Aroclor1242	ND<0.050	ND<0.50			0.025	NA
Aroclor1248	ND<0.050	ND<0.50			0.025	NA
Aroclor1254	ND<0.050	ND<0.50			0.025	NA
Aroclor1260	ND<0.050	ND<0.50			0.025	NA
PCBs, total	ND<0.050	ND<0.50			0.025	NA
Surrogate Recoveries (%)						
%SS:	104	86				
Comments	j	j				

* water samples in µg/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, filter samples in µg/filter, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

surrogate diluted out of range or surrogate coelutes with another peak.

(h) a lighter than water immiscible sheen/product is present; (i) liquid sample that contains >~1 vol. % sediment; (j) sample diluted due to high organic content; (k) p,p-* is the same as 4,4,-; (l) florisil (EPA 3620) cleanup; (m) silica-gel (EPA 3630) cleanup; (n) elemental sulfur (EPA 3660) cleanup; (o) sulfuric acid permanganate (EPA 3665) cleanup; (r) results are reported on a dry weight basis; (p) see attached narrative.

FOR QC COUNCIL USE ONLY

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
"When Quality Counts"

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Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

TERRASEARCH Inc.	Client Project ID: # 10188 E3; Eden Pointe	Date Sampled: 09/28/07
257 Wright Brothers Ave.		Date Received: 09/28/07
	Client Contact: Cheryl Blychester	Date Extracted: 09/28/07
Livermore, CA 94550	Client P.O.:	Date Analyzed 10/04/07

Volatile Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0709690

Lab ID	0709690-001A						
Client ID	Comp-1(S,A,B,C,D)						
Matrix	Soil						
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	0.05	Acrolein (Propenal)	ND	1.0	0.05
Acrylonitrile	ND	1.0	0.02	tert-Amyl methyl ether (TAME)	ND	1.0	0.005
Benzene	ND	1.0	0.005	Bromobenzene	ND	1.0	0.005
Bromochloromethane	ND	1.0	0.005	Bromodichloromethane	ND	1.0	0.005
Bromoform	ND	1.0	0.005	Bromomethane	ND	1.0	0.005
2-Butanone (MEK)	ND	1.0	0.02	t-Butyl alcohol (TBA)	ND	1.0	0.05
n-Butyl benzene	ND	1.0	0.005	sec-Butyl benzene	ND	1.0	0.005
tert-Butyl benzene	ND	1.0	0.005	Carbon Disulfide	ND	1.0	0.005
Carbon Tetrachloride	ND	1.0	0.005	Chlorobenzene	ND	1.0	0.005
Chloroethane	ND	1.0	0.005	2-Chloroethyl Vinyl Ether	ND	1.0	0.01
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005
2-Chlorotoluene	ND	1.0	0.005	4-Chlorotoluene	ND	1.0	0.005
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromo-3-chloropropane	ND	1.0	0.005
1,2-Dibromoethane (EDB)	ND	1.0	0.005	Dibromomethane	ND	1.0	0.005
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.005
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005
1,3-Dichloropropane	ND	1.0	0.005	2,2-Dichloropropane	ND	1.0	0.005
1,1-Dichloropropene	ND	1.0	0.005	cis-1,3-Dichloropropene	ND	1.0	0.005
trans-1,3-Dichloropropene	ND	1.0	0.005	Diisopropyl ether (DIPE)	ND	1.0	0.005
Ethylbenzene	ND	1.0	0.005	Ethyl tert-butyl ether (ETBE)	ND	1.0	0.005
Freon 113	ND	1.0	0.1	Hexachlorobutadiene	ND	1.0	0.005
Hexachloroethane	ND	1.0	0.005	2-Hexanone	ND	1.0	0.005
Isopropylbenzene	ND	1.0	0.005	4-Isopropyl toluene	ND	1.0	0.005
Methyl-t-butyl ether (MTBE)	ND	1.0	0.005	Methylene chloride	ND	1.0	0.005
4-Methyl-2-pentanone (MIBK)	ND	1.0	0.005	Naphthalene	ND	1.0	0.005
Nitrobenzene	ND	1.0	0.1	n-Propyl benzene	ND	1.0	0.005
Styrene	ND	1.0	0.005	1,1,1,2-Tetrachloroethane	ND	1.0	0.005
1,1,2,2-Tetrachloroethane	ND	1.0	0.005	Tetrachloroethene	ND	1.0	0.005
Toluene	ND	1.0	0.005	1,2,3-Trichlorobenzene	ND	1.0	0.005
1,2,4-Trichlorobenzene	ND	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005
Trichlorofluoromethane	ND	1.0	0.005	1,2,3-Trichloropropane	ND	1.0	0.005
1,2,4-Trimethylbenzene	ND	1.0	0.005	1,3,5-Trimethylbenzene	ND	1.0	0.005
Vinyl Chloride	ND	1.0	0.005	Xylenes	ND	1.0	0.005

Surrogate Recoveries (%)

%SS1:	103	%SS2:	95
%SS3:	99		

Comments:

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis

surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) reporting limit raised due to high organic content/matrix interference; k) reporting limit near, but not identical to our standard reporting limit due to variable Encore sample weight; m) reporting limit raised due to insufficient sample amount; n) results are reported on a dry weight basis; p) see attached narrative.

FOR CITY OF OAKLAND USE ONLY

DHS ELAP Certification N° 1644

Angela Rydelius, Lab Manager

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TERRASEARCH Inc.	Client Project ID: # 10188.E3; Eden Pointe	Date Sampled: 09/28/07
257 Wright Brothers Ave.		Date Received: 09/28/07
	Client Contact: Cheryl Blychester	Date Extracted: 09/28/07
Livermore, CA 94550	Client P.O.:	Date Analyzed 10/04/07

