



**CITY OF SAUSALITO
PROJECT SPECIFICATIONS-BID DOCUMENTS
FOR
2023 PAVEMENT IMPROVEMENT PROJECT
City Project No. 07.01.010**

November 2023

CITY OF SAUSALITO
MARIN COUNTY

PUBLIC WORKS DEPARTMENT
420 Litho Street
Sausalito, California 94965
(415) 289-4106

**Kevin McGowan, PE
DIRECTOR OF PUBLIC WORKS/CITY ENGINEER**

Bid Opening: December 14, 2023

Pre-Bid Conference: November 29, 2023 (Not Mandatory)

Contract Performance Time: 84 Days
Liquidated Damages: \$1,500 per Calendar Day



LOCATION MAP

City of Sausalito

TABLE OF CONTENTS

Notice Inviting Bids	1
Instructions to Bidders	3
Bid Proposal.....	9
Bid Schedule	12
Subcontractor List.....	15
Noncollusion Declaration	16
Bid Bond.....	17
Bidder's Questionnaire	19
Contract	22
Payment Bond.....	26
Performance Bond	28
General Conditions	30
Article 1 - Definitions.....	30
Definitions.....	30
Article 2 - Roles and Responsibilities	32
2.1 City	32
2.2 Contractor.....	33
2.3 Subcontractors	35
2.4 Coordination of Work.....	36
2.5 Submittals.....	37
2.6 Shop Drawings.....	37
Article 3 - Contract Documents.....	38
3.1 Interpretation of Contract Documents	38
3.2 Order of Precedence	39
3.3 Caltrans Standard Specifications	39
3.4 For Reference Only	40
3.5 Current Versions	40
3.6 Conformed Copies	40
Article 4 - Bonds, Indemnity, and Insurance	40
4.1 Payment and Performance Bonds	40
4.2 Indemnity.....	41
4.3 Insurance.....	41
Article 5 - Contract Time	43
5.1 Time is of the Essence	43
5.2 Schedule Requirements	44
5.3 Delay and Extensions of Contract Time.....	45
5.4 Liquidated Damages	49
Article 6 - Contract Modification	49
6.1 Contract Modification.....	49
6.2 Contractor Change Order Requests	50
6.3 Adjustments to Contract Price.....	51

6.4	Unilateral Change Order	52
6.5	Non-Compliance Deemed Waiver.....	52
Article 7 - General Construction Provisions		52
7.1	Permits, Fees, Business License, and Taxes	52
7.2	Temporary Facilities	52
7.3	Noninterference and Site Management	53
7.4	Signs.....	53
7.5	Project Site and Nearby Property Protections.	53
7.6	Materials and Equipment.....	55
7.7	Substitutions	55
7.8	Testing and Inspection	56
7.9	Project Site Conditions and Maintenance	57
7.10	Instructions and Manuals	58
7.11	As-built Drawings	59
7.12	Existing Utilities	59
7.13	Notice of Excavation.....	60
7.14	Trenching and Excavations of Four Feet or More.....	60
7.15	Trenching of Five Feet or More	60
7.16	New Utility Connections	61
7.17	Lines and Grades.	61
7.18	Historic or Archeological Items.....	61
7.19	Environmental Control.....	61
7.20	Noise Control.....	62
7.21	Mined Materials.	62
Article 8 - Payment		62
8.1	Schedule of Values	62
8.2	Progress Payments	62
8.3	Adjustment of Payment Application	63
8.4	Early Occupancy.	63
8.5	Retention	63
8.6	Payment to Subcontractors and Suppliers.....	64
8.7	Final Payment	65
8.8	Release of Claims	65
8.9	Warranty of Title	65
Article 9 - Labor Provisions.....		65
9.1	Discrimination Prohibited.....	65
9.2	Labor Code Requirements	65
9.3	Prevailing Wages	66

9.4	Payroll Records	66
9.5	Labor Compliance	66
Article 10 - Safety Provisions		67
10.1	Safety Precautions and Programs	67
10.2	Hazardous Materials	67
10.3	Material Safety	67
10.4	Hazardous Condition	68
10.5	Emergencies	68
Article 11 - Completion and Warranty Provisions		68
11.1	Final Completion	68
11.2	Warranty	69
11.3	Use Prior to Final Completion	70
11.4	Substantial Completion	70
Article 12 - Dispute Resolution		70
12.1	Claims.....	70
12.2	Claims Submission.....	71
12.3	City's Response	73
12.4	Meet and Confer.....	73
12.5	Mediation and Government Code Claims	73
12.6	Tort Claims	74
12.7	Arbitration	74
12.8	Burden of Proof and Limitations.....	74
12.9	Legal Proceedings.....	74
12.10	Other Disputes	74
Article 13 - Suspension and Termination.....		75
13.1	Suspension for Cause	75
13.2	Suspension for Convenience	75
13.3	Termination for Default.....	75
13.4	Termination for Convenience	77
13.5	Actions Upon Termination for Default or Convenience.....	77
Article 14 - Miscellaneous Provisions		78
14.1	Assignment of Unfair Business Practice Claims	78
14.2	Provisions Deemed Inserted	78
14.3	Waiver	78
14.4	Titles, Headings, and Groupings.....	79
14.5	Statutory and Regulatory References.....	79
14.6	Survival.....	79
Special Conditions		80
3.	Insurance Requirements.....	81

4. Normal Weather Delay Days	81
5. Public Notification	81
6. ALTERATIONS	81
7. Close Out Requirements	82
8. Value Engineering	82
TECHNICAL SPECIFICATIONS	ii

Notice Inviting Bids

1. **Bid Submission.** City of Sausalito (“City”) will accept sealed bids for its 2023 Pavement Improvement Project (“Project”), by or before December 14, 2023, at 2:00 p.m., at its City Hall (Administration Office), located at 420 Litho St, Sausalito, California, at which time the bids will be publicly opened and read aloud.
2. **Project Information.**
 - 2.1 **Location and Description.** The Project is located at Edwards Ave., between Marion Ave. and Alexander Ave., and is described as follows: The project provides for demolition of existing roadway, roadway improvements and sanitary sewer upgrades as shown on the plans.
 - 2.2 **Time for Final Completion.** The Project must be fully completed within 84 calendar days from the start date set forth in the Notice to Proceed. City anticipates that the Work will begin on or about March 4, 2024, but the anticipated start date is provided solely for convenience and is neither certain nor binding.
 - 2.3 **Estimated Cost.** The estimated construction cost is \$1,190,000 Base Bid and \$1,245,000 Base Bid plus Additive Alternatives 1, 2 & 3.
3. **License and Registration Requirements.**
 - 3.1 **License.** This Project requires a valid California contractor’s license for the following classification(s): A-General Engineering Contractor.
 - 3.2 **DIR Registration.** City may 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 pursuant to Labor Code § 1725.5, subject to limited legal exceptions.
4. **Contract Documents.** The plans, specifications, bid forms and contract documents for the Project, and any addenda thereto (“Contract Documents”) may be downloaded from City’s website located at: <https://www.sausalito.gov/departments/public-works/bid-notices>. A printed copy of the Contract Documents are not available.
5. **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 within ten days after City issues the Notice of Potential Award, the successful bidder will execute the Contract and submit the payment and performance bonds, insurance certificates and endorsements, and any other submittals required by the Contract Documents and as specified in the Notice of Potential Award.
6. **Prevailing Wage Requirements.**
 - 6.1 **General.** Pursuant to California Labor Code § 1720 et seq., 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 and are 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 § 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, as further specified in the Contract Documents.
- 8. **Substitution of Securities.** Substitution of appropriate securities in lieu of retention amounts from progress payments is permitted under Public Contract Code § 22300.
- 9. **Subcontractor List.** Each Subcontractor must be registered with the DIR to perform work on public projects. Each bidder must submit a completed Subcontractor List form with its Bid Proposal, including the name, location of the place of business, California contractor license number, DIR registration number, and percentage of the Work to be performed (based on the base bid price) 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.** All bidders should carefully review the Instructions to Bidders for more detailed information before submitting a Bid Proposal. The definitions provided in Article 1 of the General Conditions apply to all of the Contract Documents, as defined therein, including this Notice Inviting Bids.
- 11. **Questions.** All bid questions must be in writing and can be emailed to Kevin McGowan at kmcgowan@sausalito.gov. and to Andrew Davidson at adavidson@sausalito.gov. The last day to submit questions prior to bid opening is Tuesday December 5, 2023.
- 12. **Bidders' Conference.** A bidders' conference will be held on Wednesday, November 29, 2023 at 1:00 p.m., at the following location: Sausalito City Hall, 420 Litho St., Sausalito, CA 94965 to acquaint all prospective bidders with the Contract Documents and the Worksite. The bidders' conference is not mandatory.

By: _____ Date: _____

Walfred Solorzano; City Clerk, City Clerk

Publication Date: < _____ >

END OF NOTICE INVITING BIDS

Instructions to Bidders

Each Bid Proposal submitted to City of Sausalito ("City") for its 2023 Pavement Improvement 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 date and time set forth in Section 1 of the Notice Inviting Bids, or as amended by subsequent addendum. Faxed or emailed Bid Proposals will not be accepted, unless otherwise specified. Late submissions will be returned unopened. City reserves the right to postpone the date or time for receiving or opening bids. 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 labor, material, supplies, and equipment and all other direct or indirect costs such as applicable taxes, insurance and overhead.
- 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:

BID PROPOSAL:

2023 Pavement Improvement Project
Contract No. 07.01.010

City Clerk
420 Litho St.
Sausalito, CA 94965
Attn: Walfred Solorzano

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

[Contractor company name]
[street address]
[city, state, zip code]
DIR Registration No: _____

- 1.3 DIR Registration.** Subject to limited legal exceptions for joint venture bids and federally-funded projects, City may not accept a Bid Proposal from a bidder without proof that the bidder is registered with the DIR to perform public work under Labor Code § 1725.5. If City is unable to confirm that the bidder is currently registered with the DIR, City may disqualify the bidder and return its bid unopened. (Labor Code §§ 1725.5 and 1771.1(a).)
- 2. Bid Proposal Form and Enclosures.** Each Bid Proposal must be completed in ink using the Bid Proposal form included with the Contract Documents. The Bid Proposal form must 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 exceptions or terms such as "negotiable,"

“will negotiate,” or similar, will be considered nonresponsive. Each Bid Proposal must be accompanied by bid security, as set forth in Section 4 below, and by a completed Subcontractor List and Non-Collusion Declaration using the forms included with the Contract Documents, and any other required enclosures, as applicable.

3. **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 Corporations Code § 313.
4. **Bid Security.** Each Bid Proposal must be accompanied by bid security of ten percent of the maximum bid amount, in the form of a cashier’s check or certified check, made payable to the City, or 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, within ten days after issuance of the Notice of Potential Award, the bidder will: execute and submit the enclosed Contract for the bid price; submit payment and performance bonds for 100% of the maximum Contract Price; and submit the insurance certificates and endorsements and any other submittals, if any, required by the Contract Documents or the Notice of Potential Award. A Bid Proposal may not be withdrawn for a period of 60 days after the bid opening without forfeiture of the bid security, except as authorized for material error under Public Contract Code § 5100 et seq.
5. **Requests for Information.** Questions or requests for clarifications regarding the Project, the bid procedures, or any of the Contract Documents must be submitted in writing to Kevin McGowan, Director of Public Works, at kmcgowan@sausalito.gov and to Andrew Davidson, Senior Engineer, at adavidson@sausalito.gov. Oral responses are not authorized and are not binding on the City. Bidders should submit any such written inquiries by the date identified in 10. Questions of the Notice Inviting Bids. Questions received any later might not be addressed before the bid deadline. An interpretation or clarification by City in response to a written inquiry will be issued in an addendum.
6. **Pre-Bid Investigation.**
 - 6.1 **General.** Each bidder is solely responsible at its sole expense for diligent and thorough review of the Contract Documents, examination of the Project site, and reasonable and prudent inquiry concerning known and potential site and area conditions prior to submitting a Bid Proposal. Each bidder is responsible for knowledge of conditions and requirements which reasonable review and investigation would have disclosed. However, except for any areas that are open to the public at large, bidders may not enter property owned or leased by the City or the Project site without prior written authorization from City.
 - 6.2 **Document Review.** Each bidder is responsible for review of the Contract Documents and any informational documents provided “For Reference Only,” e.g., as-builts, technical reports, test data, and the like. A bidder is responsible for notifying City of any errors, omissions, inconsistencies, or conflicts it discovers in the Contract Documents, acting solely in its capacity as a contractor and subject to the limitations of Public Contract Code § 1104. Notification of any such errors, omissions, inconsistencies, or conflicts must be submitted in writing to the City no later than five Working Days before the scheduled bid opening. (See Section 5, above.) City expressly disclaims responsibility for assumptions a bidder might draw from the presence or absence of information provided by City.

- 6.3 Project Site.** Questions regarding the availability of soil test data, water table elevations, and the like should be submitted to the City in writing, as specified in Section 5, above. Any 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. Any water table elevation indicated by a soil test report existed on the date the test hole was drilled. The bidder is responsible for determining and allowing for any differing soil or water table conditions during construction. Because groundwater levels may fluctuate, difference(s) in elevation between ground water shown in soil boring logs and ground water actually encountered during Project construction will not be considered changed Project site conditions. Actual locations and depths must be determined by bidder's field investigation. The bidder may request access to underlying or background information on the Project site in City's possession that is necessary for the bidder to form its own conclusions, including, if available, record drawings or other documents indicating the location of subsurface lines, utilities, or other structures.
- 6.4 Utility Company Standards.** The Project must be completed in a manner that satisfies the standards and requirements of any affected utility companies or agencies (collectively, "utility owners"). The successful bidder may be required by the third party 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 affected third party utility owners about their requirements before submitting a Bid Proposal.
- 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.
- 8. Addenda.** Any addenda issued prior to the bid opening are part of the Contract Documents. Subject to the limitations of Public Contract Code § 4104.5, City reserves the right to issue addenda prior to bid time. Each bidder is solely responsible for ensuring it has received and reviewed all addenda prior to submitting its bid. Bidders should check City's website periodically for any addenda or updates on the Project at: <https://www.sausalito.gov/departments/public-works/bid-notice>.
- 9. Brand Designations and "Or Equal" Substitutions.** Any specification designating a material, product, thing, or service by specific brand or trade name, 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. A request for substitution must be submitted within 35 days after Notice of Potential Award unless otherwise provided in the Contract Documents. 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 § 3400(c).
- 10. Bid Protest.** Any bid protest against another bidder must be submitted in writing and received by City at 420 Litho, St., Sausalito, CA 94965 or sent via email at kmcgowan@sausalito.gov before 5:00 p.m. no later than two Working Days following bid opening ("Bid Protest Deadline") and must comply with the following requirements:
- 10.1 General.** Only a bidder who has actually submitted a Bid Proposal is eligible to submit a bid protest against another bidder. Subcontractors are not eligible to submit bid protests. A bidder may not rely on the bid protest submitted by another

bidder, but must timely pursue its own protest. If required by City, the protesting bidder must submit a non-refundable fee in the amount specified by City, based upon City's reasonable costs to administer the bid protest. Any such fee must be submitted to City no later than the Bid Protest Deadline, unless otherwise specified. For purposes of this Section 10, a "Working Day" means a day that City is open for normal business, and excludes weekends and holidays observed by City. Pursuant to Public Contract Code § 4104, inadvertent omission of a Subcontractor's DIR registration number on the Subcontractor List form is not grounds for a bid protest, provided it is corrected within 24 hours of the bid opening or as otherwise provided under Labor Code § 1771.1(b).

- 10.2 Protest Contents.** The bid protest must contain a complete statement of the basis for the protest and must include all supporting documentation. Material submitted after the Bid Protest Deadline will not be considered. The protest must refer to the *specific* portion or portions of the Contract Documents upon which the protest is based. The protest must include the name, address, email address, and telephone number of the protesting bidder and any person submitting the protest on behalf of or as an authorized representative of the protesting bidder.
 - 10.3 Copy to Protested Bidder.** Upon submission of its bid protest to City, the protesting bidder must also concurrently transmit the protest and all supporting documents to the protested bidder, and to any other bidder who has a reasonable prospect of receiving an award depending upon the outcome of the protest, by email or hand delivery to ensure delivery before the Bid Protest Deadline.
 - 10.4 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 attach 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 responding on behalf of or representing the protested bidder if different from the protested bidder.
 - 10.5 Copy to Protesting Bidder.** Upon submission of its response to the bid protest to the City, the protested bidder must also concurrently transmit by email or hand delivery, by or before the Response Deadline, a copy of its response and all supporting documents to the protesting bidder and to any other bidder who has a reasonable prospect of receiving an award depending upon the outcome of the protest.
 - 10.6 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 a 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.
 - 10.7 Right to Award.** City reserves the right, acting in its sole discretion, to reject any bid protest that it determines lacks merit, 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.
- 11. Reservation of Rights.** City reserves the unfettered right, acting in its sole discretion, to waive or to decline to waive any immaterial bid irregularities; to accept or reject any or all

bids; to cancel or reschedule the bid; to postpone or abandon the Project entirely; or to perform all or part of the Work with its own forces. The Contract will be awarded, if at all, within 60 days after opening of bids or as otherwise specified in the Special Conditions, to the responsible bidder that submitted the lowest responsive bid. Any planned start date for the Project represents the City's expectations at the time the Notice Inviting Bids was first issued. City is not bound to issue a Notice to Proceed by or before such planned start date, and it reserves the right to issue the Notice to Proceed when the City determines, in its sole discretion, the appropriate time for commencing the Work. The City expressly disclaims responsibility for any assumptions a bidder might draw from the presence or absence of information provided by the City in any form. Each bidder is solely responsible for its costs to prepare and submit a bid, including site investigation costs.

12. **Bonds.** Within ten calendar days following City's issuance of the Notice of Potential Award to the apparent low bidder, the bidder must submit payment and performance bonds to City as specified in the Contract Documents using the bond forms included in the Contract Documents. All required bonds must be calculated on the maximum total Contract Price as awarded, including additive alternates, if applicable.
13. **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 10 days following City's issuance of the Notice of Potential Award. Subcontractors must also obtain a City business license before performing any Work.
14. **Ineligible Subcontractor.** Any Subcontractor who is ineligible to perform work on a public works project under Labor Code §§ 1777.1 or 1777.7 is prohibited from performing work on the Project.
15. **Safety Orders.** If the Project includes construction of a pipeline, sewer, sewage disposal system, boring and jacking pits, or similar trenches or open excavations, which are five feet or deeper, each bid must include a bid item for adequate sheeting, shoring, and bracing, or equivalent method, for the protection of life or limb, which comply with safety orders as required by Labor Code § 6707.
16. **Additive and Deductive Alternates.** As required by Public Contract Code § 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.