Volatile Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0709690

Lab ID	0709690-002A						
Client ID	Comp-2(S2A,B,C,D)						
Matrix	Soil						
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	0.05	Acrolein (Propenal)	ND	1.0	0.05
Acrylonitrile	ND	1.0	0.02	tert-Amyl methyl ether (TAME)	ND	1.0	0.005
Benzene	ND	1.0	0.005	Bromobenzene	ND	1.0	0.005
Bromochloromethane	ND	1.0	0.005	Bromodichloromethane	ND	1.0	0.005
Bromoform	ND	1.0	0.005	Bromomethane	ND	1.0	0.005
2-Butanone (MEK)	ND	1.0	0.02	t-Butyl alcohol (TBA)	ND	1.0	0.05
n-Butyl benzene	ND	1.0	0.005	sec-Butyl benzene	ND	1.0	0.005
tert-Butyl benzene	ND	1.0	0.005	Carbon Disulfide	ND	1.0	0.005
Carbon Tetrachloride	ND	1.0	0.005	Chlorobenzene	ND	1.0	0.005
Chloroethane	ND	1.0	0.005	2-Chloroethyl Vinyl Ether	ND	1.0	0.01
Chloroform	ND	1.0	0.005	Chloromethane	ND	1.0	0.005
2-Chlorotoluene	ND	1.0	0.005	4-Chlorotoluene	ND	1.0	0.005
Dibromochloromethane	ND	1.0	0.005	1,2-Dibromo-3-chloropropane	ND	1.0	0.005
1,2-Dibromoethane (EDB)	ND	1.0	0.005	Dibromomethane	ND	1.0	0.005
1,2-Dichlorobenzene	ND	1.0	0.005	1,3-Dichlorobenzene	ND	1.0	0.005
1,4-Dichlorobenzene	ND	1.0	0.005	Dichlorodifluoromethane	ND	1.0	0.005
1,1-Dichloroethane	ND	1.0	0.005	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.005
1,1-Dichloroethene	ND	1.0	0.005	cis-1,2-Dichloroethene	ND	1.0	0.005
trans-1,2-Dichloroethene	ND	1.0	0.005	1,2-Dichloropropane	ND	1.0	0.005
1,3-Dichloropropane	ND	1.0	0.005	2,2-Dichloropropane	ND	1.0	0.005
1,1-Dichloropropene	ND	1.0	0.005	cis-1,3-Dichloropropene	ND	1.0	0.005
trans-1,3-Dichloropropene	ND	1.0	0.005	Diisopropyl ether (DIPE)	ND	1.0	0.005
Ethylbenzene	ND	1.0	0.005	Ethyl tert-butyl ether (ETBE)	ND	1.0	0.005
Freon 113	ND	1.0	0.1	Hexachlorobutadiene	ND	1.0	0.005
Hexachloroethane	ND	1.0	0.005	2-Hexanone	ND	1.0	0.005
Isopropylbenzene	ND	1.0	0.005	4-Isopropyl toluene	ND	1.0	0.005
Methyl-t-butyl ether (MTBE)	ND	1.0	0.005	Methylene chloride	ND	1.0	0.005
4-Methyl-2-pentanone (MIBK)	ND	1.0	0.005	Naphthalene	ND	1.0	0.005
Nitrobenzene	ND	1.0	0.1	n-Propyl benzene	ND	1.0	0.005
Styrene	ND	1.0	0.005	1,1,1,2-Tetrachloroethane	ND	1.0	0.005
1,1,2,2-Tetrachloroethane	ND	1.0	0.005	Tetrachloroethene	ND	1.0	0.005
Toluene	ND	1.0	0.005	1,2,3-Trichlorobenzene	ND	1.0	0.005
1,2,4-Trichlorobenzene	ND	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005
Trichlorofluoromethane	ND	1.0	0.005	1,2,3-Trichloropropane	ND	1.0	0.005
1,2,4-Trimethylbenzene	ND	1.0	0.005	1,3,5-Trimethylbenzene	ND	1.0	0.005
Vinyl Chloride	ND	1.0	0.005	Xylenes	ND	1.0	0.005

Surrogate Recoveries (%)

%SS1:	102	%SS2:	96
%SS3:	97		

Comments:

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis

surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol % sediment; j) reporting limit raised due to high organic content/matrix interference; k) reporting limit near, but not identical to our standard reporting limit due to variable Encore sample weight; m) reporting limit raised due to insufficient sample amount; n) results are reported on a dry weight basis; p) see attached narrative.

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TERRASEARCH Inc.	Client Project ID: # 10188.E3; Eden Pointe	Date Sampled: 09/28/07
257 Wright Brothers Ave.		Date Received: 09/28/07
	Client Contact: Cheryl Blychester	Date Extracted: 09/28/07
Livermore, CA 94550	Client P.O.:	Date Analyzed 10/03/07

Semi-Volatile Organics by GC/MS (Basic Target List)*

Extraction Method: SW3550C Analytical Method: SW8270C Work Order: 0709690

Lab ID	0709690-001A
Client ID	Comp-1(S,A,B,C,D)
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acenaphthene	ND	1.0	0.33	Acenaphthylene	ND	1.0	0.33
Acetochlor	ND	1.0	0.33	Anthracene	ND	1.0	0.33
Benzidine	ND	1.0	1.6	Benzoic Acid	ND	1.0	1.6
Benzo(a)anthracene	ND	1.0	0.33	Benzo(b)fluoranthene	ND	1.0	0.33
Benzo(k)fluoranthene	ND	1.0	0.33	Benzo(g,h,i)perylene	ND	1.0	0.33
Benzo(a)pyrene	ND	1.0	0.33	Benzyl Alcohol	ND	1.0	0.66
1,1-Biphenyl	ND	1.0	0.33	Bis (2-chloroethoxy) Methane	ND	1.0	0.33
Bis (2-chloroethyl) Ether	ND	1.0	0.33	Bis (2-chloroisopropyl) Ether	ND	1.0	0.33
Bis (2-ethylhexyl) Phthalate	ND	1.0	0.33	4-Bromophenyl Phenyl Ether	ND	1.0	0.33
Butylbenzyl Phthalate	ND	1.0	0.33	4-Chloroaniline	ND	1.0	0.66
4-Chloro-3-methylphenol	ND	1.0	0.33	2-Chloronaphthalene	ND	1.0	0.33
2-Chlorophenol	ND	1.0	0.33	4-Chlorophenyl Phenyl Ether	ND	1.0	0.33
Chrysene	ND	1.0	0.33	Dibenzo(a,h)anthracene	ND	1.0	0.33
Dibenzofuran	ND	1.0	0.33	Di-n-butyl Phthalate	ND	1.0	0.33
1,2-Dichlorobenzene	ND	1.0	0.33	1,3-Dichlorobenzene	ND	1.0	0.33
1,4-Dichlorobenzene	ND	1.0	0.33	3,3-Dichlorobenzidine	ND	1.0	0.66
2,4-Dichlorophenol	ND	1.0	0.33	Diethyl Phthalate	ND	1.0	0.33
2,4-Dimethylphenol	ND	1.0	0.33	Dimethyl Phthalate	ND	1.0	0.33
4,6-Dinitro-2-methylphenol	ND	1.0	1.6	2,4-Dinitrophenol	ND	1.0	1.6
2,4-Dinitrotoluene	ND	1.0	0.33	2,6-Dinitrotoluene	ND	1.0	0.33
Di-n-octyl Phthalate	ND	1.0	0.33	1,2-Diphenylhydrazine	ND	1.0	0.33
Fluoranthene	ND	1.0	0.33	Fluorene	ND	1.0	0.33
Hexachlorobenzene	ND	1.0	0.33	Hexachlorobutadiene	ND	1.0	0.33
Hexachlorocyclopentadiene	ND	1.0	1.6	Hexachloroethane	ND	1.0	0.33
Indeno (1,2,3-cd) pyrene	ND	1.0	0.33	Isophorone	ND	1.0	0.33
2-Methylnaphthalene	ND	1.0	0.33	2-Methylphenol (o-Cresol)	ND	1.0	0.33
3 &/or 4-Methylphenol (m,p-Cres	ND	1.0	0.33	Naphthalene	ND	1.0	0.33
2-Nitroaniline	ND	1.0	1.6	3-Nitroaniline	ND	1.0	1.6
4-Nitroaniline	ND	1.0	1.6	Nitrobenzene	ND	1.0	0.33
2-Nitrophenol	ND	1.0	1.6	4-Nitrophenol	ND	1.0	1.6
N-Nitrosodiphenylamine	ND	1.0	0.33	N-Nitrosodi-n-propylamine	ND	1.0	0.33
Pentachlorophenol	ND	1.0	1.6	Phenanthrene	ND	1.0	0.33
Phenol	ND	1.0	0.33	Pyrene	ND	1.0	0.33
1,2,4-Trichlorobenzene	ND	1.0	0.33	2,4,5-Trichlorophenol	ND	1.0	0.33
2,4,6-Trichlorophenol	ND	1.0	0.33				

Surrogate Recoveries (%)

%SS1:	95	%SS2:	86
%SS3:	94	%SS4:	88
%SS5:	54	%SS6:	87

Comments:

* water samples in µg/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis

#) surrogate diluted out of range; &) low or no surrogate due to matrix interference.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol % sediment; j) sample diluted due to high organic content/matrix interference; k) reporting limit raised due to insufficient sample amount; m) reporting limit raised due to matrix interference; r) results are reported on a dry weight basis.