_____ (A) The lowest bid will be the lowest bid price on the base contract without consideration of the prices on the additive or deductive items.

X (B) The lowest bid will be the lowest total of the bid prices on the base contract and those additive or deductive items that were specifically identified in the bid solicitation or Bid Proposal as being used for the purpose of determining the lowest bid price.

_____ (C) The lowest bid will be the lowest total of the bid prices on the base contract and those additive or deductive items taken in order from a specifically identified list of those items that, when in the solicitation, and added to, or subtracted from, the base contract, are less than, or equal to, a funding amount publicly disclosed by City before the first bid is opened.

_____ (D) The lowest bid will be determined in a manner that prevents any information that would identify any of the bidders or the proposed subcontractors or suppliers from being revealed to City before the ranking of all bidders from lowest to highest has been

determined.

17. **Bid Schedule.** Each bidder must complete the Bid Schedule form with unit prices as indicated, and submit the completed Bid Schedule with its Bid Proposal.
 - 17.1 **Incorrect Totals.** 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 as the product of the estimated quantity and the unit cost. 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. Likewise, 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. Nothing in this provision is intended to prevent a bidder from requesting to withdraw its bid for material error under Public Contract Code § 5100 et seq.
 - 17.2 **Estimated Quantities.** Unless identified as a "Final Pay Quantity," 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 based on the itemized or unit prices provided in the Bid Schedule, with no allowance for anticipated profit for quantities that are deleted or decreased, and no increase in the unit price, and without regard to the percentage increase or decrease of the estimated quantity and the actual quantity.
18. **Bidder's Questionnaire.** A completed, signed Bidder's Questionnaire using the form provided with the Contract Documents and including all required attachments must be submitted within 48 hours following a request by City. A bid that does not fully comply with this requirement may be rejected as nonresponsive. A bidder who submits a Bidder's Questionnaire which is subsequently determined to contain false or misleading information, or material omissions, may be disqualified as non-responsible.
19. **For Reference Only.** The following documents are provided "For Reference Only," as defined in Section 3.4 of the General Conditions:
None

END OF INSTRUCTIONS TO BIDDERS

Bid Proposal

2023 Pavement Improvement Project

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

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, including all labor, materials, supplies, and equipment and all other direct or indirect costs including, but not limited to, taxes, insurance and all overhead for the following price (“Base Bid”):
\$ _____.

2. **Bid Alternates.** Bidder submits the following prices for the specified bid alternates:

Alternate #1: Replace Concrete Driveway Approach (38/40/42/44 Edwards)
Add/Deduct: \$ _____

Alternate #2: Replace Asphalt Driveway Approach (36 Edwards)
Add/Deduct: \$ _____

Alternate #3: Replace Wooden Car Port
Add/Deduct: \$ _____

3. **Sum of Base Bid plus Bid Alternatives #1, #2 and #3:** \$ _____
Lowest bid will be the lowest total of the bid prices of the Base Bid plus the sum of Bid Alternatives #1, #2 and #3.

4. **Addenda.** Bidder agrees that it has confirmed receipt of or access to, and reviewed, all addenda issued for this bid. Bidder waives any claims it might have against the City based on its failure to receive, access, or review any addenda for any reason. Bidder specifically acknowledges receipt of the following addenda:

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

5. **Bidder’s Certifications and Warranties.** By signing and submitting this Bid Proposal, Bidder certifies and warrants the following:

5.1 **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 § 1104.

5.2 **Examination of Worksite.** Bidder has had the opportunity to examine the Worksite and local conditions at the Project location.

- 5.3 Bidder Responsibility.** Bidder is a responsible bidder, with the necessary ability, capacity, experience, skill, qualifications, workforce, equipment, and resources to perform or cause the Work to be performed in accordance with the Contract Documents and within the Contract Time.
- 5.4 Responsibility for Bid.** Bidder has carefully reviewed this Bid Proposal and is solely responsible for any errors or omissions contained in its completed bid. All statements and information provided in this Bid Proposal and enclosures are true and correct to the best of Bidder's knowledge.
- 5.5 Nondiscrimination.** In preparing this bid, the Bidder has not engaged in discrimination against any prospective or present employee or Subcontractor on grounds of race, color, ancestry, national origin, ethnicity, religion, sex, sexual orientation, age, disability, or marital status.
- 5.6 Iran Contracting Act.** If the Contract Price exceeds \$1,000,000, Bidder is not identified on a list created under the Iran Contracting Act, Public Contract Code § 2200 et seq. (the "Act"), as a person engaging in investment activities in Iran, as defined in the Act, or is otherwise expressly exempt under the Act.

6. Award of Contract. By signing and submitting this Bid Proposal, Bidder agrees that if Bidder is awarded the Contract for the Project, within ten days following issuance of the Notice of Potential Award to Bidder, Bidder will do all of the following:

- 6.1 Execute Contract.** Enter into the Contract with City in accordance with the terms of this Bid Proposal, by signing and submitting to City the Contract prepared by City using the form included with the Contract Documents;
- 6.2 Submit Required Bonds.** Submit to City a payment bond and a performance bond, each for 100% of the Contract Price, using the bond forms provided and in accordance with the requirements of the Contract Documents; and
- 6.3 Insurance Requirements.** Submit to City the insurance certificate(s) and endorsement(s) as required by the Contract Documents.

7. 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 in one of the following forms (check one):

_____ A cashier's check or certified check payable to City and issued by _____ [Bank name] in the amount of \$_____.

_____ 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

s/ _____
[See Section 3 of Instructions to Bidders]

Name and Title

Company Name

License #, Expiration Date, and Classification

Address

DIR Registration #

City, State, Zip

Phone

Contact Name

Contact Email

END OF BID PROPOSAL

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. Items marked "(SW)" are Specialty Work that must be performed by a qualified Subcontractor. 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.

AL = Allowance CF = Cubic Feet CY = Cubic Yard EA = Each LB = Pounds
 LF = Linear Foot LS = Lump Sum SF = Square Feet TON = Ton (2000 lbs)

BID ITEM NO.	ITEM DESCRIPTION	EST. QTY.	UNIT	UNIT COST	EXTENDED TOTAL AMOUNT
1	Mobilization/Demobilization	1	LS	\$	\$
2	Construction Phasing and Traffic Control	1	LS	\$	\$
3	Water Pollution Control	1	LS	\$	\$
4	Construction Layout	1	LS	\$	\$
5	Remove Pavement & Base	15,240	SF	\$	\$
6	Remove Curb & Gutter	11	LF	\$	\$
7	Lamp Hole Abandonment	1	EA		
8	Lamp Hole Frame & Lid Removals	2	EA	\$	\$
9	Concrete Pavement	5,870	SF	\$	\$
10	Curb & Gutter (UCS #105) (Type A)	6	LF	\$	\$
11	Curb & Gutter (UCS #105) (Type E) 8-inch	5	LF		
12	Hot Mix Asphalt (Type A)	300	TON		
13	Dig Out Repair	305	SF	\$	\$
14	Curb Paint	292	LF	\$	\$
15	Pavement Striping and Markings	1	LS		
16	4" or 6" Sanitary Sewer Lateral (Open Trench or Pipe Burst)	230	LF	\$	\$
17	6" Sanitary Sewer Main – HDPE (Pipe Burst)	1,130	LF	\$	\$
18	Sanitary Sewer Cleanout (Include Utility Boxes)	21	EA	\$	\$
19	Replace SSMH Frame & Cover	1	EA	\$	\$
20	Sanitary Sewer Maintenance Hole – Rehabilitation	1	EA	\$	\$
21	Sanitary Sewer Maintenance Hole, Remove and Replace	4	EA	\$	\$

BID ITEM NO.	ITEM DESCRIPTION	EST. QTY.	UNIT	UNIT COST	EXTENDED TOTAL AMOUNT
22	Utility Adjustment – Sewer Maintenance Hole	1	EA	\$	\$
23	Utility Adjustment – Gas Valve (Revocable Item)	2	EA	\$	\$
24	Utility Adjustment – Water Valve (Revocable Item)	10	EA	\$	\$

TOTAL BASE BID: Items 1 through 24 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.

BID SCHEDULE

BID ALTERNATIVE #1 Replace Concrete Driveway Approach (38/40/42/44 Edwards)

BID ITEM NO.	ITEM DESCRIPTION	EST. QTY.	UNIT	UNIT COST	EXTENDED TOTAL AMOUNT
1a	Remove Pavement & Base	590	SF	\$	\$
1b	HMA (Type A)	18	TON	\$	\$

TOTAL BID ALTERNATIVE #1: Items 1a through 1b inclusive:
\$ _____

Note: The amount entered as the “Total Bid Alternative 1” should be identical to the Alternate #1 amount entered in Section 2 of the Bid Proposal form.

BID SCHEDULE

BID ALTERNATIVE #2 Replace Asphalt Driveway Approach (36 Edwards)

BID ITEM NO.	ITEM DESCRIPTION	EST. QTY.	UNIT	UNIT COST	EXTENDED TOTAL AMOUNT
2a	Asphalt Concrete Grinding/Milling	570	SF	\$	\$
2b	HMA (Type A)	13	TON	\$	\$

TOTAL BID ALTERNATIVE #2: Items 2a through 2b inclusive:
\$ _____

Note: The amount entered as the “Total Bid Alternative 2” should be identical to the Alternate #2 amount entered in Section 2 of the Bid Proposal form.

BID SCHEDULE

BID ALTERNATIVE #3 Replace Wooden Car Port

BID ITEM NO.	ITEM DESCRIPTION	EST. QTY.	UNIT	UNIT COST	EXTENDED TOTAL AMOUNT
3a	Mobilize/Demobilization	1	LS	\$	\$
3b	Construction Phasing and Traffic Control	1	LS	\$	\$
3c	Demolition (bracing, removals & disposals)	1	LS	\$	\$
3d	Soldier Piles	30	LF	\$	\$
3e	Concrete Retaining Walls	80	SF	\$	\$
3f	HMA (Type A)	11	TON	\$	\$

TOTAL BID ALTERNATIVE #3: Items 3a through 3f inclusive:

\$ _____

Note: The amount entered as the "Total Bid Alternative 3" should be identical to the Alternate #3 amount entered in Section 2 of the Bid Proposal form.

SUM TOTAL BASE BID PLUS BID ALTERNATES #1, #2 and #3:

\$ _____

BIDDER NAME: _____

END OF BID SCHEDULE

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 § 7106 and Title 23 U.S.C § 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].

s/ _____

Name [print]

END OF NONCOLLUSION DECLARATION

Bid Bond

_____ (“Bidder”) has submitted a bid, dated _____, 20____ (“Bid”), to City of Sausalito (“City”) for work on the 2023 Pavement Improvement 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 days following issuance of the Notice of Potential Award to Bidder, Bidder must submit to City the following:
 - 2.1 **Contract.** The executed Contract, using the form provided by City in the Project contract documents (“Contract Documents”);
 - 2.2 **Payment Bond.** A payment bond for 100% of the maximum Contract Price, executed by a surety licensed to do business in the State of California using the Payment Bond form included with the Contract Documents;
 - 2.3 **Performance Bond.** A performance bond for 100% of the maximum Contract Price, executed by a surety licensed to do business in the State of California using the Performance Bond form included with the Contract Documents; and
 - 2.4 **Insurance.** The insurance certificate(s) and endorsement(s) required by the Contract Documents, and any other documents required by the Instructions to Bidders or Notice of Potential Award.
3. **Enforcement.** If Bidder fails to execute the Contract and to submit the bonds and insurance certificates as required by the Contract Documents, 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: _____
4. **Duration and 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 60 days following the bid opening or until this Bid Bond is returned to Bidder, whichever occurs first. Surety waives the provisions of Civil Code §§ 2819 and 2845.

[Signatures are on the following page.]

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

SURETY:

Business Name

s/ _____

Date

Name, Title

(Attach Acknowledgment with Notary Seal and Power of Attorney)

BIDDER:

Business Name

s/ _____

Date

Name, Title

END OF BID BOND

Bidder's Questionnaire

2023 Pavement Improvement Project

Within 48 hours following a request by City, a bidder must submit to City a completed, signed Bidder's Questionnaire using this form and all required attachments, including clearly labeled additional sheets as needed. City may request the Questionnaire from one or more of the apparent low bidders following the bid opening, and may use the completed Questionnaire as part of its investigation to evaluate a bidder's qualifications for this Project. The Questionnaire must be filled out completely, accurately, and legibly. Any errors, omissions, or misrepresentations in completion of the Questionnaire may be grounds for rejection of the bid or termination of a Contract awarded pursuant to the bid.

Part A: General Information

Bidder Business Name: _____ ("Bidder")

Check One: Corporation (State of incorporation: _____)
 Partnership
 Sole Proprietorship
 Joint Venture of: _____
 Other: _____

Main Office Address and Phone: _____

Local Office Address and Phone: _____

Website address: _____

Owner of Business: _____

Contact Name and Title: _____

Contact Phone and Email: _____

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

Bidder's DIR Registration Number: _____

Part B: Bidder Experience

1. How many years has Bidder been in business under its present business name? _____ years
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 from a bid on grounds that it is not responsible, or otherwise disqualified or disbarred from bidding under state or federal law?
_____ Yes _____ No

If yes, provide additional information on a separate sheet regarding the disqualification or disbarment, including the name and address of the agency or owner of the project, the type and size of the project, the reasons that Bidder was disqualified or disbarred, and the month and year in which the disqualification or disbarment occurred.

4. Has Bidder ever been terminated for cause, alleged default, or legal violation from a construction project, either as a general contractor or as a subcontractor?
 _____ Yes _____ No

If yes, provide additional information on a separate sheet 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 past projects performed as general contractor as follows:

- 5.1 Six most recently completed public works projects within the last three years;
- 5.2 Three largest completed projects within the last three years; and
- 5.3 Any project which is similar to this Project including scope and character of the work.

6. Use separate sheets to provide all of the following information for each project identified in response to the above three categories:

- 6.1 Project name, location, and description;
- 6.2 Owner (name, address, email, and phone number);
- 6.3 Prime contractor, if applicable (name, address, email, and phone number);
- 6.4 Architect or engineer (name, email, and phone number);
- 6.5 Project and/or construction manager (name, email, and phone number);
- 6.6 Scope of work performed (as general or as subcontractor);
- 6.7 Initial contract price and final contract price (including change orders);
- 6.8 Original scheduled completion date and actual date of completion;
- 6.9 Time extensions granted (number of days);
- 6.10 Number and amount of stop notices or mechanic’s liens filed;
- 6.11 Amount of any liquidated damages assessed against Bidder; and
- 6.12 Nature and resolution of any project-related claim, lawsuit, mediation, or arbitration involving Bidder.

Part C: Safety

1. Provide Bidder’s Experience Modification Rate (EMR) for the last three years:

Year	EMR

2. Complete the following, based on information provided in Bidder’s CalOSHA Form 300 or Form 300A, Annual Summary of Work-Related Illnesses and Injuries, from the most recent past calendar year:

- 2.1 Number of lost workday cases: _____
- 2.2 Number of medical treatment cases: _____
- 2.3 Number of deaths: _____

3. Has Bidder ever been cited, fined, or prosecuted by any local, state, or federal agency, including OSHA, CalOSHA, or EPA, for violation of any law, regulation, or requirements pertaining to health and safety?

_____ Yes _____ No

If yes, provide additional information on a separate sheet regarding each such citation, fine, or prosecution, including the name and address of the agency or owner of the project, the type and size of the project, the reasons for and nature of the citation, fine, or prosecution, and the month and year in which the incident giving rise to the citation, fine, or prosecution occurred.

4. Name, title, and email for person responsible for Bidder's safety program:

Name	Title	Email

Part D: Verification

In signing this document, I, the undersigned, declare that I am duly authorized to sign and submit this Bidder's Questionnaire on behalf of the named Bidder, and that all responses and information set forth in this Bidder's Questionnaire and accompanying 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

END OF BIDDER'S QUESTIONNAIRE

Contract

This public works contract ("Contract") is entered into by and between City of Sausalito ("City") and _____ ("Contractor"), for work on the 2023 Pavement Improvement 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 the Work to construct the Project. On _____, 20____, City authorized award of this Contract to Contractor for the amount set forth in Section 4, below.
2. **Contract Documents.** The Contract Documents incorporated into this Contract include and are comprised of all of the documents listed below. The definitions provided in Article 1 of the General Conditions apply to all of the Contract Documents, including this Contract.
 - 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;
 - 2.6 Payment and Performance Bonds;
 - 2.7 General Conditions;
 - 2.8 Special Conditions;
 - 2.9 Project Plans and Specifications;
 - 2.10 Change Orders, if any;
 - 2.11 Notice of Potential Award;
 - 2.12 Notice to Proceed; and
 - 2.13 The following: No other documents.
3. **Contractor's Obligations.** Contractor will 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, supplies, tools, equipment, transportation, onsite facilities, and utilities, unless otherwise specified in the Contract Documents. Contractor must use its best efforts to diligently prosecute and 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") for all of Contractor's direct and indirect costs to perform the Work, including all labor, materials, supplies, equipment, taxes, insurance, bonds and all overhead costs, in accordance with the payment provisions in the General Conditions.
5. **Time for Completion.** Contractor will fully complete the Work for the Project, meeting all requirements for Final Completion, within 84 calendar days from the commencement date given in the Notice to Proceed ("Contract Time"). By signing below, Contractor expressly waives any claim for delayed early completion.
6. **Liquidated Damages.** As further specified in Section 5.4 of the General Conditions, if Contractor fails to complete the Work within the Contract Time, City will assess liquidated damages in the amount of \$1,500 per day for each day of unexcused delay in achieving

Final Completion, and such liquidated damages may be deducted from City's payments due or to become due to Contractor under this Contract.

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, as further specified in Article 9 of the General Conditions.

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 may 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 pursuant to Labor Code § 1725.5, subject to limited legal exceptions.