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TERRASEARCH Inc.	Client Project ID: #10188.E3; Eden Pointe	Date Sampled: 09/28/07
257 Wright Brothers Ave.		Date Received: 09/28/07
	Client Contact: Cheryl Blychester	Date Extracted: 09/28/07
Livermore, CA 94550	Client P.O.:	Date Analyzed 10/03/07

Semi-Volatile Organics by GC/MS (Basic Target List)*

Extraction Method: SW3550C Analytical Method: SW8270C Work Order: 0709690

Lab ID	0709690-002A
Client ID	Comp-2(S2A,B,C,D)
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acenaphthene	ND	1.0	0.33	Acenaphthylene	ND	1.0	0.33
Acetochlor	ND	1.0	0.33	Anthracene	ND	1.0	0.33
Benzidine	ND	1.0	1.6	Benzoic Acid	ND	1.0	1.6
Benzo(a)anthracene	ND	1.0	0.33	Benzo(b)fluoranthene	ND	1.0	0.33
Benzo(k)fluoranthene	ND	1.0	0.33	Benzo(g,h,i)perylene	ND	1.0	0.33
Benzo(a)pyrene	ND	1.0	0.33	Benzyl Alcohol	ND	1.0	0.66
1,1-Biphenyl	ND	1.0	0.33	Bis (2-chloroethoxy) Methane	ND	1.0	0.33
Bis (2-chloroethyl) Ether	ND	1.0	0.33	Bis (2-chloroisopropyl) Ether	ND	1.0	0.33
Bis (2-ethylhexyl) Phthalate	ND	1.0	0.33	4-Bromophenyl Phenyl Ether	ND	1.0	0.33
Butylbenzyl Phthalate	ND	1.0	0.33	4-Chloroaniline	ND	1.0	0.66
4-Chloro-3-methylphenol	ND	1.0	0.33	2-Chloronaphthalene	ND	1.0	0.33
2-Chlorophenol	ND	1.0	0.33	4-Chlorophenyl Phenyl Ether	ND	1.0	0.33
Chrysene	ND	1.0	0.33	Dibenzo(a,h)anthracene	ND	1.0	0.33
Dibenzofuran	ND	1.0	0.33	Di-n-butyl Phthalate	ND	1.0	0.33
1,2-Dichlorobenzene	ND	1.0	0.33	1,3-Dichlorobenzene	ND	1.0	0.33
1,4-Dichlorobenzene	ND	1.0	0.33	3,3-Dichlorobenzidine	ND	1.0	0.66
2,4-Dichlorophenol	ND	1.0	0.33	Diethyl Phthalate	ND	1.0	0.33
2,4-Dimethylphenol	ND	1.0	0.33	Dimethyl Phthalate	ND	1.0	0.33
4,6-Dinitro-2-methylphenol	ND	1.0	1.6	2,4-Dinitrophenol	ND	1.0	1.6
2,4-Dinitrotoluene	ND	1.0	0.33	2,6-Dinitrotoluene	ND	1.0	0.33
Di-n-octyl Phthalate	ND	1.0	0.33	1,2-Diphenylhydrazine	ND	1.0	0.33
Fluoranthene	ND	1.0	0.33	Fluorene	ND	1.0	0.33
Hexachlorobenzene	ND	1.0	0.33	Hexachlorobutadiene	ND	1.0	0.33
Hexachlorocyclopentadiene	ND	1.0	1.6	Hexachloroethane	ND	1.0	0.33
Indeno (1,2,3-cd) pyrene	ND	1.0	0.33	Isophorone	ND	1.0	0.33
2-Methylnaphthalene	ND	1.0	0.33	2-Methylphenol (o-Cresol)	ND	1.0	0.33
3 &/or 4-Methylphenol (m,p-Cres	ND	1.0	0.33	Naphthalene	ND	1.0	0.33
2-Nitroaniline	ND	1.0	1.6	3-Nitroaniline	ND	1.0	1.6
4-Nitroaniline	ND	1.0	1.6	Nitrobenzene	ND	1.0	0.33
2-Nitrophenol	ND	1.0	1.6	4-Nitrophenol	ND	1.0	1.6
N-Nitrosodiphenylamine	ND	1.0	0.33	N-Nitrosodi-n-propylamine	ND	1.0	0.33
Pentachlorophenol	ND	1.0	1.6	Phenanthrene	ND	1.0	0.33
Phenol	ND	1.0	0.33	Pyrene	ND	1.0	0.33
1,2,4-Trichlorobenzene	ND	1.0	0.33	2,4,5-Trichlorophenol	ND	1.0	0.33
2,4,6-Trichlorophenol	ND	1.0	0.33				

Surrogate Recoveries (%)

%SS1:	103	%SS2:	93
%SS3:	103	%SS4:	91
%SS5:	50	%SS6:	89

Comments:

* water samples in µg/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis

#) surrogate diluted out of range; &) low or no surrogate due to matrix interference.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) sample diluted due to high organic content/matrix interference; k) reporting limit raised due to insufficient sample amount; m) reporting limit raised due to matrix interference; r) results are reported on a dry weight basis.

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TERRASEARCH Inc.	Client Project ID: # 10188 E3; Eden Pointe	Date Sampled: 09/28/07
		Date Received: 09/28/07
257 Wright Brothers Ave.	Client Contact: Cheryl Blychester	Date Extracted: 09/28/07
Livermore, CA 94550	Client P.O.:	Date Analyzed 09/29/07

CAM / CCR 17 Metals*

Lab ID	0709690-001A	0709690-002A			Reporting Limit for DF =1; ND means not detected above the reporting limit	
Client ID	Comp-1(S,A,B,C,D)	Comp-2(S2A,B,C,D)				
Matrix	S	S			S	W
Extraction Type	TOTAL	TOTAL			mg/Kg	mg/L

ICP-MS Metals, Concentration*

Analytical Method: 6020A Extraction Method: SW3050B Work Order: 0709690

Dilution Factor	1	1			1	1
Antimony	ND	ND			0.5	NA
Arsenic	5.5	6.3			0.5	NA
Barium	150	180			5.0	NA
Beryllium	0.50	0.53			0.5	NA
Cadmium	ND	ND			0.25	NA
Chromium	39	44			0.5	NA
Cobalt	11	9.6			0.5	NA
Copper	20	19			0.5	NA
Lead	7.2	7.0			0.5	NA
Mercury	ND	ND			0.05	NA
Molybdenum	ND	ND			0.5	NA
Nickel	40	45			0.5	NA
Selenium	ND	ND			0.5	NA
Silver	ND	ND			0.5	NA
Thallium	ND	ND			0.5	NA
Vanadium	54	43			0.5	NA
Zinc	58	49			5.0	NA
%SS:	93	98				

Comments					

*water samples are reported in µg/L, product/oil/non-aqueous liquid samples and all TCLP / STLC / DISTLC / SPLP extracts are reported in mg/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, filter samples in µg/filter

means surrogate diluted out of range; ND means not detected above the reporting limit; N/A means not applicable to this sample or instrument

TOTAL = acid digestion.

WET = Waste Extraction Test (STLC).

DI WET = Waste Extraction Test using de-ionized water

i) aqueous sample containing greater than ~1 vol % sediment; for DISSOLVED metals, this sample has been preserved prior to filtration; for TOTAL^ metals, a representative sediment-water mixture was digested; j) reporting limit raised due to insufficient sample amount; l) analyte detected below quantitation limits; k) reporting limit raised due to matrix interference; m) estimated value due to low/high surrogate recovery caused by matrix interference; n) results are reported on a dry weight basis; p) see attached narrative.

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TERRASEARCH Inc.	Client Project ID: # 10188.E3; Eden Pointe	Date Sampled: 09/28/07
257 Wright Brothers Ave.		Date Received: 09/28/07
Livermore, CA 94550	Client Contact: Cheryl Blychester	Date Extracted: 09/28/07
	Client P.O.:	Date Analyzed 09/29/07

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE*

Extraction method SW5030B Analytical methods SW8021B/8015Cm Work Order: 0709690

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	Comp-1(S,A,B,C,D)	S	ND	---	ND	ND	ND	ND	1	83
002A	Comp-2(S2A,B,C,D)	S	ND	---	ND	ND	ND	ND	1	80

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	NA	NA	NA	NA	NA	NA	1	ug/L
	S	1.0	0.05	0.005	0.005	0.005	0.005	1	mg/Kg

* water and vapor samples and all TCLP & SPLP extracts are reported in µg/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L.

cluttered chromatogram; sample peak coelutes with surrogate peak

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (stoddard solvent / mineral spirit?); f) one to a few isolated non-target peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) reporting limit raised due to high organic / MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas) m) no recognizable pattern; n) TPH(g) value derived using a client specified carbon range; o) results are reported on a dry weight basis; p) see attached narrative.

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TERRASEARCH Inc.	Client Project ID: # 10188.E3; Eden Pointe	Date Sampled: 09/28/07
257 Wright Brothers Ave.		Date Received: 09/28/07
Livermore, CA 94550	Client Contact: Cheryl Blychester	Date Extracted: 09/28/07
	Client P.O.:	Date Analyzed: 10/03/07

Diesel (C10-23) and Oil (C18+) Range Extractable Hydrocarbons with Silica Gel Clean-Up*

Extraction method: SW3550C/3630C Analytical methods: SW8015C Work Order: 0709690

Lab ID	Client ID	Matrix	TPH(d)	TPH(mo)	DF	% SS
0709690-001A	Comp-1(S,A,B,C,D)	S	ND	ND	1	106
0709690-002A	Comp-2(S2A,B,C,D)	S	ND	ND	1	105

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	NA	NA	NA	ug/L
	S	1.0	5.0		mg/Kg

* water samples are reported in µg/L, wipe samples in µg/wipe, soil/solid/sludge samples in mg/kg, product/oil/non-aqueous liquid samples in mg/L, and all DISTLC / STLC / SPLP / TCLP extracts are reported in µg/L

cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) aged diesel? is significant); d) gasoline range compounds are significant; e) unknown medium boiling point pattern that does not appear to be derived from diesel (asphalt?); f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol % sediment; k) kerosene/kerosene range; l) bunker oil; m) fuel oil; n) stoddard solvent/mineral spirit; r) results are reported on a dry weight basis

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QC SUMMARY REPORT FOR SW8081B/8082A

W.O. Sample Matrix: Soil QC Matrix: Soil WorkOrder 0709690

EPA Method SW8081B/8082A	Extraction SW3550C				BatchID: 30911				Spiked Sample ID: 0709648-033A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/kg	mg/kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
Aldrin	ND	0.010	122	121	0.637	117	117	0	70 - 130	30	70 - 130	30
g-BHC	ND	0.010	90.7	90.1	0.578	87.3	87.9	0.741	70 - 130	30	70 - 130	30
p,p-DDT	ND	0.025	85.3	84	1.64	84	82.6	1.62	70 - 130	30	70 - 130	30
Dieldrin	ND	0.025	113	112	0.511	107	108	0.673	70 - 130	30	70 - 130	30
Endrin	ND	0.025	114	113	0.734	108	109	0.523	70 - 130	30	70 - 130	30
Heptachlor	ND	0.010	84.2	83.7	0.655	80.3	81.5	1.51	70 - 130	30	70 - 130	30
%SS:	105	0.050	107	107	0	107	106	0.731	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 30911 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0709690-001A	09/28/07 12:45 PM	09/28/07	09/28/07 10:51 PM	0709690-002A	09/28/07 1:10 AM	09/28/07	09/28/07 11:46 PM

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MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2)

MS / MSD spike recoveries and / or %RPD may fail outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

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QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Soil QC Matrix: Soil WorkOrder 0709690

EPA Method SW8021B/8015Cm **Extraction SW5030B** **BatchID: 30947** **Spiked Sample ID: 0709690-002A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex)£	ND	0.60	108	105	3.32	104	102	2.32	70 - 130	30	70 - 130	30
MTBE	ND	0.10	79.1	89.7	12.7	101	107	5.07	70 - 130	30	70 - 130	30
Benzene	ND	0.10	94	95.2	1.25	96.2	100	4.09	70 - 130	30	70 - 130	30
Toluene	ND	0.10	94.3	95.4	1.23	86	89.3	3.84	70 - 130	30	70 - 130	30
Ethylbenzene	ND	0.10	98.8	97.8	1.03	93.5	98	4.71	70 - 130	30	70 - 130	30
Xylenes	ND	0.30	110	110	0	86.3	91.3	5.63	70 - 130	30	70 - 130	30
%SS:	80	0.10	82	95	14.2	85	92	7.98	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 30947 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0709690-001A	09/28/07 12:45 PM	09/28/07	09/29/07 10:04 PM	0709690-002A	09/28/07 1:10 AM	09/28/07	09/29/07 10:37 PM

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MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery

£ TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

DHS ELAP Certification N° 1644

AR QA/QC Officer

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QC SUMMARY REPORT FOR 6020A

W.O Sample Matrix: Soil QC Matrix: Soil WorkOrder 0709690

EPA Method 6020A Extraction SW3050B BatchID: 30948 Spiked Sample ID: 0709691-001A