8. Workers' Compensation Certification. Pursuant to Labor Code § 1861, by signing this Contract, Contractor certifies as follows: "I am aware of the provisions of Labor Code § 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 conflict of interest in relation to this Contract in violation of any City ordinance or requirement, or in violation of any California law, including Government Code § 1090 et seq., or the Political Reform Act, as set forth in Government Code § 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 means and methods by 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 or pursuant to the Contract Documents must be made in writing, signed, dated and sent to the other party by personal delivery, U.S. Mail, a reliable overnight delivery service, or by email as a PDF file. Notice is deemed effective upon delivery, except that service by U.S. Mail is deemed effective on the second working day after deposit for delivery. Notice for each party must be given as follows:

City:

Andrew Davidson
Senior Engineer
420 Litho St
Sausalito, CA 94965
adavidson@sausalito.gov

Copy to:
Kevin McGowan
Director of Public Works
kmcgowan@sausalito.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 and City’s lawful heirs, successors and permitted assigns.
- 12.2 Third Party Beneficiaries.** There are no intended third party beneficiaries to this Contract.
- 12.3 Governing Law and Venue.** This Contract will be governed by California law and venue will be in the Marin County Superior Court, and no other place. Contractor waives any right it may have pursuant to Code of Civil Procedure § 394, to file a motion to transfer any action arising from or relating to this Contract to a venue outside of Marin County, California.
- 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.** 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.
- 12.6 Severability.** If any provision of the Contract Documents is determined to be illegal, invalid, or unenforceable, in whole or in part, the remaining provisions of the Contract Documents will remain in full force and effect.
- 12.7 Iran Contracting Act.** If the Contract Price exceeds \$1,000,000, Contractor certifies, by signing below, that it is not identified on a list created under the Iran Contracting Act, Public Contract Code § 2200 et seq. (the “Act”), as a person engaging in investment activities in Iran, as defined in the Act, or is otherwise expressly exempt under the Act.
- 12.8 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 § 313.

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

CITY:

Approved as to form:

s/ _____

s/ _____

Name, Title

Name, Title

Date: _____

Date: _____

Attest:

s/ _____

Name, Title

Date: _____

CONTRACTOR: _____
Business Name

s/ _____

Seal:

Name, Title

Date: _____

Second Signature (See Section 12.8):

s/ _____

Name, Title

Date: _____

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

END OF CONTRACT

Payment Bond

City of Sausalito ("City") and _____ ("Contractor") have entered into a contract for work on the 2023 Pavement Improvement 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 § 9550 et seq., to ensure payment to authorized claimants. This Bond is binding on the respective successors, assigns, owners, heirs, or executors of Surety and Contractor.
- 2. Surety's Obligation.** If Contractor or any of its Subcontractors fails to pay a person authorized in California Civil Code § 9100 to assert a claim against a payment bond, any amounts due under the Unemployment Insurance Code with respect to work or labor performed under the Contract, or 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 § 13020 with respect to the work and labor, then Surety will pay the obligation.
- 3. Beneficiaries.** This Bond inures to the benefit of any of the persons named in California Civil Code § 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 §§ 2819 and 2845. City waives the requirement of a new bond for any supplemental contract under Civil Code § 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: _____
Email: _____

- 6. Law and Venue.** This Bond will be governed by California law, and venue for any dispute pursuant to this Bond will be in the Marin County Superior Court, 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.

[Signatures are on the following page.]

7. **Effective Date; Execution.** This Bond is entered into and is effective on _____,
20__.

SURETY:

Business Name

s/ _____

Date

Name, Title

(Attach Acknowledgment with Notary Seal and Power of Attorney)

CONTRACTOR:

Business Name

s/ _____

Date

Name, Title

APPROVED BY CITY:

s/ _____

Date

Name, Title

END OF PAYMENT BOND

Performance Bond

City of Sausalito ("City") and _____ ("Contractor") have entered into a contract for work on the 2023 Pavement Improvement 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 \$_____ to ensure Contractor's faithful performance of its obligations under the Contract. This Bond is binding on the respective successors, assigns, owners, heirs, or executors of Surety and Contractor.
2. **Surety's Obligations.** Surety's obligations are co-extensive with Contractor's obligations under the Contract. 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. Otherwise, Surety's obligations will remain in full force and effect.
3. **Waiver.** 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 §§ 2819 and 2845.
4. **Application of Contract Balance.** Upon making a demand on this Bond for completion of the Work prior to acceptance of the Project, 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.
5. **Contractor Default.** Upon written notification from City of Contractor's termination for default under Article 13 of the Contract General Conditions, time being of the essence, Surety must act within the time specified in Article 13 to remedy the default through one of the following courses of action:
 - 5.1 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;
 - 5.2 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
 - 5.3 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.
6. **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.
7. **Notice.** Any notice to Surety may be given in the manner specified in the Contract and sent to Surety as follows:

Attn: _____

Address: _____

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

8. **Law and Venue.** This Bond will be governed by California law, and venue for any dispute pursuant to this Bond will be in the Marin County Superior Court, 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.
9. **Effective Date; Execution.** This Bond is entered into and effective on _____, 20____.

SURETY:

Business Name

s/ _____

Date

Name, Title

(Attach Acknowledgment with Notary Seal and Power of Attorney)

CONTRACTOR:

Business Name

s/ _____

Date

Name, Title

APPROVED BY CITY:

s/ _____

Date

Name, Title

END OF PERFORMANCE BOND

General Conditions

Article 1 - Definitions

Definitions. The following definitions apply to all of the Contract Documents unless otherwise indicated, e.g., additional definitions that apply solely to the Specifications or other technical documents. Defined terms and titles of documents are capitalized in the Contract Documents, with the exception of the following (in any tense or form): “day,” “furnish,” “including,” “install,” “work day” or “working day.”

Allowance means a specific amount that must be included in the Bid Proposal for a specified purpose.

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 municipality which has entered into the Contract with Contractor for performance of the Work, 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).

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 for performing the Work required for the Project, and all documents expressly incorporated therein.

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 Potential Award and Notice to Proceed; the payment and performance bonds; the General Conditions; the Special Conditions; the Project Plans and Specifications; any Change Orders; and any other documents which are clearly and unambiguously made part of the Contract Documents. The Contract Documents do not include documents provided “For Reference Only,” or documents that are intended solely to provide information regarding existing conditions.

Contract Price means the total compensation to be paid to Contractor for performance of the Work, as set forth in the Contract and as may be 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, supplies or equipment following submission of the Bid Proposal.

Contract Time means the time specified for complete performance of the Work, as set forth in the Contract and as may be amended by Change Order.

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

Day means a calendar day unless otherwise specified.

Design Professional means the licensed individual(s) or firm(s) retained by City to provide architectural, engineering, or electrical engineering design 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.

DIR means the California Department of Industrial Relations.

Drawings has the same meaning as Plans.

Engineer means the City Engineer for the City of Sausalito and his or her authorized delegates.

Excusable Delay is defined in Section 5.3(B), Excusable Delay.

Extra Work means new or unforeseen work added to the Project, as determined by the Engineer in his or her sole discretion, including Work that was not part of or incidental to the scope of the Work when the Contractor's bid was submitted; Work that is substantially different from the Work as described in the Contract Documents at bid time; or Work that results from a substantially differing and unforeseeable condition.

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

Final Payment means payment to Contractor of the unpaid Contract Price, including release of undisputed retention, less amounts withheld or deducted pursuant to the Contract Documents.

Furnish means to purchase and deliver for the Project.

Government Code Claim means a claim submitted pursuant to California Government Code § 900 et seq.

Hazardous Materials means any substance or material identified now or in the future as hazardous under any Laws, or any other substance or material that may be considered hazardous or otherwise subject to Laws governing handling, disposal, or cleanup.

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

Inspector means the individual(s) or firm(s) retained or employed 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 Laws.

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

Laws means all applicable local, state, and federal laws, regulations, rules, codes, ordinances, permits, orders, and the like enacted or imposed by or under the auspices of any governmental entity with jurisdiction over any of the Work or any performance of the Work, including health and safety requirements.

Non-Excusable Delay is defined in Section 5.3(D), Non-Excusable Delay.

Plans means the City-provided plans, drawings, details, or graphical depictions of the Project requirements, but does not include Shop 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 unavailable. If no Project Manager has been designated for this Project, any reference to Project Manager is deemed to refer to the Engineer.

Recoverable Costs is defined in Section 5.3(F), Recoverable Costs.

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

Section, when capitalized in these General Conditions, means a numbered section or subsection of the General Conditions, unless the context clearly indicates otherwise.

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

Specialty Work means Work that must be performed by a specialized Subcontractor with the specified license or other special certification, and that the Contractor is not qualified to self-perform.

Specifications means the technical, text specifications describing the Project requirements, which are prepared for and incorporated into the Contract 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 of all tiers, unless otherwise indicated by the context. A third party such as a utility performing related work on the Project is not a Subcontractor, even if Contractor must coordinate its Work with the third party.

Technical Specifications has the same meaning as Specifications.

Work means all of the construction and services necessary for 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 when the City is open for business, and does not include holidays observed by the City.

Worksite means the place or places where the Work is performed, which includes, but may extend beyond the Project site, including separate locations for staging, storage, or fabrication.

Article 2 - Roles and Responsibilities

2.1 City.

(A) **City Council.** The City Council has final authority in all matters affecting the Project, except to the extent it has delegated authority to the Engineer.

(B) **Engineer.** The Engineer, acting within the authority conferred by the City Council, is responsible for administration of the Project on behalf of City, including authority to provide directions to the Design Professional and to Contractor to ensure proper and timely completion of the Project. The Engineer's decisions are final and

conclusive within the scope of his or her authority, including interpretation of the Contract Documents.

(C) **Project Manager.** The Project Manager assigned to the Project will be the primary point of contact for the Contractor and will serve as City's representative for daily administration of the Project on behalf of City. Unless otherwise specified, all of Contractor's communications to City (in any form) will go to or through the Project Manager. City reserves the right to reassign the Project Manager role at any time or to delegate duties to additional City representatives, without prior notice to or consent of Contractor.

(D) **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 Plans and Specifications, including any design changes authorized by Change Order. The Design Professional's duties may include review of Contractor's submittals, visits to any Worksite, inspecting the Work, evaluating test and inspection results, and participation in Project-related meetings, including any pre-construction conference, weekly meetings, and coordination meetings. The Design Professional's interpretation of the Plans or Specifications is final and conclusive.

2.2 Contractor.

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

(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, safety precautions and programs, 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. Contractor's responsibilities extend to any plan, method or sequence suggested, but not required by City or specified in the Contract Documents. 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 any Worksite, 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, 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 superintendent must have full authority to act and communicate on behalf of Contractor, and Contractor will be bound by the

superintendent's communications to City. 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 an 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) **Standards.** Contractor must, at all times, ensure that the Work is performed in an efficient, skillful manner following best practices and in full compliance with the Contract Documents and Laws and applicable manufacturer's recommendations. Contractor has a material and ongoing obligation to provide true and complete information, to the best of its knowledge, with respect to all records, documents, or communications pertaining to the Project, including oral or written reports, statements, certifications, Change Order requests, or Claims.

(F) **Meetings.** Contractor, its project manager, superintendent and any primary Subcontractors requested by City, must attend a pre-construction conference, if requested by City, as well as weekly Project progress meetings scheduled with City. If applicable, Contractor may also be required to participate in coordination meetings with other parties relating to other work being performed on or near the Project site or in relation to the Project, including work or activities performed by City, other contractors, or other utility owners.

(G) **Construction Records.** Contractor will maintain up-to-date, thorough, legible, and dated daily job reports, which document all significant activity on the Project for each day that Work is performed on the Project. The daily report for each day must include the number of workers at the Project site; primary Work activities; major deliveries; problems encountered, including injuries, if any; weather and site conditions; and delays, if any. Contractor will take date and time-stamped photographs to document general progress of the Project, including site conditions prior to construction activities, before and after photographs at offset trench laterals, existing improvements and utilities, damage and restoration. Contractor will maintain copies of all subcontracts, Project-related correspondence with Subcontractors, and records of meetings with Subcontractors. Upon request by the City, Contractor will permit review of and/or provide copies of any of these construction records.

(H) **Responsible Party.** Contractor is solely responsible to City for the acts or omissions of any Subcontractors, 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. Upon City's written request, Contractor must promptly and permanently remove from the Project, at no cost to City, any employee or Subcontractor or employee of a Subcontractor who the Engineer has determined 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 any way, including workmanship, materials, parts or equipment. Workmanship, materials, parts or equipment that do not conform to the requirements under the Plans, 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. If Contractor fails to correct or to take reasonable steps toward correcting defective Work within five days following notice from City, or within the time specified in City's notice to correct, City

may elect to have the defective Work corrected by its own forces or by a third party, in which case the cost of correction will be deducted from the Contract Price. If City elects to correct defective Work due to Contractor's failure or refusal to do so, City or its agents will have the right to take possession of and use any equipment, supplies, or materials available at the Project site or any Worksite on City property, in order to effectuate the correction, at no extra cost to City. Contractor's warranty obligations under Section 11.2, Warranty, will not be waived nor limited by City's actions to correct defective Work under these circumstances. Alternatively, City may elect to retain defective Work, and deduct the difference in value, as determined by the Engineer, from payments otherwise due to Contractor. This paragraph applies to any defective Work performed by Contractor during the one-year warranty period under Section 11.2.

(J) **Contractor's Records.** Contractor must maintain all of its records relating to the Project in any form, including paper documents, photos, videos, electronic records, approved samples, and the construction records required pursuant to paragraph (G), above. Project records subject to this provision include complete Project cost records and records relating to preparation of Contractor's bid, including estimates, take-offs, and price quotes or bids.

(1) Contractor's cost records must include all supporting documentation, including original 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-related records in an organized manner for a period of five 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 during Contractor's normal business hours. The record-keeping requirements set forth in this subsection 2.2(J) will survive expiration or termination of the Contract.

(K) **Copies of Project Documents.** Contractor and its Subcontractors must keep copies, at the Project site, of all Work-related documents, including the Contract, permit(s), Plans, Specifications, Addenda, Contract amendments, Change Orders, RFIs and RFI responses, Shop Drawings, as-built drawings, schedules, daily records, testing and inspection reports or results, and any related written interpretations. These documents must be available to City for reference at all times during construction of the Project.

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, for reasons including the subcontractor's poor reputation, lack of relevant experience, financial instability, and lack of technical ability or adequate trained workforce. Each Subcontractor must obtain a City business license before performing any Work.

(B) **Contractual Obligations.** Contractor must require each Subcontractor to comply with the provisions of the Contract Documents as they apply to the Subcontractor's portion(s) of the Work, including the generally applicable terms of the Contract Documents, and to likewise bind their subcontractors. Contractor will provide that the rights that each Subcontractor may have against any manufacturer or supplier for breach of warranty or guarantee relating to items provided by the Subcontractor for the Project, will be assigned to City. 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, but only if and to the extent that City accepts, in writing, 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 § 4107, Contractor is solely responsible for all costs City incurs in responding to the request, including legal fees and costs to conduct a hearing, and any increased subcontract cost to perform the Work that was to be performed by the listed Subcontractor. If City determines that a Subcontractor is unacceptable to City based on the Subcontractor's failure to satisfactorily perform its Work, or for any of the grounds for substitution listed in Public Contract Code § 4107(a), City may request removal of the Subcontractor from the Project. Upon receipt of a written request from City to remove a Subcontractor pursuant to this paragraph, Contractor will immediately remove the Subcontractor from the Project and, at no further cost to City, will either (1) self-perform the remaining Work to the extent that Contractor is duly licensed and qualified to do so, or (2) substitute a Subcontractor that is acceptable to City, in compliance with Public Contract Code § 4107, as applicable.

2.4 Coordination of Work.

(A) **Concurrent Work.** City reserves the right to perform, have performed, or permit performance of other work on or adjacent to the Project site while the Work is being performed for the Project. 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, individuals, or entities, and must ensure safe and reasonable site access and use as required or authorized by City. 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) **Coordination.** If Contractor's Work will connect or interface with work performed by others, Contractor is responsible for independently measuring and visually inspecting such work to ensure a correct connection and interface. Contractor is responsible for any failure by Contractor or its Subcontractors to confirm measurements before proceeding with connecting Work. 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 known or reasonably discoverable 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. Contractor must also promptly notify City if work performed by others, including work or activities performed by City's own forces, is operating to hinder, delay, or interfere with Contractor's timely

performance of the Work. City reserves the right to backcharge Contractor for any additional costs incurred due to Contractor's failure to comply with the requirements in this Section 2.4.

2.5 Submittals. Unless otherwise specified, Contractor must submit to the Engineer for review and acceptance, all schedules, Shop Drawings, samples, product data, and similar submittals required by the Contract Documents, or upon request by the Engineer. Unless otherwise specified, all submittals, including Requests for Information, are subject to the general provisions of this Section, as well as specific submittal requirements that may be included elsewhere in the Contract Documents, including the Special Conditions or Specifications. The Engineer may require submission of a submittal schedule at or before a pre-construction conference, as may be specified in the Notice to Proceed.

(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 City-accepted schedule for the Work and within the applicable time specified 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.

(C) **Required Contents.** Each submittal must 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 corrections are required, Contractor must promptly make and submit any required corrections as specified in full conformance with the requirements of this Section, or other requirements that apply to that submittal.

(E) **Effect of Review and Acceptance.** Review and acceptance of a submittal 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 or acceptance of a submittal by City is not an assumption of risk or liability by City.

(F) **Enforcement.** Any Work performed or any material furnished, installed, fabricated or used without City's prior acceptance of a required submittal is performed or provided 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 or material, 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 RFI will be considered excessive or unnecessary if City determines that the explanation or response to the RFI is clearly and unambiguously discernable from the Contract Documents. City's costs to review and respond to excessive or unnecessary RFIs may be deducted from payments otherwise due to Contractor.

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 clearly show all necessary details. Unless otherwise specified by City, Shop Drawings must be provided to the Engineer for review and acceptance at least 30 days before the Work will be performed. If City requires changes, the corrected Shop Drawings must be resubmitted to the Engineer for review within the time specified by the Engineer. For all Project components

requiring Shop Drawings, Contractor will not furnish materials or perform any Work until the Shop Drawings for those components are accepted by City. Contractor is responsible for any errors or 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. Acceptance of Shop Drawings by City does not relieve Contractor of Contractor's responsibility.