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
Antimony	1.9	10	101	103	2.57	97.3	96.3	1.06	70 - 130	20	80 - 120	20
Arsenic	2.7	10	100	103	2.81	97.3	96.4	0.960	70 - 130	20	80 - 120	20
Barium	77	100	100	103	2.49	95.3	93.7	1.71	70 - 130	20	80 - 120	20
Beryllium	ND	10	110	113	3.13	102	101	0.886	70 - 130	20	80 - 120	20
Cadmium	1.2	10	97.5	100	2.61	96.8	95.4	1.40	70 - 130	20	80 - 120	20
Chromium	43	10	93.6	98.8	2.85	96.4	94.4	2.09	70 - 130	20	80 - 120	20
Cobalt	7.5	10	104	107	2.82	107	106	0.752	70 - 130	20	80 - 120	20
Copper	57	10	89.4	94.4	2.43	92	91.7	0.370	70 - 130	20	80 - 120	20
Lead	14	10	98.5	101	2.24	86.6	85.7	1.02	70 - 130	20	80 - 120	20
Mercury	ND	0.25	95.9	99.6	3.71	97.2	93.6	3.69	70 - 130	20	80 - 120	20
Molybdenum	2.8	10	96	99.8	3.65	89.5	84.3	5.84	70 - 130	20	80 - 120	20
Nickel	42	10	89.5	94.3	2.73	93.3	92.1	1.30	70 - 130	20	80 - 120	20
Selenium	ND	10	105	107	2.33	104	99.5	4.50	70 - 130	20	80 - 120	20
Silver	ND	10	98.7	101	1.91	98.5	97.7	0.805	70 - 130	20	80 - 120	20
Thallium	ND	10	97.7	99.9	2.31	95	95	0	70 - 130	20	80 - 120	20
Vanadium	29	10	95.5	98.5	1.91	96.1	94.7	1.43	70 - 130	20	80 - 120	20
Zinc	170	100	95.5	98.9	2.60	99.8	99.3	0.562	70 - 130	20	80 - 120	20
%SS:	100	250	100	102	1.78	97	96	1.32	70 - 130	20	70 - 130	20

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

BATCH 30948 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0709690-001A	09/28/07 12:45 PM	09/28/07	09/29/07 2:09 AM	0709690-002A	09/28/07 1:10 AM	09/28/07	09/29/07 2:16 AM

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MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not applicable to this method.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

DHS ELAP Certification N° 1644

QA/QC Officer

McCampbell Analytical, Inc.
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QC SUMMARY REPORT FOR SW8270C

W.O Sample Matrix: Soil QC Matrix: Soil WorkOrder 0709690

EPA Method SW8270C Extraction SW3550C BatchID: 30950 Spiked Sample ID: 0709607-013A

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
Acenaphthene	ND	2	72	72.1	0.153	74.4	76.3	2.56	30 - 130	30	30 - 130	30
4-Chloro-3-methylphenol	ND	4	86.3	83.6	3.20	76	77.4	1.79	30 - 130	30	30 - 130	30
2-Chlorophenol	ND	4	84.6	85.1	0.583	86.7	89	2.70	30 - 130	30	30 - 130	30
1,4-Dichlorobenzene	ND	2	71.8	72.2	0.527	73.2	74.7	2.03	30 - 130	30	30 - 130	30
2,4-Dinitrotoluene	ND	2	68.3	69.6	1.96	69.8	71.1	1.86	30 - 130	30	30 - 130	30
4-Nitrophenol	ND	4	60.8	61.7	1.44	54.4	45.9	17.0	30 - 130	30	30 - 130	30
N-Nitrosodi-n-propylamine	ND	2	114	117	2.39	96.5	98.8	2.32	30 - 130	30	30 - 130	30
Pentachlorophenol	ND	4	61.5	65.4	6.17	54.9	54.7	0.374	30 - 130	30	30 - 130	30
Phenol	ND	4	80.1	77.5	3.29	88.6	90.7	2.36	30 - 130	30	30 - 130	30
Pyrene	ND	2	80.3	80.5	0.274	80.7	81.9	1.48	30 - 130	30	30 - 130	30
1,2,4-Trichlorobenzene	ND	2	78.7	78.3	0.509	80.5	81.8	1.66	30 - 130	30	30 - 130	30
%SS1:	107	200	105	105	0	102	105	2.88	30 - 130	30	30 - 130	30
%SS2:	99	200	106	101	4.40	113	116	2.73	30 - 130	30	30 - 130	30
%SS3:	112	200	115	114	0.893	115	118	1.86	30 - 130	30	30 - 130	30
%SS4:	87	200	87	87	0	86	88	2.72	30 - 130	30	30 - 130	30
%SS5:	108	200	110	109	0.674	105	108	2.87	30 - 130	30	30 - 130	30
%SS6:	97	200	96	97	0.395	95	96	1.83	30 - 130	30	30 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

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BATCH 30950 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0709690-001A	09/28/07 12:45 PM	09/28/07	10/03/07 9:13 AM	0709690-002A	09/28/07 1:10 AM	09/28/07	10/03/07 10:30 AM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

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QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Soil QC Matrix: Soil WorkOrder 0709690

EPA Method SW8260B	Extraction SW5030B				BatchID: 30951				Spiked Sample ID: 0709700-005A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
tert-Amyl methyl ether (TAME)	ND	0.050	95.9	98.2	2.33	98	99.4	1.39	70 - 130	30	70 - 130	30
Benzene	ND	0.050	92.8	94.7	2.04	93.5	93.4	0.105	70 - 130	30	70 - 130	30
t-Butyl alcohol (TBA)	ND	0.25	87.3	96.6	10.1	92.3	99.8	7.71	70 - 130	30	70 - 130	30
Chlorobenzene	ND	0.050	116	118	2.00	118	118	0	70 - 130	30	70 - 130	30
1,2-Dibromoethane (EDB)	ND	0.050	128	125	2.26	126	128	1.27	70 - 130	30	70 - 130	30
1,2-Dichloroethane (1,2-DCA)	ND	0.050	91.5	94.6	3.35	91.9	93.5	1.73	70 - 130	30	70 - 130	30
1,1-Dichloroethene	ND	0.050	111	115	2.99	115	119	3.17	70 - 130	30	70 - 130	30
Diisopropyl ether (DIPE)	ND	0.050	97.1	99.1	1.97	99	99.1	0.0696	70 - 130	30	70 - 130	30
Ethyl tert-butyl ether (ETBE)	ND	0.050	85.7	88.7	3.51	89.6	88.6	1.09	70 - 130	30	70 - 130	30
Methyl-t-butyl ether (MTBE)	ND	0.050	97.4	102	4.62	101	102	1.24	70 - 130	30	70 - 130	30
Toluene	ND	0.050	95	96.3	1.38	97.4	95.5	1.94	70 - 130	30	70 - 130	30
Trichloroethene	ND	0.050	101	104	3.40	102	103	0.277	70 - 130	30	70 - 130	30
%SS1:	107	0.050	96	96	0	96	98	1.63	70 - 130	30	70 - 130	30
%SS2:	96	0.050	90	90	0	91	89	2.24	70 - 130	30	70 - 130	30
%SS3:	96	0.050	97	96	1.27	97	96	0.927	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

BATCH 30951 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0709690-001A	09/28/07 12:45 PM	09/28/07	10/02/07 3:42 PM	0709690-002A	09/28/07 1:10 AM	09/28/07	10/02/07 2:53 PM

FOR CITY COUNCIL USE ONLY

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2)

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content

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QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Soil QC Matrix: Soil WorkOrder 0709690

EPA Method SW8260B	Extraction SW5030B				BatchID: 30951				Spiked Sample ID: 0709700-005A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
tert-Amyl methyl ether (TAME)	ND	0.050	95.9	98.2	2.33	98	99.4	1.39	70 - 130	30	70 - 130	30
Benzene	ND	0.050	92.8	94.7	2.04	93.5	93.4	0.105	70 - 130	30	70 - 130	30
t-Butyl alcohol (TBA)	ND	0.25	87.3	96.6	10.1	92.3	99.8	7.71	70 - 130	30	70 - 130	30
Chlorobenzene	ND	0.050	116	118	2.00	118	118	0	70 - 130	30	70 - 130	30
1,2-Dibromoethane (EDB)	ND	0.050	128	125	2.26	126	128	1.27	70 - 130	30	70 - 130	30
1,2-Dichloroethane (1,2-DCA)	ND	0.050	91.5	94.6	3.35	91.9	93.5	1.73	70 - 130	30	70 - 130	30
1,1-Dichloroethene	ND	0.050	111	115	2.99	115	119	3.17	70 - 130	30	70 - 130	30
Diisopropyl ether (DIPE)	ND	0.050	97.1	99.1	1.97	99	99.1	0.0696	70 - 130	30	70 - 130	30
Ethyl tert-butyl ether (ETBE)	ND	0.050	85.7	88.7	3.51	89.6	88.6	1.09	70 - 130	30	70 - 130	30
Methyl-t-butyl ether (MTBE)	ND	0.050	97.4	102	4.62	101	102	1.24	70 - 130	30	70 - 130	30
Toluene	ND	0.050	95	96.3	1.38	97.4	95.5	1.94	70 - 130	30	70 - 130	30
Trichloroethene	ND	0.050	101	104	3.40	102	103	0.277	70 - 130	30	70 - 130	30
%SS1:	107	0.050	96	96	0	96	98	1.63	70 - 130	30	70 - 130	30
%SS2:	96	0.050	90	90	0	91	89	2.24	70 - 130	30	70 - 130	30
%SS3:	96	0.050	97	96	1.27	97	96	0.927	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

BATCH 30951 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0709690-001A	09/28/07 12:45 PM	09/28/07	10/04/07 2:38 AM	0709690-002A	09/28/07 1:10 AM	09/28/07	10/04/07 3:26 AM

FOR CITY COUNCIL USE ONLY

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2)

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content

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QC SUMMARY REPORT FOR SW8015C

W.O. Sample Matrix: Soil QC Matrix: Soil WorkOrder: 0709690

EPA Method SW8015C	Extraction SW3550C/3630C				BatchID: 30865				Spiked Sample ID: 0709689-007A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(d)	3200	20	NR	NR	NR	105	108	2.76	70 - 130	30	70 - 130	30
%SS:	103	50	82	82	0	100	103	2.70	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

BATCH 30865 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0709690-001A	09/28/07 12:45 PM	09/28/07	10/03/07 8:11 AM	0709690-002A	09/28/07 1:10 AM	09/28/07	10/03/07 6:37 PM

FOR CITY COUNCIL USE ONLY

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2)

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Grain Size Distribution with Hydrometer ASTM D422

Project Name: Niles Town Plaza Soil Remediation 11129	**Project Number: 2046.800**	Date: 11/06/07
Sample ID: Soil	Sample Description: (Loam) CL Sandy Lean Clay Dark Gray Brown	

Gradation

Screen Size			Weight Retained, grams	Accumulated Weight Retained, grams	Percent Retained, %	Accumulated, %		Specifications
US Standard	Inches	mm				Retained	**Passing**	
3	3.0	75.0	0.0	0.0	0.0	0.0	**100**	
2	2.0	50.0	0.0	0.0	0.0	0.0	**100**	
1-1/2	1.5	37.5	0.0	0.0	0.0	0.0	**100**	
1	1.0	25.0	0.0	0.0	0.0	0.0	**100**	
3/4	0.742	19.0	0.0	0.0	0.0	0.0	**100**	
1/2	0.500	12.5	0.0	0.0	0.0	0.0	**100**	
3/8	0.371	9.5	0.0	0.0	0.0	0.0	**100**	
#4	0.183	4.75	14.6	14.6	2.9	2.9	**97**	
#8	0.093	2.36	15.6	30.2	3.1	5.9	**94**	
#10	0.050	2.00	4.4	34.6	0.9	6.8	**93**	
#16	0.046	1.17	9.8	44.4	1.9	8.7	**91**	
#30	0.0232	0.60	12.5	56.9	2.5	11.2	**89**	
#50	0.0116	0.30	26.0	82.9	5.1	16.3	**84**	
#100	0.0053	0.15	53.4	136.3	10.5	26.8	**73**	
#200	0.0029	0.075	70.0	206.3	13.8	40.5	**59.5**	

Hydrometer

Hydrometer ID:			Hydrometer Correction Factor: 1.4158		Uncorrected Hydrometer Reading	Hydrometer Reading in Water	Corrected Hydrometer Reading	Percent Passing, %	Size, mm
Date	Hour	Minute	Seconds	Time					
11/7/07	8	25	0	Started		7.0			
11/7/07	8	25	15	15 Seconds	49.0	7.0	42.0	**59.5**	**0.075**
11/7/07	8	25	30	30 Seconds	46.5	7.0	39.5	**55.9**	**0.055**
11/7/07	8	26	6	1 Min. 6 Seconds	40.5	7.0	33.5	**47.4**	**0.037**
11/7/07	8	29	12	4 Min 12 Seconds	34.0	7.0	27.0	**38.2**	**0.019**
11/7/07	8	43	40	18 Min 40 Seconds	29.0	7.0	22.0	**31.1**	**0.009**
11/7/07	9	25	30	60 Min 30 Seconds	25.5	7.0	18.5	**26.2**	**0.005**
11/7/07	14	43	0	6 Hrs 18 Minutes	21.0	7.0	14.0	**19.8**	**0.002**
11/8/07	8	38	0	24 Hrs 13 Minutes	19.5	7.0	12.5	**17.7**	**0.001**

Initial Weights

	Bulk Sample Weight, grams	Gradation Passing Screen		Hygroscopic Moisture Correction
		#4	#10	
Tare ID:	56			
Wet Soil + Tare Weight, g:				
Dry Soil + Tare Wt, g:	508.9			
Tare Weight, g:	0.0			
Dry Soil Weight, g:	508.9			
Corrected Dry Soil Weight, g:	508.9			