- 2.7 Access to Work.** Contractor must afford prompt and safe access to any Worksite by City and its employees, agents, or consultants authorized by City; and upon request by City, Contractor must promptly arrange for City representatives to visit or inspect manufacturing sites or fabrication facilities for items to be incorporated into the Work.
- 2.8 Personnel.** Contractor and its Subcontractors must employ only competent and skillful personnel to perform the Work. Contractor and its Subcontractor's supervisors, security or safety personnel, and employees who have unescorted access to the Project site must possess proficiency in English sufficient to read, understand, receive, and implement oral or written communications or instructions relating to their respective job functions, including safety and security requirements. Upon written notification from the Engineer, Contractor and its Subcontractors must immediately discharge any personnel who are incompetent, disorderly, disruptive, threatening, abusive, or profane, or otherwise refuse or fail to comply with the requirements of the Contract Documents or Laws, including Laws pertaining to health and safety. Any such discharged personnel may not be re-employed or permitted on the Project in any capacity without City's prior written consent.

Article 3 - Contract Documents

3.1 Interpretation of Contract Documents.

(A) **Plans and Specifications.** The Plans 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 Plans 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 Plans and Specifications, the Specifications will control, unless the drawing(s) at issue are dated later than the Specification(s) at issue. Detailed drawings take precedence over general drawings, and large-scale drawings take precedence over smaller scale drawings. 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.

(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 the Plans or Specifications, Contractor must promptly submit a Request for Information to the Engineer and wait for a response from City before proceeding further with the related Work. The RFI 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. Timely submission of a clear and complete RFI is essential to avoiding delay. Delay resulting from Contractor's failure to submit a timely and complete RFI to the Engineer is Non-Excusable Delay. If Contractor believes that City's response to an RFI justifies a change to the Contract Price or Contract Time, Contractor must perform the Work as directed, but may submit a timely Change Order request in accordance with the Contract Documents. (See Article 5 and 6.)

(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 in the Contract Documents and at the Project site before ordering any material or performing any Work, and will be responsible for the correctness of those measurements or for costs that could have been avoided by independently verifying measurements.

(F) **Compliance with Laws.** The Contract Documents are intended to comply with Laws and will be interpreted to comply with Laws.

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, with the most recent version taking precedent over an earlier version:

- (A) Change Orders;
- (B) Addenda;
- (C) Contract;
- (D) Notice to Proceed;
- (E) Attachment B – Federal Contract Requirements (only if used);
- (F) Special Conditions;
- (G) General Conditions;
- (H) Payment and Performance Bonds;
- (I) Specifications;
- (J) Plans;
- (K) Notice of Potential Award;
- (L) Notice Inviting Bids;
- (M) Attachment A – Federal Bidding Requirements (only if used);
- (N) Instructions to Bidders;
- (O) Contractor's Bid Proposal and attachments;
- (P) the City's standard specifications, as applicable; and
- (Q) Any generic documents prepared by and on behalf of a third party, that were not prepared specifically for this Project, such as the Caltrans Standard Specifications or Caltrans Special Provisions.

3.3 Caltrans Standard Specifications. Any reference 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 ("Caltrans 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 Caltrans Standard Specifications or Special Provisions:

(A) **Limitations.** The “General Provisions” of the Caltrans Standard Specifications, i.e., sections 1 through 9, do not apply 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 Caltrans Standard Specifications or Special Provisions 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 are expressly included in the Contract Documents listed in 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 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 provided For Reference Only.

3.5 Current Versions. Unless otherwise specified by City, any reference to standard specifications, technical specifications, or any City or state codes or regulations means the latest specification, code or regulation in effect at the time the Contract is signed.

3.6 Conformed Copies. If City prepares a conformed set of the Contract Documents following award of the Contract, it will provide Contractor with two hard copy (paper) sets and one copy of the electronic file in PDF format. It is Contractor’s responsibility to ensure that all Subcontractors, including fabricators, are provided with the conformed set of the Contract Documents at Contractor’s sole expense.

3.7 Ownership. No portion of the Contract Documents may be used for any purpose other than construction of the Project, without prior written consent from City. Contractor is deemed to have conveyed the copyright in any designs, drawings, specifications, Shop Drawings, or other documents (in paper or electronic form) developed by Contractor for the Project, and City will retain all rights to such works, including the right to possession.

Article 4 - Bonds, Indemnity, and Insurance

4.1 Payment and Performance Bonds. Within ten days following issuance of the Notice of Potential 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, and each

executed by Contractor and its surety using the bond forms included with the Contract Documents.

(A) **Surety.** Each bond must be issued and executed 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 must 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, its Council, officers, officials, employees, agents, volunteers, and consultants (individually, an "Indemnitee," and collectively the "Indemnitees") from and against any and all liability, loss, damage, claims, causes of action, demands, charges, fines, costs, and 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, its employees, Subcontractors, representatives, or agents, 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 § 9201. Contractor waives any right to express or implied indemnity against any Indemnitee. 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 Potential Award, Contractor must procure and provide proof of the insurance coverage required by this Section in the form of certificates and endorsements acceptable to City. The required insurance must cover the activities of Contractor and its Subcontractors relating to or arising from the performance of the Work, and must remain in full force and effect at all times during the period covered by the Contract, through the date of City's acceptance of the Project. All required insurance must be issued by a company 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 "VIII" or better. If Contractor fails to provide any of the required coverage in full compliance with the requirements of the Contract Documents, City may, at its sole discretion, purchase such coverage at Contractor's expense and deduct the cost from payments due to Contractor, or terminate the Contract for default. The procurement of the required insurance will not be construed to limit Contractor's liability under this Contract or to fulfill Contractor's indemnification obligations under this Contract.

(A) **Policies and Limits.** The following insurance policies and limits are required for this Contract, unless otherwise specified in the Special Conditions:

(1) *Commercial General Liability ("CGL") Insurance:* The CGL insurance policy must be issued on an occurrence basis, written on a comprehensive general

liability form, and must include coverage for liability arising from Contractor's or its Subcontractor's acts or omissions in the performance of the Work, including contractor's protected coverage, contractual liability, products and completed operations, and broad form property damage, with limits of at least \$2,000,000 per occurrence and at least \$4,000,000 general aggregate. The CGL insurance coverage may be arranged under a single policy for the full limits required or by a combination of underlying policies with the balance provided by excess or umbrella policies, provided each such policy complies with the requirements set forth in this Section, including required endorsements.

(2) *Automobile Liability Insurance*: The automobile liability insurance policy must provide coverage of at least \$2,000,000 combined single-limit per accident for bodily injury, death, or property damage, including hired and non-owned auto liability.

(3) *Workers' Compensation Insurance and Employer's Liability*: The workers' compensation and employer's liability insurance policy must comply with the requirements of the California Labor Code, providing coverage of at least \$1,000,000 or as otherwise required by the statute. If Contractor is self-insured, Contractor must provide its Certificate of Permission to Self-Insure, duly authorized by the DIR.

(4) *Pollution Liability Insurance*: The pollution liability insurance policy must be issued on an occurrence basis, providing coverage of at least \$2,000,000 for all loss arising out of claims for bodily injury, death, property damage, or environmental damage caused by pollution conditions resulting from the Work.

(5) *Builder's Risk Insurance*: The builder's risk insurance policy must be issued on an occurrence basis, for all-risk or "all perils" coverage on a 100% completed value basis on the insurable portion of the Project for the benefit of City.

(B) **Notice**. Each certificate of insurance must state that the coverage afforded by the policy or policies will not be reduced, cancelled or allowed to expire without at least 30 days written notice to City, unless due to non-payment of premiums, in which case ten days written notice must be made to City.

(C) **Waiver of Subrogation**. Each required policy must include an endorsement providing that the carrier will waive any right of subrogation it may have against City.

(D) **Required Endorsements**. The CGL policy, automobile liability policy, pollution liability policy, and builder's risk policy must include the following specific endorsements:

(1) The City, including its Council, officials, officers, employees, agents, volunteers and consultants (collectively, "Additional Insured") must be named as an additional insured for all liability arising out of the operations by or on behalf of the named insured, and the policy must protect the Additional Insured against any and all liability for personal injury, death or property damage or destruction arising directly or indirectly in the performance of the Contract. The additional insured endorsement must be provided using ISO form CG 20 10 11 85 or an equivalent form approved by the City.

(2) 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.

(3) The insurance provided by Contractor is primary and no insurance held or owned by any Additional Insured may be called upon to contribute to a loss.

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

(E) **Contractor's Responsibilities.** This Section 4.3 establishes the minimum requirements for Contractor's insurance coverage in relation to this Project, but is not intended to limit Contractor's ability to procure additional or greater coverage. Contractor is responsible for its own risk assessment and needs and is encouraged to consult its insurance provider to determine what coverage it may wish to carry beyond the minimum requirements of this Section. Contractor is solely responsible for the cost of its insurance coverage, including premium payments, deductibles, or self-insured retentions, and no Additional Insured will be responsible or liable for any of the cost of Contractor's insurance coverage.

(F) **Deductibles and Self-Insured Retentions.** Any deductibles or self-insured retentions that apply to the required insurance (collectively, "deductibles") in excess of \$100,000 are subject to approval by the City's Risk Manager, acting in his or her sole discretion, and must be declared by Contractor when it submits its certificates of insurance and endorsements pursuant to this Section 4.3. If the City's Risk Manager determines that the deductibles are unacceptably high, at City's option, Contractor must either reduce or eliminate the deductibles as they apply to City and all required Additional Insured; or must provide a financial guarantee, to City's satisfaction, guaranteeing payment of losses and related investigation, claim administration, and legal expenses.

(G) **Subcontractors.** Contractor must ensure that each Subcontractor is required to maintain the same insurance coverage required under this Section 4.3, with respect to its performance of Work on the Project, including those requirements related to the Additional Insureds and waiver of subrogation, but excluding pollution liability or builder's risk insurance unless otherwise specified in the Special Conditions. A Subcontractor may be eligible for reduced insurance coverage or limits, but only to the extent approved in writing in advance by the City's Risk Manager. Contractor must confirm that each Subcontractor has complied with these insurance requirements before the Subcontractor is permitted to begin Work on the Project. Upon request by the City, Contractor must provide certificates and endorsements submitted by each Subcontractor to prove compliance with this requirement. The insurance requirements for Subcontractors do not replace or limit the Contractor's insurance obligations.

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. Contractor may not begin performing the Work before the date specified in the Notice to Proceed.

(B) **Authorization.** Contractor is not entitled to compensation or credit for any Work performed before the date specified in the Notice to Proceed, with the exception of any schedules, submittals, or other requirements, if any, that must be provided or performed before issuance of the Notice to Proceed.

(C) **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. Contractor must prepare all schedules using standard, commercial scheduling software acceptable to the Engineer, and must provide the schedules in electronic and paper form as requested by the Engineer. In addition to the general scheduling requirements set forth below, Contractor must also comply with any scheduling requirements included in the Special Conditions or in the Technical Specifications.

(A) **Baseline (As-Planned) Schedule.** Within ten calendar days following City's issuance of the Notice to Proceed (or as otherwise specified in the Notice to Proceed), Contractor must submit to City for review and acceptance a baseline (as-planned) schedule using critical path methodology showing in detail how Contractor plans to perform and fully complete the Work within the Contract Time, including labor, equipment, materials and fabricated items. 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, and the duration of the activity.

(1) **Specialized Materials Ordering.** Within five calendar days following issuance of the Notice to Proceed, Contractor must order any specialized material or equipment for the Work that is not readily available from material suppliers. Contractor must also retain documentation of the purchase order date(s).

(B) **City's Review of Schedules.** City will review and may note 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 noted in a schedule and, within seven days, must correct the schedule to address the exceptions. City's review or acceptance of Contractor's schedules will not operate to waive or limit Contractor's duty to complete the Project within the Contract Time, nor to waive or limit City's right to assess liquidated damages for Contractor's unexcused failure to do so.

(C) **Progress Schedules.** After City accepts the final baseline schedule with no exceptions, Contractor must submit an updated progress schedule and three-week look-ahead schedule, in the format specified by City, for review and acceptance 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 construction schedule or 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 may be allocated by the Engineer to best serve timely completion of the Project.

(2) *Failure to Submit Schedule.* Reliable, up-to-date schedules are essential to efficient and cost-effective administration of the Project and timely completion. 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 up to ten percent from payment(s) otherwise due to Contractor until the exceptions are resolved, the schedule is corrected and resubmitted, and City has accepted the schedule. In addition, Contractor's failure to comply with the schedule requirements in this Section 5.2 will be deemed a material default and a waiver of any claims for Excusable Delay or loss of productivity arising during any period when Contractor is out of compliance, subject only to the limits of Public Contract Code § 7102.

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

(E) **Effect of Acceptance.** Contractor and its Subcontractors must perform the Work in accordance with the most current City-accepted schedule unless otherwise directed by City. City's acceptance 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 a copy of the most current City-accepted progress or recovery schedule in its on-site office.

(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, during City's normal business hours, 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.

5.3 Delay and Extensions of Contract Time.

(A) **Notice of Delay.** If Contractor becomes aware of any actual or potential delay affecting the critical path, Contractor must promptly notify the Engineer in writing, regardless of the nature or cause of the delay, so that City has a reasonable opportunity to mitigate or avoid the delay.

(B) **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, provided that Contractor is otherwise fully performing its obligations under the Contract Documents. 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. The Contract Time will not be extended based on circumstances which will not unavoidably delay completing the Work within the Contract Time based on critical path analysis.

(C) **Weather Delays.** 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 Project site 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. Contractor will be entitled to a non-compensable extension of the Contract Time for each Weather Delay Day in excess of the normal Weather Delay Days within a given month as determined by reliable records, including monthly rainfall averages, for the preceding ten years (or as otherwise specified in the Special Conditions or Specifications).

(1) Contractor must fully comply with the applicable procedures in Articles 5 and 6 of the General Conditions regarding requests to modify the Contract Time.

(2) Contractor will not be entitled to an extension of time for a Weather Delay Day to the extent Contractor is responsible for concurrent delay on that day.

(3) Contractor must take reasonable steps to mitigate the consequences of Weather Delay Days, including prudent workforce management and protecting the Work, Project Site, materials, and equipment.

(D) **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;

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

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

- (4) foreseeable conditions which Contractor could have ascertained from reasonably diligent inspection of the Project site or review of the Contract Documents or other information provided or available to Contractor;
- (5) Contractor's failure, refusal, or financial inability to perform the Work within the Contract Time, including insufficient funds to pay its Subcontractors or suppliers;
- (6) performance or non-performance by Contractor's Subcontractors or suppliers;
- (7) the time required to respond to excessive RFIs (see Section 2.5(G));
- (8) delayed submission of required submittals, or the time required for correction and resubmission of defective submittals;
- (9) time required for repair of, re-testing, or re-inspection of defective Work;
- (10) enforcement of Laws by City, or outside agencies with jurisdiction over the Work; or
- (11) City's exercise or enforcement of any of its rights or Contractor's duties pursuant to the Contract Documents, including correction of defective Work, extra inspections or testing due to non-compliance with Contract requirements, safety compliance, environmental compliance, or rejection and return of defective or deficient submittals.

(E) **Compensable Delay.** Pursuant to Public Contract Code § 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. Delay due to causes that are beyond the control of either City or Contractor, including Weather Delay Days, discovery of Historic or Archeological Items pursuant to Section 7.18, or the actions or inactions of third parties or other agencies, is not Compensable Delay, and will only entitle Contractor to an extension of time commensurate with the time lost due to such delay.

(F) **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 accepted by City. Recoverable Costs will not include home office overhead or lost profit.

(G) **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 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 days, if any, by which an Excusable Delay or a Compensable Delay exceeds any concurrent Non-Excusable Delay. Contractor is entitled to an extension of Contract Time, or compensation for Recoverable Costs, 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: the delay was an Excusable or Compensable Delay, as defined above; Contractor has fully complied with its scheduling obligations in Section 5.2, Schedule Requirements; Contractor has made reasonable efforts to mitigate the delay and its schedule and cost impacts; the delay will unavoidably result in delaying Final Completion; and 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 § 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 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. 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 § 7203, if Contractor fails to achieve Final Completion within the Contract Time due to Contractor's Non-Excusable Delay, City will charge Contractor in the amount specified in the Contract for each calendar day that Final Completion is delayed beyond the Contract Time, as liquidated damages and not as a penalty. Any waiver of accrued liquidated damages, in whole or in part, is subject to approval of the City Council or its authorized delegee.

(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.

(C) **Setoff.** City is entitled to deduct the amount of liquidated damages assessed against any payments otherwise due to Contractor, including progress payments, Final Payment, or 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) **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 damage, including damage to property or persons, costs or diminution in value from defective materials or workmanship, costs to repair or complete the Work, or other liability caused by Contractor.

Article 6 - Contract Modification

6.1 Contract Modification. Subject to the limited exception set forth in subsection (D) below, any change in the Work or the Contract Documents, including the Contract Price or Contract Time, will not be a valid and binding change to the Contract unless it is formalized in a Change Order, including a "no-cost" Change Order or a unilateral Change Order. Changes in the Work pursuant to this Article 6 will not operate to release, limit, or abridge Contractor's warranty obligations pursuant to Article 11 or any obligations of Contractor's bond sureties.

(A) **City-Directed Changes.** City may direct changes in the scope or sequence of Work or the requirements of the Contract Documents, without invalidating the Contract. Such changes may include Extra Work as set forth in subsection (C) below, or deletion or modification of portions of the Work. 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. Contractor is not entitled to extra compensation for cost savings resulting from "value engineering" pursuant to Public Contract Code § 7101, except to the extent authorized in advance by City in writing, and subject to any applicable procedural requirements for submitting a proposal for value engineering cost savings.

(B) **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. Likewise, 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. If Contractor refuses to perform the Work in dispute, City may, acting in its sole discretion, elect to delete the Work from the Contract and reduce the Contract Price accordingly, and self-perform the Work or direct that the Work be performed by others. Alternatively, City may elect to terminate the Contract for convenience or for cause. 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.

(C) **Extra Work.** City may direct Contractor to perform Extra Work related to the Project. Contractor must promptly perform any Extra Work as directed or authorized by City in accordance with the original Contract Documents, even if Contractor and City have not yet reached agreement on adjustments to the Contract Price or Contract Time for such Extra Work. If Contractor believes it is necessary to perform Extra Work due to changed conditions, Contractor must promptly notify the Engineer in writing, specifically identifying the Extra Work and the reason(s) the Contractor believes it is Extra Work. This notification requirement does not constitute a Change Order request pursuant to Section 6.2, below. Contractor must maintain detailed daily records that itemize the cost of each element of Extra Work, and sufficiently distinguish the direct cost of the Extra Work from the cost of other Work performed. For each day that Contractor performs Extra Work, or Work that Contractor contends is Extra Work, Contractor must submit no later than the following Working Day, a daily report of the Extra Work performed that day and the related costs, together with copies of certified payroll, invoices, and other documentation substantiating the costs ("Extra Work Report"). The Engineer will make any adjustments to Contractor's Extra Work Report(s) based on the Engineer's records of the Work. When an Extra Work Report(s) is agreed on and signed by both City and Contractor, the Extra Work Report(s) will become the basis for payment under a duly authorized and signed Change Order. Failure to submit the required documentation by close of business on the next Working Day is deemed a full and complete waiver for any change in the Contract Price or Contract Time for any Extra Work performed that day.

(D) **Minor Changes and RFIs.** Minor field changes, including RFI replies from City, that do not affect the Contract Price or Contract Time and that are approved by the Engineer acting within his or her scope of authority, do not require a Change Order. By executing an RFI reply from City, Contractor agrees that it will perform the Work as clarified therein, with no change to the Contract Price or Contract Time.

(E) **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, compensation for Extra 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, subcontract amounts, and, if applicable, Extra Work Reports. 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. Upon request, Contractor must permit City to inspect its original and unaltered bidding records, subcontract agreements, subcontract change orders, purchase orders, invoices, or receipts associated with the claimed costs.

(D) **Required Form.** Contractor must use City's form(s) for submitting all Change Order requests or proposals, unless otherwise specified by City.

(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 as to the Work or changes referenced herein, and agrees that any known or foreseeable costs, expenses, or time extension requests not included herein, are deemed waived."

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 listed below, in the order listed with unit pricing taking precedence over the other methods. Markup applies only to City-authorized time and material Work, and does not apply to any other payments to Contractor. For Work items or components that are deleted in their entirety, Contractor will only be entitled to compensation for those direct, actual, and documented costs (including restocking fees), reasonably incurred before Contractor was notified of the City's intent to delete the Work, with no markup for overhead, profit, or other indirect costs.

(A) **Unit Pricing.** Amounts previously provided by Contractor in the form of unit prices, either in a bid schedule or in a post-award schedule of values pursuant to Section 8.1, Schedule of Values, will apply to determine the price for the affected Work, to the extent applicable unit prices have been provided for that type of Work. No additional markup for overhead, profit, or other indirect costs will be added to the calculation.

(B) **Lump Sum.** A mutually agreed upon, all-inclusive lump sum price for the affected Work with no additional markup for overhead, profit, or other indirect costs.

(C) **Time and Materials.** On a time and materials basis, if and only to the extent compensation on a time and materials basis is expressly authorized by City in advance of Contractor's performance of the Work and subject to any not-to-exceed limit. Time and materials compensation for increased costs or Extra Work (but not decreased costs or deleted Work), will include allowed markup for overhead, profit, and other indirect costs, calculated as the total of the following sums, the cumulative total of which may not exceed the maximum markup rate of 15%:

- (1) All direct labor costs provided by the Contractor, excluding superintendence, project management, or administrative costs, plus 15% markup;
- (2) All direct material costs provided by the Contractor, including sales tax, plus 15% markup;
- (3) All direct plant and equipment rental costs provided by the Contractor, plus 15% markup;
- (4) All direct additional subcontract costs plus 10% markup for Work performed by Subcontractors; and
- (5) Increased bond or insurance premium costs computed at 1.5% of total of the previous four sums.

6.4 Unilateral Change Order. If the parties dispute the terms of a proposed Change Order, including disputes over the amount of compensation or extension of time that Contractor has requested, the value of deleted or changed Work, what constitutes Extra Work, or quantities used, 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 for the adjustment to compensation or time that the 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.

Article 7 - General Construction Provisions

7.1 Permits, Fees, Business License, and Taxes.

(A) **Permits, Fees, and City Business License.** Contractor must obtain and pay for all permits, fees, or licenses required to perform the Work, including a City business license. 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 records of permits and permit applications, payment of required fees, and any licenses required for the Work.

(B) **Taxes.** 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. Contractor must provide, at Contractor's sole expense, any and all temporary facilities for the Project, including an onsite staging area for materials 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 incidental utility services. The location of all temporary facilities must be

approved by the City prior to installation. Temporary facilities must be safe and adequate for the intended use and installed and maintained in accordance with Laws and the Contract Documents. Contractor must fence and screen the Project site and, if applicable, any separate Worksites, including the staging area, and its operation must minimize inconvenience to neighboring properties. Additional provisions pertaining to temporary facilities may be included in the Specifications or Special Conditions.

(A) **Utilities.** Contractor must install and maintain the power, water, sewer and all other utilities required for the Project site, including the piping, wiring, internet and wifi connections, and any related equipment necessary to maintain the temporary facilities.

(B) **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 or to other property caused by the installation, use, or removal of the temporary facilities, and must promptly restore the property to its original or intended condition.

7.3 Noninterference and Site Management. 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 provide effective notice to the affected parties at least 48 hours in advance 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 Worksites, licenses, 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, such as for the staging area or the field office, Contractor may need to make arrangements with the nearby property owner(s) to secure the space. Before using or 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, in a form acceptable to the City Attorney.

(C) **Traffic Management.** Contractor must provide traffic management and traffic controls as specified in the Contract Documents, as required by Laws, and as otherwise required to ensure public and worker safety, and to avoid interference with public or private operations or the normal flow of vehicular, bicycle, or pedestrian traffic.

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

7.5 Project Site 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 City has accepted the Project, excluding any exceptions to acceptance, if any. Except as specifically authorized by City, Contractor

must confine its operations to the area of the Project site indicated in the Plans and Specifications. Contractor is liable for any damage caused by Contractor or its Subcontractors to the Work, City's property, the property of adjacent or nearby property owners and the work or personal property of other contractors working for City, including damage related to Contractor's failure to adequately secure the Work or any Worksite.

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

(2) City 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.

(4) If directed by Engineer, Contractor must promptly repair or replace any property damage, as specified by the Engineer. However, acting in its sole discretion, City may elect to have the property damage remedied otherwise, and may deduct the cost to repair or replace the damaged property from payment otherwise due to Contractor.

(5) Contractor will not permit any structure or infrastructure to be loaded in a manner that will damage or endanger the integrity of the structure or infrastructure.

(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) **Unforeseen Conditions.** If Contractor encounters facilities, utilities, or other unknown conditions not shown on or reasonably inferable from the Plans or apparent from inspection of the Project site, Contractor must immediately notify the City and promptly submit a Request for Information to obtain further directions from the Engineer. Contractor must 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.

(D) **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 Laws. See also, Section 7.15, Trenching of Five Feet or More.

(E) **Notification of Property Damage.** Contractor must immediately notify the City of damage to any real or personal property resulting from Work on the Project. Contractor must immediately provide a written report to City of any such property damage in excess of \$500 (based on estimated cost to repair or replace) within 24 hours of the occurrence. The written report must include: (1) the location and nature of the damage, and the owner of the property, if known; (2) the name and address of each employee of Contractor or any Subcontractor involved in the damage; (3) a detailed description of the incident, including precise location, time, and names and contact information for known witnesses; and (4) a police or first responder report, if applicable. If Contractor is required to file an accident report with another government agency, Contractor will provide a copy of the report to City.

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 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 recommendations or instructions. Contractor is responsible for all shipping, handling, and storage costs associated with the materials and equipment required for the Work. Contractor 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, Final Completion. 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 in accordance with the Contract Documents. Contractor must notify City of any defects discovered in City-provided materials or equipment, sufficiently in advance of scheduled use or installation to afford adequate time to procure replacement materials or equipment as needed. Contractor is solely responsible for any loss of or damage to such items which occurs while the items are in Contractor's custody and control, the cost of which may be offset from the Contract Price and deducted from any payment(s) due to Contractor.

(C) **Intellectual Property Rights.** Contractor must, at its sole expense, obtain any authorization or license required for use of patented or copyright-protected materials, equipment, devices or processes that are incorporated into the Work. Contractor's indemnity obligations in Article 4 apply to any claimed violation of intellectual property rights in violation of this provision.

7.7 Substitutions.

(A) **"Or Equal."** Any Specification designating a material, product, or thing (collectively, "item") or service by specific brand or trade name, followed by the words "or equal," is intended only to indicate the quality and type of item or service desired, and Contractor may request use of any equal item or service. Unless otherwise stated in the Specifications, any reference to a specific brand or trade name for an item or service that is used solely for the purpose of describing the type of item or service desired, will be deemed to be followed by the words "or equal." A substitution will only be approved if it is a true "equal" item or service in every aspect of design, function, and quality, as

determined by City, including dimensions, weight, maintenance requirements, durability, fit with other elements, and schedule impacts.

(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. 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.

(F) **Contractor's Obligations.** City's approval 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.

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 Worksite, 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, make the Work available for testing or inspection. Neither City's inspection or testing of Work, nor its failure to do so, operate to waive or limit Contractor's duty to complete the Work in accordance with the Contract Documents.

(B) **Scheduling and Notification.** Contractor must cooperate with City in coordinating the inspections and testing. Contractor must submit samples of materials, at Contractor's expense, and 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 noon of the Working Day 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 regular 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. Such costs, including the City's hourly costs for required personnel, may be deducted from payments otherwise due to Contractor.

(C) **Responsibility for Costs.** City will bear the initial cost of inspection and testing to be performed by 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 hourly 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.
- (4) Contractor is responsible for properly shoring all compaction test sites deeper than five feet below grade, as required under Section 7.15 below.
- (5) Any Work or material that is defective or fails to comply with the requirements of the Contract Documents must be promptly repaired, removed, replaced, or corrected by Contractor, at Contractor's sole expense, even if that Work or material was previously inspected or included in a progress payment.

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

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

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

7.9 Project Site Conditions and Maintenance. 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, neat, and sanitary condition and in compliance with all Laws pertaining to safety, air quality, and dust control. Adequate toilets must be provided, and properly maintained and serviced for all workers on the Project site, located in a suitably secluded area, subject to City's prior approval. 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.

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

(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 water is used for dust control, Contractor will only use

the minimum necessary. Contractor must take all necessary steps to keep waste water out of streets, gutters, or storm drains. See Section 7.19, Environmental Control. If City 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 Project site and any dirt deposited on public streets.

(C) **Clean up.** Before discontinuing Work in an area, Contractor must clean the area and remove all debris and waste along with the construction equipment, tools, machinery, and surplus materials.

(1) 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.

(2) 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.

(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 maintenance holes or into the storm drain system.

(E) **Completion.** At the completion of the Work, Contractor must remove from the Project site all of its equipment, tools, surplus materials, waste materials and debris, presenting a clean and neat appearance. Before demobilizing from the Project site, 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. Contractor must ensure 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. Contractor must restore to original condition all property or items that are not designated for alteration under the Contract Documents and leave each Worksite clean and ready for occupancy or use by City.

(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 deduct the cost 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, must be delivered to City for review.

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

7.11 As-built Drawings. Contractor and its Subcontractors must prepare and maintain at the Project site a detailed, complete and accurate as-built set of the Plans which will be used solely for the purpose of recording changes made in any portion of the original Plans 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. City may withhold the estimated cost for City to have the as-built drawings prepared from payments otherwise due to Contractor, 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 Plans must be shown in detail. The exact location of all main runs, whether piping, conduit, ductwork or drain lines, must be shown by dimension and elevation. The location of all buried pipelines, appurtenances, or other improvements must be represented by coordinates and by the horizontal distance from visible above-ground improvements.

(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 to the Engineer for review and acceptance as a condition precedent to Final Completion and Final Payment.

7.12 Existing Utilities.

(A) **General.** The Work may be performed in developed, urban areas with existing utilities, both above and below ground, including utilities identified in the Contract Documents or in other informational documents or records. Contractor must take due care to locate identified or reasonably identifiable utilities before proceeding with trenching, excavation, or any other activity that could damage or disrupt existing utilities. This may include excavation with small equipment, potholing, or hand excavation, and, if practical, using white paint or other suitable markings to delineate the area to be excavated. Except as otherwise provided herein, Contractor will be responsible for costs resulting from damage to identified or reasonably identifiable utilities due to Contractor's negligence or failure to comply with the Contract Documents, including the requirements in this Article 7.

(B) **Unidentified Utilities.** Pursuant to Government Code § 4215, if, during the performance of the Work, Contractor discovers utility facilities not identified by City in the Contract Documents, Contractor must immediately provide written notice to City and the utility. City assumes responsibility for the timely removal, relocation, or protection of existing main or trunkline utility facilities located on the Project site if those utilities are not identified in the Contract Documents. Contractor will be compensated in accordance with the provisions of the Contract Documents for the costs of locating, repairing damage not due to Contractor's failure to exercise reasonable care, and removing or relocating utility facilities not indicated in the Plans 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 the delay was caused by City's failure to provide for removal or relocation of the utility facilities.

7.13 Notice of Excavation. Contractor must comply with all applicable requirements in Government Code §§ 4216 through 4216.5, which are incorporated by reference herein. Government Code § 4216.2 requires that, except in an emergency, Contractor must contact the appropriate regional notification center, or Underground Services Alert, 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. Contractor may not begin excavation until it has obtained and submitted to Engineer an inquiry identification number from Underground Services Alert.

7.14 Trenching and Excavations of Four Feet or More. As required by Public Contract Code § 7104, if the Work includes digging trenches or other excavations that extend deeper than four feet below the surface, the 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 § 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 Laws;

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

(3) Unknown physical conditions at the Project site 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 materially differ from those indicated, apparent, or reasonably inferred from information about the Project site made available to bidders, or 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 (B) above, or the terms of a Change Order issued by City, Contractor will not be excused from completing the Work within the Contract Time, 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 Laws which pertain to the resolution of disputes between Contractor and City.

7.15 Trenching of Five Feet or More. As required by Labor Code § 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. Except as otherwise specified, 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 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, including any changes directed by a Change Order.

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, a burial ground, 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. At City's discretion, a suspension of Work required due to discovery of Historic or Archeological Items may be treated as Excusable Delay pursuant to Article 5, or 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 and watercourses as required below. Contractor and its Subcontractors must at all times in the performance of the Work comply with all Laws concerning pollution of waterways.

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

(B) **Contractor's Obligations.** If required for the Work, a copy of the Stormwater Permit is on file in City's principal administrative offices, and Contractor must comply with it 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 Laws

governing discharge of stormwater, including applicable municipal stormwater management programs.

- 7.20 Noise Control.** Contractor must comply with all applicable noise control Laws. 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.
- 7.21 Mined Materials.** Pursuant to the Surface Mining and Reclamation Act of 1975, Public Resources Code § 2710 et seq., any purchase of mined materials, such as construction aggregate, sand, gravel, crushed stone, road base, fill materials, and any other mineral materials must originate from a surface mining operation included on the AB 3098 List, which is available online at:
<ftp://ftp.consrv.ca.gov/pub/omr/AB3098%20List/AB3908List.pdf>.

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, including mobilization and demobilization. If a Bid Schedule was submitted with Contractor's bid, the amounts in the schedule of values must be consistent with the Bid Schedule. 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 specified in the Contract Documents.
- (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 delivered to the Project site, as well as authorized and approved Change Orders. Each payment application must be supported by the unit prices submitted with Contractor's Bid Schedule and/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 30 days after Contractor has submitted a complete and accurate payment application, subject to Public Contract Code § 20104.50. City will deduct a percentage from each progress payment as retention, as set forth in Section 8.5, below, and may withhold additional amounts as set forth in Section 8.3, below.

8.3 Adjustment of Payment Application. City may adjust or reject the amount requested in a payment application, including application for Final Payment, in whole or in part, if the amount requested is disputed or unsubstantiated. Contractor will be notified in writing of the basis for the modification to the amount requested. City may also deduct or withhold from payment otherwise due based upon any of the circumstances and amounts listed below. Sums withheld from payment otherwise due will be released when the basis for that withholding has been remedied and no longer exists.

(A) For Contractor's unexcused failure to perform the Work as required by the Contract Documents, including correction or completion of punch list items, City may withhold or deduct an amount based on the City's estimated cost to correct or complete the Work.

(B) For loss or damage caused by Contractor or its Subcontractors arising out of or relating to performance of the Work or any failure to protect the Project site, City may deduct an amount based on the estimated cost to repair or replace.

(C) For Contractor's failure to pay its Subcontractors and suppliers when payment is due, City may withhold an amount equal to the total of past due payments and may opt to pay that amount separately via joint check pursuant to Section 8.6(B), Joint Checks.

(D) For Contractor's failure to timely correct rejected, nonconforming, or defective Work, City may withhold or deduct an amount based on the City's estimated cost to correct or complete the Work.

(E) For any unreleased stop notice, City may withhold 125% of the amount claimed.

(F) For Contractor's failure to submit any required schedule or schedule update in the manner and within the time specified in the Contract Documents, City may withhold an amount equal to five percent of the total amount requested until Contractor complies with its schedule submittal obligations.

(G) For Contractor's failure to maintain or submit as-built documents in the manner and within the time specified in the Contract Documents, City may withhold or deduct an amount based on the City's cost to prepare the as-builts.

(H) For Work performed without Shop Drawings that have been accepted by City, when accepted Shop Drawings are required before proceeding with the Work, City may deduct an amount based on the estimated cost to correct unsatisfactory Work or diminution in value.

(I) For fines, payments, or penalties assessed under the Labor Code, City may deduct from payments due to Contractor as required by Laws and as directed by the Division of Labor Standards Enforcement.

(J) For any other costs or charges that may be withheld or deducted from payments to Contractor, as provided in the Contract Documents, including liquidated damages, City may withhold or deduct such amounts from payment otherwise due to Contractor.

8.4 Early Occupancy. 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 full amount due on each progress payment (i.e., the amount due before any withholding or deductions pursuant to Section 8.3, Adjustment of Payment Application), or the percentage stated in the Notice Inviting Bids, whichever is greater, as retention to ensure full and satisfactory performance of the Work.