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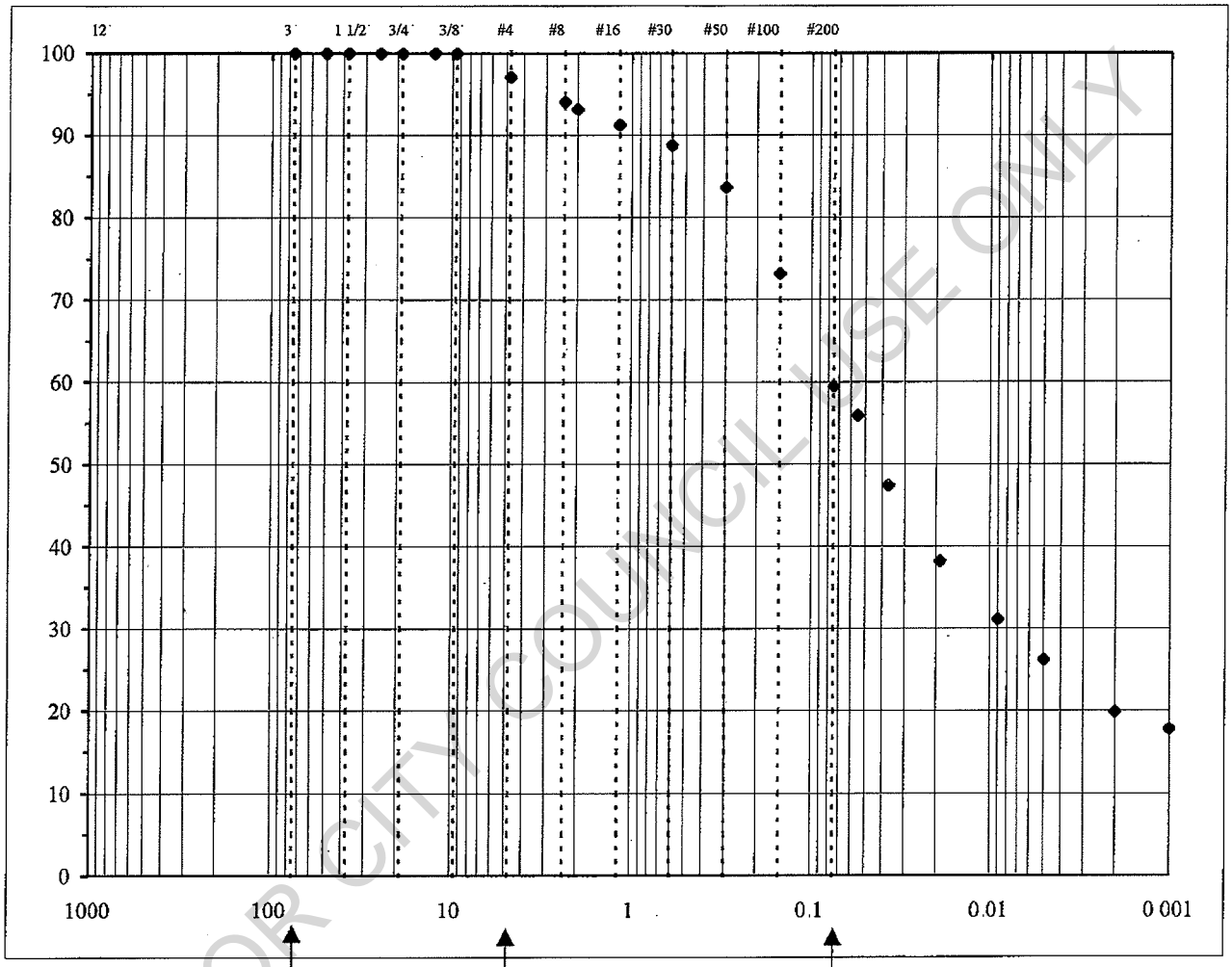
Gradation Test Data ASTM D 422

Project Name: Niles Town Plaza Soil Remediation 11129	**Project No: 2046.8**
Comments:	**Date:** 11/6/2007



COBBLES	GRAVEL		SAND			SILT/CLAY
	coarse	fine	coarse	medium	fine	

Symbol	Sample ID	Description
	Soil	(Loam) CL Sandy Lean Clay Dark Gray Brown

FOR CITY COUNCIL USE ONLY

Pacific States Niles Town Plaza Soil Remediation 2046.800
11/8/2007

	Spec	Actual
Rock 1" to 1/2"	0-10%	0%
Gravel 2 to13mm	0-15%	7%
Coarse Sand 0 5 to 2.0mm	0-15%	5%
Fine Sand 0.05 to 0.5mm	na	
Silt 0.002 to 0.05mm	10-30%	35%
Clay 0 to 0.002mm	10-25%	20%
Silt +Clay <0.05mm	25-50%	55%

Clay Fraction=20%
Silt Fraction=35%
Sand Fraction=45%

From Soil Texture Trianlge Sample Classified as: Loam

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Pacific States Environmental	Client Project ID: #607119; Niles Town	Date Sampled: 10/31/07
11555 Dublin Blvd		Date Received: 11/01/07
Dublin, CA 94568	Client Contact: Peter Buss	Date Extracted: 11/01/07
	Client P.O.:	Date Analyzed 11/01/07

pH*

Analytical Method: SW9045C

Work Order: 0711001

Lab ID	Client ID	Matrix	pH
0711001-001A	EDEN-01A	S	7 61 @ 23 2 °C

Method Accuracy and Reporting Units	W	NA
	S	±0 05 pH units @ °C

DHS ELAP Certification N° 1644

Angela Rydelius, Lab Manager

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Telephone: 877-252-9262 Fax: 925-252-9269

Pacific States Environmental	Client Project ID: #607119; Niles Town	Date Sampled: 10/31/07
11555 Dublin Blvd		Date Received: 11/01/07
Dublin, CA 94568	Client Contact: Peter Buss	Date Extracted: 11/01/07
	Client P.O.:	Date Analyzed 11/02/07

Sodium Adsorption Ratio (SAR) and Boron*

Work Order: 0711001

Lab ID	Client ID	Matrix	Boron	SAR
			SSSA V5 Pt3; H Petersen 2000	SSSA V5 Pt3; H Petersen 2000
001A	EDEN-01A	S	0.76	2.7
Reporting Limit or Method Accuracy and Reporting Units; ND means not detected at or above the reporting limit		W	NA	NA
		S	0.02 mg/L	N/A

* SAR = ([Na] / 23) / SQRT (0.5 * (2 * [Ca] / 40 + 2 * [Mg] / 24.3))

Boron, Calcium, Magnesium & Sodium are reported in mg/L

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DHS ELAP Certification N° 1644

Angela Rydelius, Lab Manager

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1534 Willow Pass Road Pittsburg, CA 94565-1701
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Telephone: 877-252-9262 Fax: 925-252-9269

Pacific States Environmental	Client Project ID: #607119; Niles Town	Date Sampled: 10/31/07
11555 Dublin Blvd		Date Received: 11/01/07
Dublin, CA 94568	Client Contact: Peter Buss	Date Extracted: 11/01/07
	Client P.O.:	Date Analyzed 11/02/07

Specific Conductivity*

Analytical Method: CAI est424m Work Order: 0711001

Lab ID	Client ID	Matrix	Specific Conductivity	DF
0711001-001A	EDEN-01A	S	776 @ 25.0°C	1

Reporting Limit for DF = 1; ND means not detected at or above the reporting limit	W	NA	
	S	25 µmhos/cm @ 25°C	

FOR CITY COUNCIL USE ONLY

DHS ELAP Certification N° 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
"When Quality Counts"

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QC SUMMARY REPORT FOR WET CHEMISTRY TESTS

Test Method: pH **Matrix: S** **WorkOrder: 0711001**

Method Name: SW9045C Units ±, pH units @ °C BatchID: 31633

SampleID	Sample	DF	Dup / Ser. Dil	DF	RD	Acceptance Criteria
0711001-001A	7.61 @ 23.2 °C	1	7.60 @ 23.3 °C	1	0.01	±0.05

BATCH 31633 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0711001-001A	10/31/07 2:00 PM	11/01/07	11/01/07 12:35 PM				

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Dup = Duplicate; Ser Dil = Serial Dilution; MS = Matrix Spike; RD = Relative Difference; RPD = Relative Percent Deviation

RD = Absolute Value {Sample - Duplicate}; RPD = 100 " (Sample - Duplicate) / [(Sample + Duplicate) / 2].