Contractor is not entitled to any reduction in the rate of withholding at any time, nor to release of any retention before 35 days following City's acceptance of the Project.

(A) **Substitution of Securities.** As provided by Public Contract Code § 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 § 22300 and will be subject to approval as to form by City's legal counsel. If City exercises its right to draw upon such securities in the event of default pursuant to section (7) of the statutory Escrow Agreement for Security Deposits in Lieu of Retention, pursuant to subdivision (f) of Public Contract Code § 22300 ("Escrow Agreement"), and if Contractor disputes that it is in default, its sole remedy is to comply with the dispute resolution procedures in Article 12 and the provisions therein. It is agreed that for purposes of this paragraph, an event of default includes City's rights pursuant to these Contract Documents to withhold or deduct sums from retention, including withholding or deduction for liquidated damages, incomplete or defective Work, stop payment notices, or backcharges. It is further agreed that if any individual authorized to give or receive written notice on behalf of a party pursuant to section (10) of the Escrow Agreement are unavailable to give or receive notice on behalf of that party due to separation from employment, retirement, death, or other circumstances, the successor or delegee of the named individual is deemed to be the individual authorized to give or receive notice pursuant to section (10) of the Escrow Agreement.

(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 pursuant to Section 8.3, Adjustment of Payment Application, 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(C), Acceptance, or, if the Project has not been accepted, no later than 60 days after the Project is otherwise considered complete pursuant to Public Contract Code § 7107(c).

8.6 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 Project site by the Subcontractor or supplier during the preceding month. Such payments must be made in accordance with the requirements of Laws pertaining to such payments, and those of the Contract Documents and applicable subcontract or supplier contract.

(A) **Withholding for Stop Notice.** Pursuant to Civil Code § 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, acting in its sole discretion, to issue joint checks made payable to Contractor and a Subcontractor or supplier, if City determines this is necessary to ensure fair and timely payment for a Subcontractor or supplier who has provided services or goods for the Project. 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 the City Attorney's Office. 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.

- 8.7 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. Corrections to previous progress payments, including adjustments to estimated quantities for unit priced items, may be included in the Final Payment. If Contractor fails to submit a timely application for Final Payment, City reserves the right to unilaterally process and issue Final Payment without an application from Contractor in order to close out the Project. For the purposes of determining the deadline for Claim submission pursuant to Article 12, the date of Final Payment is deemed to be the date that City acts to release undisputed retention as final payment to Contractor, or otherwise provides written notice to Contractor of Final Payment or that no undisputed funds remain available for Final Payment due to offsetting withholdings or deductions pursuant to Section 8.3, Adjustment of Payment Application. 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.
- 8.8 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 waiver and release of all claims against City arising from or related to the portion of Work covered by those undisputed amounts subject to the limitations of Public Contract Code § 7100. Any disputed amounts may be specifically excluded from the release.
- 8.9 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 Laws prohibiting discrimination, including the California Fair Employment and Housing Act (Govt. Code § 12900 et seq.), Government Code § 11135, and Labor Code §§ 1735, 1777.5, 1777.6, and 3077.5.
- 9.2 Labor Code Requirements.**
- (A) **Eight Hour Day.** Pursuant to Labor Code § 1810, eight hours of labor constitute a legal day's work under this Contract.
- (B) **Penalty.** Pursuant to Labor Code § 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 § 1815.
- (C) **Apprentices.** Contractor is responsible for compliance with the requirements governing employment and payment of apprentices, as set forth in Labor Code § 1777.5, which is fully incorporated by reference.
- (D) **Notices.** Pursuant to Labor Code § 1771.4, Contractor is required to post all job site notices prescribed by Laws.

9.3 Prevailing Wages. Each worker performing Work under this Contract that is covered under Labor Code §§ 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 §§ 1771 and 1774 of the Labor Code. The prevailing wage rates are on file with the City and available online at <http://www.dir.ca.gov/dlsr>. Contractor must post a copy of the applicable prevailing rates at the Project site.

(A) **Penalties.** Pursuant to Labor Code § 1775, Contractor and any Subcontractor will forfeit to City as a penalty up to \$200.00 for each calendar day, or portion thereof, 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 currently applicable state or federal prevailing wage rates.

9.4 Payroll Records. Contractor must comply with the provisions of Labor Code §§ 1771.4, 1776, and 1812 and all implementing regulations, which are fully incorporated by this reference, including requirements for monthly electronic submission of payroll records to the DIR.

(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 §§ 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 DIR, and as further required by the Labor Code.

(C) **Enforcement.** Upon notice of noncompliance with Labor Code § 1776, Contractor or Subcontractor has ten days in which to comply with the 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 thereof, 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 payments then due to Contractor.

9.5 Labor Compliance. Pursuant to Labor Code § 1771.4, the Contract for this Project is subject to compliance monitoring and enforcement by the DIR.

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 at all times comply with all applicable health and safety Laws and seek to avoid injury, loss, or damage to persons or property by taking reasonable steps to protect its employees and other persons at any Worksite, materials and equipment stored on or off site, and property at or adjacent to any Worksite.

(A) **Reporting Requirements.** Contractor must immediately notify the City of any death, serious injury or illness resulting from Work on the Project. Contractor must immediately provide a written report to City of each recordable accident or injury occurring at any Worksite within 24 hours of the occurrence. The written report must include: (1) the name and address of the injured or deceased person; (2) the name and address of each employee of Contractor or of any Subcontractor involved in the incident; (3) a detailed description of the incident, including precise location, time, and names and contact information for known witnesses; and (4) a police or first responder report, if applicable. 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 Laws.

(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 Project site 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 Project site 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 § 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 Safety Data Sheets ("SDS") at the Project site, as required by Laws, for materials or substances used or consumed in the performance of the Work. The SDS 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 Project site 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 Project site 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. Hazardous conditions may result from, but are not limited to, use of specified materials or equipment, the Work location, the Project site condition, the method of construction, or the way any Work must be performed.

10.5 Emergencies. In an emergency affecting the safety or protection of persons, Work, or property at or adjacent to any Worksite, Contractor must take reasonable and prompt actions to prevent damage, injury, or loss, without prior authorization from the City if, under the circumstances, there is inadequate time to seek prior authorization from the City.

Article 11 - Completion and Warranty Provisions

11.1 Final Completion.

(A) **Final Inspection and Punch List.** When the Work required by this Contract is fully performed, Contractor must provide written notification to City requesting final inspection. The Engineer will schedule the date and time for final inspection, which must include Contractor's primary representative for this Project and its superintendent. Based on that inspection, City will prepare a punch list of any items that are incomplete, missing, defective, incorrectly installed, or otherwise not compliant with the Contract Documents. The punch list to Contractor 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. The omission of any non-compliant item from a punch list will not relieve Contractor from fulfilling all requirements of the Contract Documents. Contractor's failure to complete any punch list item within the time specified in the punch list will not waive or abridge its warranty obligations for any such items that must be completed by the City or by a third party retained by the City due to Contractor's failure to timely complete any such outstanding item.

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

(C) **Acceptance.** The Project will be considered accepted upon City Council action during a public meeting to accept the Project, unless the Engineer is authorized to accept

the Project, in which case the Project will be considered accepted upon the date of the Engineer's issuance of a written notice of acceptance. In order to avoid delay of Project close out, the City may elect, acting in its sole discretion, to accept the Project as complete subject to exceptions for punch list items that are not completed within the time specified in the punch list.

(D) **Final Payment and Release of Retention.** 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 withhold up to 150% of City's estimated cost to complete each of the remaining items from Final Payment and may use the withheld retention to pay for the costs to self-perform the outstanding items or to retain a third party to complete any such outstanding punch list item.

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. Contractor warrants that materials or items incorporated into the Work comply with the requirements and standards in the Contract Documents, including compliance with Laws, and that any Hazardous Materials encountered or used were handled as required by Laws. At City's request, Contractor must furnish satisfactory evidence of the quality and type of materials and equipment furnished. Contractor's warranty does not extend to damage caused by normal wear and tear, or improper use or maintenance.

(B) **Warranty Period.** Contractor's warranty must guarantee its Work for a period of one year from the date of Project acceptance (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 Final Completion, Contractor must supply City with all warranty and guarantee documents relevant to equipment and materials incorporated into the Work and guaranteed by their suppliers or manufacturers.

(D) **Subcontractors.** The warranty obligations in the Contract Documents apply to Work performed by Contractor and its Subcontractors, and Contractor agrees to be 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. Work performed during the Warranty Period ("Warranty Work") will be subject to the warranty provisions in this Section 11.2 for a one-year period that begins upon completion of such Warranty Work to City's satisfaction.

(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, City may correct the defects to conform with the Contract Documents at Contractor's sole expense. Contractor must reimburse City for its costs in accordance with subsection (H), below.

(G) **Emergency Repairs.** In cases of emergency where any delay in correcting defective Work could cause harm, loss or damage, City may immediately correct the defects to conform with the Contract Documents at Contractor's sole expense. Contractor or its surety must reimburse City for its costs in accordance with subsection (H), below.

(H) **Reimbursement.** Contractor must reimburse City for its costs to repair under subsections (F) or (G), above, within 30 days following City's submission of a demand 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.

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.

(A) **Non-Waiver.** Occupation or use of the Project, in whole or in part, 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 complete the Work within the Contract Time.

11.4 Substantial Completion. For purposes of determining "substantial completion" with respect to any statute of repose pertaining to the time for filing an action for construction defect, "substantial completion" is deemed to mean the last date that Contractor or any Subcontractor performs Work on the Project prior to City acceptance of the Project, 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 a change in the Contract Time, including a time extension or relief from liquidated damages, or a change in the Contract Price, when the demand 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. A Claim may also include that portion of a unilateral Change Order that is disputed by the Contractor.

(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 § 9204 and § 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 a 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.

(E) **Informal Resolution.** Contractor will make a good faith effort to informally resolve a dispute before initiating a Claim, preferably by face-to-face meeting between authorized representatives of Contractor and City.

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 known or estimated 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 component of claimed cost. Any Claim for an extension of time or delay costs must be substantiated with a schedule analysis and narrative depicting and explaining claimed time impacts.

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

(1) Provide a cover letter, specifically identifying the submission as a "Claim" submitted under this Article 12 and specifying the requested remedy (e.g., amount of proposed change to Contract Price and/or change to Contract Time).

(2) Provide a summary of each Claim, including underlying facts and the basis for entitlement, and identify each specific demand at issue, including the specific Change Order request (by number and submittal date), and the date of City's rejection of that demand, in whole or in part.

(3) Provide a detailed explanation of each issue in dispute. For multiple issues included within a single Claim or for multiple Claims submitted concurrently, separately number and identify each individual issue or Claim, and include the following for each separate issue or Claim:

- a. A succinct statement of the matter in dispute, including Contractor's position and the basis for that position;
- b. Identify and attach all documents that substantiate the Claim, including relevant provisions of the Contract Documents, RFIs, calculations, and schedule analysis (see subsection (A), Substantiation, above);
- c. A chronology of relevant events; and
- d. Analysis and basis for claimed changes to Contract Price, Contract Time, or any other remedy requested.

(4) Provide a summary of issues and corresponding claimed damages. If, by the time of the Claim submission deadline (below), the precise amount of the requested change in the Contract Price or Contract Time is not yet known, Contractor must provide a good faith estimate, including the basis for that estimate, and must identify the date by which it is anticipated that the Claim will be updated to provide final amounts.

(5) Include 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 submittal are true and correct. Contractor warrants that this Claim submittal is comprehensive and complete as to the matters in dispute, and agrees that any costs, expenses, or delay not included herein are deemed waived."

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

(1) A Claim disputing rejection of a request for a change in the Contract Time or Contract Price 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. A Claim disputing the terms of a unilateral Change Order must be submitted within 15 days following the date of issuance of the unilateral Change Order. These Claim deadlines apply even if Contractor cannot yet quantify the total amount of any requested change in the Contract Time or Contract Price. If the Contractor cannot quantify those amounts, it must submit an estimate of the amounts claimed pending final determination of the requested remedy by Contractor.

(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 8.7, Final Payment.

(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 is extended by mutual agreement of City and Contractor or as otherwise allowed under Public Contract Code § 9204. However, if City determines that the Claim is not adequately substantiated pursuant to Section 12.2(A), Substantiation, 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.

(A) **Additional Information.** If additional information is thereafter required, it may be requested and provided upon mutual agreement of City and Contractor. If Contractor's Claim is based on estimated amounts, Contractor has a continuing duty to update its Claim as soon as possible with information on actual amounts in order to facilitate prompt and fair resolution of the Claim.

(B) **Non-Waiver.** Any failure by City to respond within the times specified above will 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 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 notify City of the dispute and demand an informal conference to meet and confer 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 Contractor may identify in writing disputed portion(s) of the Claim, which 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 § 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. If there are multiple Claims in dispute, the parties may agree to schedule the mediation to address all outstanding Claims at the same time. The parties will share the costs of the mediator and mediation fees equally, but each party is otherwise solely and separately

responsible for its own costs to prepare for and participate in the mediation, including costs for its legal counsel or any other consultants.

(B) **Government Code Claims.**

(1) Timely presentation of a Government Code Claim is a condition precedent to filing any legal action based on or arising from the Contract. Compliance with the Claim submission requirements in this Article 12 is a condition precedent to filing a Government Code Claim.

(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 Code of Civil Procedure § 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 Burden of Proof and Limitations.** 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 speculative, special, or consequential damages, including home office overhead or any form of overhead not directly incurred at the Project site or any other 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. The Eichleay Formula or similar formula will not be used for any recovery under the Contract. The City will not be directly liable to any Subcontractor or supplier.
- 12.9 Legal Proceedings.** In any legal proceeding that involves enforcement of any requirements of the Contract Documents, the finder of fact will receive detailed instructions on the meaning and operation of the Contract Documents, including conditions, limitations of liability, remedies, claim procedures, and other provisions bearing on the defenses and theories of liability. Detailed findings of fact will be requested to verify enforcement of the Contract Documents. All of the City's remedies under the Contract Documents will be construed as cumulative, and not exclusive, and the City reserves all rights to all remedies available under law or equity as to any dispute arising from or relating to the Contract Documents or performance of the Work.
- 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, including disputes regarding suspension or early termination of the 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, including non-compliance with applicable environmental or health and safety Laws, City may immediately order the Work, or any portion of it, suspended until the circumstances giving rise to the suspension have been eliminated to City's satisfaction.

(A) **Notice of Suspension.** Upon receipt of City's written notice to suspend the Work, in whole or in part, except as otherwise specified in the notice of suspension, Contractor and its Subcontractors must promptly stop Work as specified in the notice of suspension; comply with directions for cleaning and securing the Worksite; and protect the completed and in-progress Work and materials. Contractor is solely responsible for any damages or loss resulting from its failure to adequately secure and protect the Project.

(B) **Resumption of Work.** Upon receipt of the City's written notice to resume the suspended Work, in whole or in part, except as otherwise specified in the notice to resume, Contractor and its Subcontractors must promptly re-mobilize and resume the Work as specified; and within ten days from the date of the notice to resume, Contractor must submit a recovery schedule, prepared in accordance with the Contract Documents, showing how Contractor will complete the Work within the Contract Time.

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

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

13.2 Suspension for Convenience. City reserves the right to suspend, delay, or interrupt the performance of the Work in whole or in part, for a period of time determined to be appropriate for City's convenience. Upon notice by City pursuant to this provision, Contractor must immediately suspend, delay, or interrupt the Work and secure the Project site as directed by City except for taking measures to protect completed or in-progress Work as directed in the suspension notice, and subject to the provisions of Section 13.1(A) and (B), above. If Contractor submits a timely request for a Change Order in compliance with Articles 5 and 6, the Contract Price and the Contract Time will be equitably adjusted by Change Order pursuant to the terms of Articles 5 and 6 to reflect the cost and delay impact occasioned by such suspension for convenience, except to the extent that any such impacts were caused by Contractor's failure to comply with the Contract Documents or the terms of the suspension notice or notice to resume. However, the Contract Time will only be extended if the suspension causes or will cause unavoidable delay in Final Completion. If Contractor disputes the terms of a Change Order issued for such equitable adjustment due to suspension for convenience, its sole recourse is to comply with the Claim procedures in Article 12.

13.3 Termination for Default. City may declare that Contractor is in default of the Contract for a material breach of or inability to fully, promptly, or satisfactorily perform its obligations under the Contract.

(A) **Default.** Events giving rise to a declaration of default include Contractor's refusal or failure to supply sufficient skilled workers, proper materials, or equipment to perform the Work within the Contract Time; Contractor's refusal or failure to make prompt

payment to its employees, Subcontractors, or suppliers or to correct defective Work or damage; Contractor's failure to comply with Laws, or orders of any public agency with jurisdiction over the Project; evidence of Contractor's bankruptcy, insolvency, or lack of financial capacity to complete the Work as required within the Contract Time; suspension, revocation, or expiration and nonrenewal of Contractor's license or DIR registration; dissolution, liquidation, reorganization, or other major change in Contractor's organization, ownership, structure, or existence as a business entity; unauthorized assignment of Contractor's rights or duties under the Contract; or any material breach of the Contract requirements.

(B) **Notice of Default and Opportunity to Cure.** Upon City's declaration that Contractor is in default due to a material breach of the Contract Documents, if City determines that the default is curable, City will afford Contractor the opportunity to cure the default within ten days of City's notice of default, or within a period of time reasonably necessary for such cure, including a shorter period of time if applicable.

(C) **Termination.** If Contractor fails to cure the default or fails to expediently take steps reasonably calculated to cure the default within the time period specified in the notice of default, City may issue written notice to Contractor and its performance bond surety of City's termination of the Contract for default.

(D) **Waiver.** Time being of the essence in the performance of the Work, if Contractor's surety fails to arrange for completion of the Work in accordance with the Performance Bond within seven calendar days from the date of the notice of termination pursuant to paragraph (C), City may immediately make arrangements for the completion of the Work through use of its own forces, by hiring a replacement contractor, or by any other means that City determines advisable under the circumstances. Contractor and its surety will be jointly and severally liable for any additional cost incurred by City to complete the Work following termination, where "additional cost" means all cost in excess of the cost City would have incurred if Contractor had timely completed Work without the default and termination. In addition, City will have the right to immediate possession and use of any materials, supplies, and equipment procured for the Project and located at the Project site or any Worksite on City property for the purposes of completing the remaining Work.