DHS ELAP Certification N° 1644

QA/QC Officer

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QC SUMMARY REPORT FOR WET CHEMISTRY TESTS

Test Method: Specific Conductivity **Matrix: S** **WorkOrder: 0711001**

Method Name: CATest424m Units µmhos/cm @ 25°C BatchID: 31655

SampleID	Sample	DF	Dup / Ser Dil.	DF	% RPD	Acceptance Criteria (%)
0711001-001A	776 @ 25.0°C	1	776 @ 25.0°C	1	0	<5

BATCH 31655 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0711001-001A	10/31/07 2:00 PM	11/01/07	11/02/07 3:40 PM				

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Dup = Duplicate; SD = Serial Dilution; MS = Matrix Spike; RD = Relative Difference; RPD = Relative Percent Deviation

RD = Absolute Value {Sample - Duplicate}; RPD = 100 " (Sample - Duplicate) / [(Sample + Duplicate) / 2].

DHS ELAP Certification N° 1644

QA/QC Officer

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Pacific States Environmental	Client Project ID: #607119; Niles Town	Date Sampled:	10/31/07
11555 Dublin Blvd		Date Received:	11/01/07
Dublin, CA 94568	Client Contact: Peter Buss	Date Reported:	11/02/07
	Client P.O.:	Date Completed:	11/08/07

WorkOrder: 0711001

November 08, 2007

Dear Peter:

Enclosed are:

1). the results of **1** analyzed sample from your **#607119; Niles Town project,**

2). a QC report for the above sample

3) a copy of the chain of custody, and

4). a bill for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits If you have any questions please contact me McCampbell Analytical Laboratories strives for excellence in quality, service and cost Thank you for your business and I look forward to working with you again

Best regards,

Angela Rydelius, Lab Manager

FOR CITY COUNCIL USE ONLY

071001

McCAMPBELL ANALYTICAL, INC.

1534 WILLOW PASS ROAD
PITTSBURG, CA 94565-1701
Website: www.mccampbell.com Email: main@mccampbell.com
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RUSH CHAIN OF CUSTODY RECORD

TURNAROUND TIME ☐ RUSH ☒ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAY

GeoTracker EDF ☐ PDF ☐ Excel ☐ Write On (DW) ☐

☐ Check if sample is effluent and "J" flag is required

Report To: Pete Buss
Company: Pacific States
E-Mail: PBuss@PacificStates.net
Tele: (925) 785-9959 Fax: (925) 803-4384
Project #: 607119 Project Name: Miles Tower
Project Location: Fremont
Sampler Signature: [signature]

Bill To: Pacific States

SAMPLE ID	LOCATION/ Field Point Name	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	MATRIX Soil	MATRIX Air	MATRIX Sludge	MATRIX Other	METHOD PRESERVED ICE	HCL	HNO3	Other	BTEX & TPH as Gas (602 / 8021 / 8015 / MTBE)	TPH as Diesel (8015)	Total Petroleum Oil & Grease (1664 / 5520 E&F)	Total Petroleum Hydrocarbons (418.1)	EPA 502.2 / 601 / 8010 / 8021 (HVOCs)	MTBE / BTEX ONLY (EPA 602 / 8021B)	EPA 508 / 608.2 / 8081 PCB'S ONLY, Aroclors, Congeners	EPA 608 / 8080 PCB'S ONLY (Aroclors)	EPA 625 / 8270 (SVOC's)	EPA 515.1 / 8151 Acidic Cl Herbicides	EPA 524.2 / 624 / 8260 (VOC's)	EPA 504.1 / 8011 (EDB / DBCP)	EPA 8270 SIM / 8310 (PAH's)	CAM 17 Metals (200.7 / 200.8 / 6010 / 6020)	LUFT 5 Metals (200.7 / 200.8 / 6010 / 6020)	Lead (200.7 / 200.8 / 6010 / 6020)	Other SC	Other Sulfate Approved Plan	Other Turbidity	Other pH	Comments: Filter Samples for Metals analysis: Yes / No
EDEN-01A		10/31	2:00P	1	3		X																								X	X	X		
EDEN-01B		10/31	2:00P	1	3		X																												2xTTCA

Relinquished By:	Date:	Time:	Received By:
[signature]	11/1	8:08A	[signature]
Relinquished By:	Date:	Time:	Received By:
Relinquished By:	Date:	Time:	Received By:

ICE/T° 6°
GOOD CONDITION YES
HEAD SPACE ABSENT YES
DECHLORINATED IN LAB NA
APPROPRIATE CONTAINERS YES
PRESERVED IN LAB X

PRESERVATION	VOAS	O&G	METALS	OTHER
			pH<2	

COMMENTS:

FOR REFERENCE ONLY

McCampbell Analytical, Inc.
1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0711001 **ClientID: PSED**

☐ EDF ☐ Excel ☐ Fax ☑ Email ☐ HardCopy ☐ ThirdParty

Report to:
Peter Buss
Pacific States Environmental
11555 Dublin Blvd
Dublin, CA 94568

Email: pbuss@pacificstates.net
TEL: 925-803-4333 FAX: 925-803-4334
ProjectNo: #607119; Niles Town
PO:

Bill to:
Accounts Payable
Pacific States Environmental
11555 Dublin Blvd
Dublin, CA 94568

Requested TAT: 1 day

Date Received: **11/01/2007**
Date Printed: **11/01/2007**

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below) 1	2	3	4	5	6	7	8	9	10	11	12
0711001-001	EDEN-01A	Soil	10/31/07 2:00:00	☐	A	A	A									

Test Legend:

1	PH_S	2	SAR_S	3	SC_S	4		5	
6		7		8		9		10	
11		12							

Prepared by: Maria Venegas

Comments:

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

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Sample Receipt Checklist

Client Name: **Pacific States Environmental**

Date and Time Received: **11/01/07 8:47:55 AM**

Project Name: **#607119; Niles Town**

Checklist completed and reviewed by: Maria Venegas

WorkOrder N°: **0711001** Matrix Soil

Carrier: Client Drop-In

Chain of Custody (COC) Information

Chain of custody present?	Yes ☑	No ☐
Chain of custody signed when relinquished and received?	Yes ☑	No ☐
Chain of custody agrees with sample labels?	Yes ☑	No ☐
Sample IDs noted by Client on COC?	Yes ☑	No ☐
Date and Time of collection noted by Client on COC?	Yes ☑	No ☐
Sampler's name noted on COC?	Yes ☑	No ☐

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	NA ☑
Shipping container/cooler in good condition?	Yes ☑	No ☐	
Samples in proper containers/bottles?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature	Cooler Temp: 6.4°C		NA ☐
Water - VOA vials have zero headspace / no bubbles?	Yes ☐	No ☐	No VOA vials submitted ☑
Sample labels checked for correct preservation?	Yes ☑	No ☐	
TTLC Metal - pH acceptable upon receipt (pH<2)?	Yes ☐	No ☐	NA ☑

Client contacted: Date contacted: Contacted by:

Comments:

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