(E) **Compensation.** Within 30 days of receipt of updated as-builts, all warranties, manuals, instructions, or other required documents for Work installed to date, and delivery to City of all equipment and materials for the Project for which Contractor has already been compensated, Contractor will be compensated for the Work satisfactorily performed in compliance with the Contract Documents up to the effective date of the termination pursuant to the terms of Article 8, Payment, subject to City's rights to withhold or deduct sums from payment otherwise due pursuant to Section 8.3, and excluding any costs Contractor incurs as a result of the termination, including any cancellation or restocking charges or fees due to third parties. If Contractor disputes the amount of compensation determined by City, its sole recourse is to comply with the Claim Procedures in Article 12, by submitting a Claim no later than 30 days following notice from City of the total compensation to be paid by City.

(F) **Wrongful Termination.** If Contractor disputes the termination, its sole recourse is to comply with the Claim procedures in Article 12. 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 special or consequential damages, lost

opportunity costs, or lost profits, and any award of damages is subject to Section 12.8, Burden of Proof and Limitations.

13.4 Termination for Convenience. City reserves the right, acting in its sole discretion, to terminate all or part of the Contract for convenience upon written notice to Contractor.

(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 as of the date notice of termination is received, 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.* Demobilization costs specified in the schedule of values, or if demobilization costs were not provided in a schedule of values pursuant to Section 8.1, then based on actual, reasonable, and fully documented demobilization costs; and

(3) *Termination Markup.* Five percent of the total value of the Work performed as of the date of notice of termination, including reasonable, actual, and documented costs to comply with the direction in the notice of termination for convenience, and demobilization costs, which is deemed to cover all overhead and profit to date.

(B) **Disputes.** If Contractor disputes the amount of compensation determined by City pursuant to paragraph (A), above, its sole recourse is to comply with the Claim procedures in Article 12, by submitting a Claim no later than 30 days following notice from City of total compensation to be paid by City.

13.5 Actions Upon Termination for Default or Convenience. The following provisions apply to any termination under this Article, whether for default or convenience, and whether in whole or in part.

(A) **General.** Upon termination, City may immediately enter upon and take possession of the Project and the Work and all tools, equipment, appliances, materials, and supplies procured or fabricated for the Project. Contractor will transfer title to and deliver all completed Work and all Work in progress to City.

(B) **Submittals.** Unless otherwise specified in the notice of termination, Contractor must immediately submit to City all designs, drawings, as-built drawings, Project records, contracts with vendors and Subcontractors, manufacturer warranties, manuals, and other such submittals or Work-related documents required under the terms of the Contract Documents, including incomplete documents or drafts.

(C) **Close Out Requirements.** Except as otherwise specified in the notice of termination, Contractor must comply with all of the following:

(1) Immediately stop the Work, except for any Work that must be completed pursuant to the notice of termination and comply with City's instructions for cessation of labor and securing the Project and any other Worksite(s).

(2) Comply with City's instructions to protect the completed Work and materials, using best efforts to minimize further costs.

(3) 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.

(4) As directed in the notice, Contractor must assign to City or cancel existing subcontracts that relate to performance of the terminated Work, subject to any prior rights, if any, of the surety for Contractor's performance bond, and settle all outstanding liabilities and claims, subject to City's approval.

(5) As directed in the notice, Contractor must use its best efforts to sell any materials, supplies, or equipment intended solely for the terminated Work in a manner and at market rate prices acceptable to City.

(D) **Payment Upon Termination.** Upon completion of all termination obligations, as specified herein and in the notice of termination, Contractor will submit its request for Final Payment, including any amounts due following termination pursuant to this Article 13. Payment will be made in accordance with the provisions of Article 8, based on the portion of the Work satisfactorily completed, including the close out requirements, and consistent with the previously submitted schedule of values and unit pricing, including demobilization costs. Adjustments to Final Payment may include deductions for the cost of materials, supplies, or equipment retained by Contractor; payments received for sale of any such materials, supplies, or equipment, less re-stocking fees charged; and as otherwise specified in Section 8.3, Adjustment of Payment Application.

(E) **Continuing Obligations.** 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, record maintenance, or other such rights and obligations arising prior to the termination date.

Article 14 - Miscellaneous Provisions

- 14.1 Assignment of Unfair Business Practice Claims.** Under Public Contract Code § 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. § 15) or under the Cartwright Act (Chapter 2 (commencing with § 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 bids were due.
- 14.6 Survival.** The provisions that survive termination or expiration of this Contract include Contract Section 11, Notice, and subsections 12.1, 12.2, 12.3, 12.4, 12.5, and 12.6, of Section 12, General Provisions; and the following provisions in these General Conditions: Section 2.2(J), Contractor's Records, Section 2.3(C), Termination, Section 3.7, Ownership, Section 4.2, Indemnity, Article 12, Dispute Resolution, and Section 11.2, Warranty.

END OF GENERAL CONDITIONS

Special Conditions

1. Authorized Work Days and Hours.

- 1.1 Authorized Work Days.** Except as expressly authorized in writing by City, Contractor is limited to performing Work on the Project on the following days of the week, excluding holidays observed by City:
Monday through Friday
- 1.2 Authorized Work Hours.** Except as expressly authorized in writing by City, Contractor is limited to performing Work on the Project during the following hours: Monday through Friday 8:00 a.m. to 6:00 p.m. A schedule of work shall be submitted to the City for review and approval prior to mobilization to the site work.

2. Pre-Construction Conference. City will designate a date and time for a pre-construction conference with Contractor following Contract execution. Project administration procedures and coordination between City and Contractor will be discussed, and Contractor must present City with the following information or documents at the meeting for City's review and acceptance before the Work commences:

- 2.1** Name, 24-hour contact information, and qualifications of the proposed on-site superintendent;
- 2.2** List of all key Project personnel and their complete contact information, including email addresses and telephone numbers during regular hours and after hours;
- 2.3** 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;
- 2.4** If required, traffic control plans associated with the staging plans that are signed and stamped by a licensed traffic engineer;
- 2.5** Draft baseline schedule for the Work as required under Section 5.2, to be finalized within ten days after City issues the Notice to Proceed;
- 2.6** Breakdown of lump sum bid items, to be used for determining the value of Work completed for future progress payments to Contractor;
- 2.7** Schedule with list of Project submittals that require City review, and list of the proposed material suppliers;
- 2.8** Plan for coordination with affected utility owner(s) and compliance with any related permit requirements;
- 2.9** Videotape and photographs recording the conditions throughout the pre-construction Project site, 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;
- 2.10** If requested by City, Contractor's cash flow projections; and

2.11 Any other documents specified in the Special Conditions or Notice of Potential Award.

3. **Insurance Requirements.** The insurance requirements under Section 4.3 of the General Conditions are modified for this Contract, as set forth below. Except as expressly stated below, all other provisions in Section 4.3 are unchanged and remain in full force and effect.

3.1 **Builders Risk Insurance Waived.** The builder's risk insurance policy requirement set forth in subsection 4.3(A)(5) of the General Conditions is hereby waived and does not apply to this Contract.

4. **Normal Weather Delay Days.** 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. Based on historic records for the Project location, Contractor's schedule should assume the following number of normal Weather Delay Days for each month:

Month	# Normal Weather Delay Days
January	6
February	5
March	2
April	2
May	0
June	0
July	0
August	0
September	0
October	1
November	1
December	5

Weather Delay Days which do not occur during a given month based on the number of days allocated for that month (above) do not carry over to another month.

5. **Public Notification.**

5.1 At least seventy-two (72) hours prior to the start of work that will affect property access, wastewater flow, parking, or traffic circulation, the Contractor shall provide notice to affected homeowners of the impending construction activity.

5.2 The contractor shall designate a representative to address questions and comments from the general public in the area and make an effort to reach out to the adjacent residents before and during the construction. The cost of this outreach shall be included in various items necessary to complete the work as stated in the contract and no additional compensation will be made for this coordination effort.

6. **ALTERATIONS** The City reserves the right to increase or decrease the quantity of any item or portion of the Work or omit portions of the Work as may be deemed necessary or advisable by the City Engineer; also, to make such alterations or deviations, additions to, or omissions from the Plans and Special Provisions, as may be determined during the progress of

the Work to be necessary and advisable for the proper completion thereof. Upon written order of the Engineer, the Contractor shall proceed with the Work as increased, decreased or altered.

Increases or Decreases in the Quantity of Work: The contractor is not entitled to adjustments of the unit price if the total bid item quantity exceeds 125 percent shown on the bid item list. The contractor is not entitled to adjustments of the unit price if the total bid item quantity is less than 75 percent shown on the bid item list.

7. Close Out Requirements. Contractor's close out requirements include the following, if applicable:

- 7.1** Contractor must replace, with thermoplastic, any existing striping adjacent to the Project site that is damaged during the Work. Partially damaged striping must be replaced in its entirety.
- 7.2** Contractor must replace any survey monuments that are damaged or removed during the Work, with a Record of Survey filed by a licensed land surveyor as required by California law.

8. Value Engineering. The Contractor may be entitled to additional compensation for cost reduction changes made pursuant to a value engineering proposal submitted by the Contractor, subject to the limitations of Public Contract Code § 7107, and in strict compliance with this Section 8. Contractor will not be entitled to any such additional compensation unless all of the following requirements have been met:

- 8.1** The Contractor must submit a written proposal for changes to the Plans or Specifications for the Project, in which it:
 - (A) Identifies the written proposal as a proposal for cost reduction changes with reference to this section;
 - (B) Clearly and specifically identifies the proposed cost reduction changes by describing in detail each of the changes proposed with specific references to each of the Specifications and Plans involved in the proposed changes, and providing proposed revised Specifications and Plans as applicable; and
 - (C) Estimates the net amount of the cost reduction and provides the basis for that estimate.
- 8.2** The proposed changes have been identified and developed solely by the Contractor, and not, in whole or in part, by the City.
- 8.3** The City accepts the proposed changes in whole or in part in a writing signed by the Engineer. The Contractor will only be entitled to additional compensation for those changes specifically accepted by the City. The Engineer will determine the net savings in construction costs from any such changes that are both accepted and implemented by the City. Contractor will not be entitled to more than 50% of the net savings as determined by the Engineer, acting in his or her sole discretion.

END OF SPECIAL CONDITIONS

**TECHNICAL SPECIFICATIONS
TABLE OF CONTENTS**

SECTION 10-1 – MOBILIZATION / DEMOBILIZATION	TS-1
SECTION 10-2 – CONSTRUCTION PHASING AND TRAFFIC CONTROL	TS-2
SECTION 10-3 – WATER POLLUTION CONTROL.....	TS-5
SECTION 10-4 – CONSTRUCTION LAYOUT	TS-6
SECTION 10-5 – UTILITY POTHOLING	TS-6
SECTION 10-6 – MONUMENT PRESERVATION	TS-8
SECTION 10-7 – CLEARING AND GRUBBING AND REMOVALS.....	TS-9
SECTION 10-8 – DEMOLITION.....	TS-10
SECTION 10-9 – SCARIFICATION	TS-14
SECTION 10-10 – CONCRETE PAVEMENT	TS-15
SECTION 10-11 - ASPHALTIC CONCRETE GRINDING/MILLING.....	TS-17
SECTION 10-12 - HOT MIX ASPHALT (TYPE A)	TS-17
SECTION 10-13 – AGGREGATE BASE	TS-22
SECTION 10-14 - CURB PAINT.....	TS-23
SECTION 10-15 - PAVEMENT STRIPING AND MARKINGS.....	TS-23
SECTION 10-16 - AGGREGATE BASE.....	TS-26
SECTION 10-17 – SEWER FLOW CONTROL AND BYPASS PUMPING.....	TS-27
SECTION 10-18 – SANITARY SEWER FACILITIES	TS-31
SECTION 10-19 – SANITARY SEWER MAINTENANCE HOLE REHABILITATION	TS-41
SECTION 10-20 - SANITARY SEWER MAINTENACE HOLE.....	TS-43
SECTION 10-21 - UTILITY ADJUSTMENT TO GRADE (REVOCABLE ITEM).....	TS-47
SECTION 10-22 – EXCAVATION AND BACKFILL.....	TS-43
SECTION 10-22 - BID ALT #3 - REPLACE WOODEN CAR PORT.....	TS-53
SECTION 10-23 - SOLDIER PILE WALL.....	TS-55

TECHNICAL SPECIFICATIONS

These Specifications were prepared under the direction of:

**Richard Souza, PE
Project Engineer
CSW|ST2
415.533.1864
richs@cswst2.com**

DESCRIPTION OF BID ITEMS

SECTION 10-1 – MOBILIZATION / DEMOBILIZATION

10-1.01 GENERAL

Mobilization shall conform to the provisions in Section 9-1.16(D), "Mobilization," of the State Standard Specifications, and shall consist of preparatory work and operations including, but not limited to, those necessary for the movement of personnel, equipment, supplies incidental to the project site, for the establishment of all staging areas and other facilities necessary for work on the project and for all other work and operations which must be performed or for project costs incurred prior to beginning work on the various Contract items. Mobilization shall include obtaining insurance and bonds, obtaining and paying for all permits by other agencies if applicable, furnishing temporary construction utilities, installing construction and other construction facilities all as required for the proper performance and completion of the work.

The work of this bid item also includes demobilization. Demobilization shall include final cleaning and restoration of the job site, removal of all temporary facilities and equipment from the work area, disconnection of the temporary construction utilities and turnover of project to the City.

10-1.02 MEASUREMENT AND PAYMENT

Full compensation for completing the requirements of this section shall be considered as included in the lump sum price paid for "Mobilization / Demobilization" (**Bid Item 1**).

Partial payments for Mobilization / Demobilization shall not exceed the following:

- (1) When 5 percent of the original contract amount is earned, 50 percent of the amount bid for Mobilization, or 5 percent of the original contract amount, whichever is lesser, may be paid.
- (2) When 10 percent of the original contract amount is earned, 75 percent of the amount bid for Mobilization or 7.5 percent of the original contract amount, whichever is lesser, may be paid.
- (3) When 20 percent of the original contract amount is earned, 95 percent of the amount bid for Mobilization, or 9.5 percent of the original contract amount, whichever is lesser, may be paid.
- (4) When 50 percent of the original contract amount is earned, 100 percent of the amount bid for mobilization, or 10 percent of the original contract amount, whichever is lesser, may be paid.
- (5) Upon completion of all work on the project, (including: punch list items, cleaning up and removal of all temporary facilities and equipment from the project site) payment of any amount bid for Mobilization in excess of 10 percent of the original contract amount will be paid.

SECTION 10-2 – CONSTRUCTION PHASING AND TRAFFIC CONTROL

10-2.01 GENERAL

The Contractor shall implement and maintain a temporary traffic control system in accordance with Section 12 "Temporary Traffic Control" of the Standard Specifications to provide safe access for motorists, pedestrians, bicyclists, and transit through the work zone. The traffic control system shall be implemented in phases in accordance with the Contractor's proposed construction sequencing plan as defined in the Special Conditions. This traffic control system shall include, but is not limited to, the following:

- Development of traffic control plans consistent with the contractor's intended phasing of construction.
- Implementation of a traffic control system for various traffic situations and street configurations in full conformance with the "California Manual on Uniform Traffic Control Devices 2014 ((Federal Highway Administration (FHWA) Manual of Uniform Traffic Control Devices (MUTCD) 2009, as amended for use in California)" herein after referred to as Traffic Control Manual.
- Provision of temporary facilities to accommodate accessible pedestrian pathways through the project area and to access all properties within the work zone.

The Contractor shall provide flaggers to control traffic. Section 12-1.03 of the Standard Specifications is deleted; the cost for flaggers is the Contractor's responsibility.

10-2.02 SUBMITTALS

The Contractor shall provide submittals for the following:

- Traffic Control Plans - The Contractor shall submit traffic handling plans for each phase of the project. The plans shall be at a scale no less than 1 inch = 40 feet and shall clearly illustrate traffic control devices consistent with the Traffic Control Manual for vehicles, pedestrians, bicyclist, and transit. These plans shall clearly illustrate the sequence of work, proposed traffic handling through the work zone, road closures, how pedestrians are routed through the work zone through an ADA compliant path of travel. In addition, the plans shall illustrate no parking zones. The Contractor shall revise the plans as required by the Engineer.
- The traffic control plans shall not be general, but specific to the project and of sufficient detail for the Engineer to understand your method of traffic management. Your plans shall be consistent with the current California edition of the Manual of Uniform Traffic Control Devices.

The Engineer will NOT issue the Notice to Proceed until the traffic control plan is approved.

10-2.03 EXECUTION

STREET CLOSURE

All street closures proposed by the Contractor shall be defined in the Traffic Control Plans described previously in this section.

If approved by the Engineer, the Contractor shall:

1. At least 72 hours prior to street closures, detours or any other alterations that can impact traffic, the Contractor shall place electronic message boards to inform the public of the planned alterations to the normal flow of traffic. The location of the message boards shall be approved by the Engineer prior to their installation.

No work may begin under contract until the Engineer's representative has approved Progress Schedule, General Project Notice, Street Construction Notice, Encroachment Permit and Traffic Control Plan.

Time required for review and approval of these items shall not constitute a basis for time extension.

City of Sausalito Community Wide Email System shall be used, in a cooperative effort with the City Public Works Department, to inform the public of pending work scheduled. Traffic Control shall be implemented only during the Working Hours as defined in these Specifications. The Engineer will make no exceptions to this requirement.

On the day of lane or street closure, the Contractor shall notify the Police Department (415) 289-4170, Fire Department 415-289-4155, and notify County Dispatch (415)479-5302.

CHANGEABLE MESSAGE SIGNS

At least two (2) changeable message signs shall be made available during the project, as requested by the Engineer and shall remain in service for as long as construction is in effect. The changeable message sign shall be a pull-type, solar-powered LED sign. The Engineer may request that the Contractor install the signs outside of the City's limits.

CONSTRUCTION AREA SIGNS

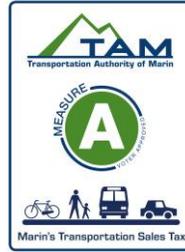
Once construction starts, the Contractor shall furnish and install construction area signs to inform motorists, pedestrians, and bicyclists of work in the streets and sidewalks. These signs may include, but are not limited to, "Road Construction Ahead", "Detour Ahead", "Road Closed". Construction area signs shall be furnished, installed, maintained, and removed when no longer required in accordance with the provisions in Section 12, "Temporary Traffic Control Devices" of the Standard Specifications and these Technical Specifications.

Construction area signs shall be metal, with reflective coating, black on orange, and securely mounted. Signs shall be kept clean and in good repair. The Contractor's traffic control plan shall show the location of the signs.

The Contractor shall be responsible for providing, placing, and installing all construction area signs. The signs shall not be installed on trees, utility poles, private property, or any other appurtenance, unless approved by the Engineer.

PROJECT INFORMATION SIGN

The Contractor shall furnish and install one (1) Project Signs, with a minimum dimension of 4' x 4' - 3/4" plywood and bolted to 4" x 4" redwood posts at a location to be designated by the Engineer. The sign shall be made by a professional sign company, approved in advance by the Engineer. The sign information shall be provided by the City of Sausalito as shown below. The sign shall be installed prior to construction and maintained in place for the duration of the project by the Contractor. Sign shall be repaired or replaced at no cost to the City of Sausalito, if damaged or stolen.



CITY OF SAUSALITO
2023 Pavement Improvement Project
Edwards Ave
Your Measures A, AA, B and O Dollars at Work



CONTRACTOR

The Contractor shall remove the project sign at the end of the contract and dispose in a legal manner.

TRAFFIC CONTROL SYSTEM MAINTENANCE

It shall be the responsibility of the Contractor to maintain signs and barricades overnight and on weekends. It shall be the responsibility of the Contractor to make sure that the signs remain posted until no longer required and are protected from vandalism or removal.

10-2.04 MEASUREMENT AND PAYMENT

The contract lump sum price paid for "Construction Phasing and Traffic Control" (**Bid Item 2**) includes full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in providing and maintaining a traffic control system, complete in place, as shown on the Plans, as specified in the Standard Specifications, these Specifications, and as directed by the Engineer.

The Contractor shall be paid on pro rata basis for the work done per month, and said payment shall be for providing all labor, material, equipment, devices, supervision, and all incidentals as are needed to provide traffic control as specified herein, and as may be required to complete the work.

SECTION 10-3 – WATER POLLUTION CONTROL

10-3.01 GENERAL

The Contractor shall be responsible for implementing and managing these systems during the life of the project. The WPCP shall conform to all applicable requirements in Section 13-2, "Water Pollution Control," of the State Standard Specifications these Special Provisions, Section 30, Stormwater Pollution Control.

10-3.02 SUBMITTAL

The Contractor shall submit a **Water Pollution Control Program (WPCP)** to address the storm drain and various improvements to the Engineer for approval. The WPCP shall conform to the Section 13 Water Pollution Control of the Standard Specifications and these Specifications.

10-3.03 EXECUTION

The WPCP shall be prepared using the latest template posted on the State's Construction stormwater website.

Dewatering work shall comply with Section 13-4 Job Site Management of the Standard Specifications and shall include the following:

1. Keep all excavations reasonably free from water during construction.
2. Disposal of water shall not damage property or create a public nuisance.
3. Have on hand pump equipment and machinery in good working condition for emergencies and workmen available for its operation.
4. Dewatering systems shall operate continuously until foundations are poured or trenches are backfilled.
5. Groundwater shall be controlled to prevent softening of the bottom of excavations, or formation of "quick" conditions.
6. Dewatering systems shall not remove natural soils.
7. Control surface runoff to prevent entry or collection of water excavations.
8. Release of groundwater shall be controlled to prevent disturbance of the natural foundation soils or compact fill.
9. There shall be no discharge of turbid water on site.
10. Discharge or disposal of water shall be controlled to prevent erosion

The Contractor shall not perform work that may cause water pollution until the WPCP has been approved by the Engineer. The Engineer's review and approval shall not waive any contract requirements and shall not relieve the Contractor from complying with Federal, State and local laws, regulations, and requirements.

10-3.04 MEASUREMENT AND PAYMENT

The contract lump sum price paid for "Water Pollution Control" (**Bid Item 3**) includes full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in implementation and maintenance of the water pollution prevention system, complete in place, as shown on the Plans, as specified in the Standard Specifications, these Specifications, and as directed by the Engineer.

SECTION 10-4 – CONSTRUCTION LAYOUT

10-4.01 GENERAL

This section specifies the work for construction staking which consists of providing all labor, tools, equipment, materials and incidentals necessary to locate by staking all improvements, to the line and grade shown on the Plans.

10-4.02 EXECUTION

Contractor shall furnish all land surveys, establish all base lines and bench marks and make sufficient detailed surveys needed for working points, lines and elevations. The Contractor shall develop all batter boards. Contractor shall also develop all additional working points, lines and elevations as they may desire to facilitate his or her methods and sequence of construction.

All work shall be staked in order to meet the lines and grades shown on the Plans. Copies of all survey cut sheets shall be provided to the City Engineer two (2) working days before the planned work begins.

Prior to concrete pouring, formwork and survey staking shall be reviewed and approved by the City Engineer.

10-4.03 MEASUREMENT AND PAYMENT

The contract lump sum price paid for "Construction Layout" (**Bid Item 4**) includes full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in providing staking and layout, complete in place, as shown on the Plans, as specified in the Standard Specifications, these Specifications, and as directed by the Engineer.

SECTION 10-5 – UTILITY POTHOLING

10-5.01 GENERAL

The Contractor shall make their own investigations, including exploratory excavations, referenced herein as potholing, to determine the locations and type of existing utilities, including service connections, prior to commencing work which may result in damage to existing utilities or other underground facilities. .

It is not the intent of the Plans to show the exact location of all existing or relocated utilities and the Engineer assumes no responsibility therefor. The position of the utilities shown on the Plans is derived from records of utility owners and limited utility locating services. The service connections to these utilities may be, but are not necessarily, shown on the drawings. Overhead utilities including wires, poles and guys are not necessarily shown on the Plans and shall be determined from the Contractor's visit to the site. It shall be the responsibility of the Contractor to determine the exact location of all utilities and service connections thereto ahead of any excavations through "potholing." The Contractor shall immediately notify the Engineer as to any utility discovered by him/her in a different position than shown on the drawings or which is not shown on the drawings.

10-5.02 EXECUTION

Prior to setting grades or commencing any excavation work, the Contractor shall contact all affected utility owners and request them to locate and mark the location of their respective

utilities on the ground. The Contractor shall then undertake "potholing" procedures as described herein below.

Methodology for potholing shall be determined by location and shall be approved by the Engineer prior to starting work. Potholing methodology shall not disturb surrounding facilities, pavements, structures, vegetation, or other existing elements beyond what is necessary for the potholing location.

If a utility owner is not equipped to provide the locating service, the Contractor shall provide for it. The location of said underground pipes and conduits shall be clearly marked on the pavement or with suitable markers if not on pavement. In addition to the location of metallic pipes and conduits, non-metallic pipe, ducts and conduits shall also be similarly located using surface indicators and shall then be similarly marked.

As soon as the utility survey is completed, and prior to setting grades or commencing fabrication of engineered pipe, the Contractor shall commence "potholing" to determine the actual location of the pipe, duct or conduit. The Contractor shall uncover all underground utilities, including sewers and storm drains, exercising extreme care so as to avoid drainage. It will be the Contractor's responsibility to have repairs made to existing facilities at their expense in the event of damage. Underground utilities shall be uncovered to a point one (1) foot below the pipe or as directed by the Engineer, where crossing, interferences or connections are shown on the drawings, prior to the preparation of shop drawings, trenching or excavating for any pipe or structure, in order to determine actual elevations. Once uncovered, the Contractor shall record the depth of the utility at the pothole and clearly mark the depth on the pavement. Any variation in the actual elevations and the indicated elevations shall be brought to the Engineer's attention.

Excavations around underground electrical ducts and conduits shall be performed using extreme caution to prevent injury or damage to workers and the electrical ducts or conduits. Similar precautions shall be exercised around gas line, telephone, and television cables.

Where an underground utility is at variance with the Plans the contractor shall proceed as follows:

- A. Marked utility not shown on the Plans: If a utility is not shown on the Plans but marked in the field by the utility owner, the Contractor shall pothole the utility and proceed with the work providing the utility is not in conflict with the line or grade of the pipeline to be laid and report the discrepancy to the Engineer.
- B. Utility shown on the Plans but not marked: If a utility is shown on the Plans, but not marked by the utility company or marked in a different location, then the Contractor shall consult with the utility company, pothole the utility, and then proceed with the work providing the utility is not in conflict with the foundation or grade of the pipeline to be laid.
- C. Unmarked utility: If a utility is not marked by the utility company and the contractor encounters it, then the contractor shall immediately notify the Engineer and the utility company. The Contractor shall proceed with the work if the utility is not in conflict with the line or grade of the pipeline to be installed.

After the need for potholing is complete, the Contractor shall backfill the potholing location.

10-5.03 MEASUREMENT AND PAYMENT

The compensation for providing "Utility Potholing" shall include furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work as shown on the Plans, as specified in the Standard Specifications and these Specifications, and as directed by the Engineer and shall be considered as included in the contract prices for the various items of work and no additional compensation will be made therefor.

SECTION 10-6 – MONUMENT PRESERVATION

10-6.01 GENERAL

The Contractor shall preserve monuments, benchmarks, survey control points, reference points, and other permanent points (hereinafter referred to as monuments) in accordance with the Business & Professions Code §8771; Streets & Highways §732 & §732.5, §1492.5, §1810.5; and Penal Code §605. The Plans indicate the locations of all known monuments located within the project area. All work locating and setting monuments shall be completed by a Land Surveyor licensed by the State of California.

The Engineer has filed corner records for all survey monuments within the project area. Prior to commencement of construction, the Engineer will provide this map to the Contractor. The Contractor shall preserve these features to the extent that is practical. Prior to disturbing a monument, the Contractor shall notify the Engineer.

The Contractor shall assume at least ten (10) monuments will need to be relocated and reset.

10-6.02 EXECUTION

The Contractor shall locate all monuments within the project area that could potentially be disturbed by his or her work. For each of these monuments, the Contractor shall file a pre-construction corner record with Marin County showing three reference control points that are tied to the monument. **NO WORK CAN COMMENCE UNTIL THIS IS COMPLETE.**

If a monument is disturbed, the Contractor shall re-set the monument in accordance with Uniform Construction Standard Drawing #300 and file a corner record with Marin County. The Contractor shall be responsible for paying the cost for all filing fees.

In the event that any non-referenced monuments or monument reference points become in danger of being disturbed due to construction, the Contractor shall cease the threatening activity and notify the Engineer immediately. In no case may an unreferenced monument or monument reference point be damaged during construction.

Any monuments that are disturbed or sustain damage during construction, the Contractor shall bear the expense for rebuilding it. In any instance where the City deems a damaged monument to be irreplaceable, the Contractor shall be fined \$20,000 per monument.

10-6.03 MEASUREMENT AND PAYMENT

Full compensation for providing "Monument Preservation" includes furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in preserving

monuments, including filing records and resetting points, complete in place, as shown on the Plans, as specified in the Standard Specifications, these Specifications, and as directed by the Engineer and shall be considered as included in the contract prices for the various items of work and no additional compensation will be made therefor.

SECTION 10-7 – CLEARING AND GRUBBING AND REMOVALS

10-7.01 GENERAL

All clearing and grubbing work shall be done in accordance with Section 17-2, "Clearing and Grubbing", of the State Standard Specifications, these Specifications, and as directed by the Engineer.

10-7.02 EXECUTION

Clearing and grubbing shall consist of, but not limited to, removing and disposing of vegetation, debris, soil, trees less than 6-inches in diameter, toots, pavement, and all other objectionable material as required to construct the improvements, as shown on the Plans and as specified in these Specifications.

Plant removal, as indicated in the plans shall include removal of any roots or trunks to a depth of fifteen (15) inches below existing grade or as directed by the Engineer.

The Contractor shall dispose all excess materials consistent with Section 11 "Disposal" of the Special Conditions.

Prior to starting clearing and grubbing operations, the Contractor shall inform the Engineer of the intended limits of their clearing and grubbing operations and shall obtain the Engineer's approval on such proposed limits. The Contractor shall not clear and grub any area not essential to their construction obligations and protect from injury or damage resulting from their operations all vegetation, facilities, or improvements, which are to remain. All edges of existing paving to remain shall be sawcut in a neat, clean manner.

10-7.03 MEASUREMENT AND PAYMENT

Full compensation for providing "Clearing and Grubbing and Removals" includes full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in site clearing, complete in place, including disposal, as shown on the plans, as specified in the Standard Specifications and these Specifications, and as directed by the Engineer, and shall be considered as included in the contract prices for the various items of work and no additional compensation will be made therefor.

SECTION 10-8 – DEMOLITION

10-8.01 GENERAL

The Contractor shall remove and dispose pavement sections, rodding inlets, cleanouts, maintenance holes, existing facilities conflicting with installation of these sewer improvements, and abandoned certain pipelines as specified as necessary for the construction of work as shown on the plans and as specified.

Dust Control shall conform to the provisions of Section 10, "Dust Control" of the State Standard Specifications.

The Contractor shall obtain all special permits and licenses and give all notices required for performance and completion of the demolition and removal work, hauling, and disposal of debris.

Contractor shall review with Engineer the exact limits of work and extent of materials to be removed.

- A. Examine site and structures and determine exact nature and status of structural elements and above ground and below ground utilities prior to commencing demolition.
- B. City assumes no responsibility for actual condition of items or structures to be demolished.

10-8.02 SUBMITTALS

Contractor shall submit a schedule indicating proposed methods and sequence of operations for selective demolition work for review prior to commencement of work. Include coordination for shut-off, capping, and continuation of utility services as required.

- A. Provide detailed sequence of demolition and removal work to ensure uninterrupted progress of adjacent building uses.
- B. Coordinate continued occupancy with adjacent building tenants.

10-8.03 MATERIALS

- CONTROL DENSITY FILL (CDF). CDF shall be flowable to fill the voids and self-leveling within the area to be backfilled. CDF shall be Shamrock Material Mix Number 1503 or approved equal.

10-8.04 EXECUTION

Provide a minimum of 72 hours advance notice of demolition activities to the Engineer.

Sanitary Sewer Maintenance Hole Abandonment:

Abandoned Sanitary Sewer Maintenance Hole (SSMH) will first have both influent and effluent lines plugged inside the maintenance hole with watertight concrete. The minimum length of watertight concrete plugs will be the diameter of the abandoned pipe plus one foot.

The upper 12-inches of maintenance hole or as approved by the Engineer shall be removed and disposed. The maintenance hole will then be filled with a flowable CDF. Pavement restoration shall include sawcutting the edges of the existing asphalt concrete. A 12-inch hot mix asphalt plug shall be installed in lifts of 3 inch max or as approved by the Engineer flush to existing grade.

Lamp Hole Abandonment

After pipe bursting through the lamp hole to be abandoned, the upper 12-inches of the lamp hole or as approved by the Engineer shall be removed and disposed of. The lamp hole will then be filled with flowable CDF. Pavement restoration shall include sawcutting the edges of the existing asphalt concrete. A 12-inch hot mix asphalt plug shall be installed in lifts of 3 inch max or as approved by the Engineer flush to existing grade.

Abandoning Sanitary Sewer Lines: Abandonment shall consist of cutting, removing a short section of pipe and capping or plugging the open end(s) of pipe with a 36-inch-long plug of concrete and filling the pipe with flowable CDF. If the sewer abandoning location is located at maintenance holes, Contractor shall remove a short section of pipe at the inlet area of the maintenance hole, plug open ends of the pipe with 12-inch-long plug of concrete, and cap and patch the existing maintenance hole with concrete.

Portland Cement Concrete of "Concrete" for abandoning of sanitary sewer shall conform to the requirements in Section of "Portland Cement Concrete" of these special provisions.

Whenever existing pipes are to be cut or abandoned, the open ends of said pipes shall be securely closed by a tight-fitting plug or wall of concrete not less than 0.5-foot thick, or by a tight brick wall 0.67-foot thick with cement mortar joints.

Stoppers for pipes and branches left unconnected shall be made of the same material as the pipe or of resilient joint material (Flexible compression joints in clay pipe and resilient joint materials to be used therein shall conform to the requirements of ASTM Designation: C-425). After placing the stopper, it shall be covered with a layer of sealant. The sealant shall be sufficiently fluid to insure free flow around the stopper.

The maintenance hole frame and cover from existing maintenance holes to be removed or abandoned shall not be re-used on new maintenance holes and shall become the property of the contractor.

Concrete Removal: Concrete removal shall be done in accordance with Section 15-1.03B, "Removing Concrete", of the Standard Specifications, these Specifications, the Contract Plans and as directed by the Engineer. This bid item also includes removal of base rock, as required for the improvements.

Asphalt Removal: Asphalt pavement removal shall be as indicated in the plans. Where indicated in the plans, roadway base and surfacing shall be removed in accordance with Section 39-3.05, "Remove Base and Surfacing," of the Standard Specifications and as directed by the Engineer. This bid item also includes removal of base rock, as required for the improvements.

Residue from cutting operations shall not be permitted to flow into storm drains or across lanes occupied by traffic and shall be removed from the pavement surface, concurrent with the cutting operation. All excavated material shall be removed and disposed of outside the street right of way in accordance with relevant sections of the State Standard Specifications.

Protection: Provide temporary barricades and other forms of protection as required to protect the general public from injury due to selective demolition work. Provide protective measures as required to provide free and safe passage of general public to and from occupied portions of building. Erect temporary covered passageways as required by authorities having jurisdiction.

Environmental Controls: Use water sprinkling, temporary enclosures, and other suitable methods to limit dust and dirt rising and scattering in air to lowest practical level. Comply with governing regulations pertaining to environmental protection.

Utilities: The Contractor shall call USA at (800) 642-2444 to mark the locations of all underground utilities at least 48 hours before the intended start of excavation. Any damage to any utility due to the Contractor's operations shall be repaired or replaced by the Contractor to the satisfaction of the Engineer. The Contractor shall receive no additional compensation for delays or inconvenience caused by utility relocations and/or adjustments. The delay caused by these relocations and/or adjustments shall not count towards the Contractors' "working days." The Contractor is responsible for coordinating with the various utility agencies for lateral adjustment and/or relocation. Contractor shall protect active sewer, water, gas, electric, and other utilities; and drainage and irrigation lines indicated or, when not indicated, found or otherwise made known to the Contractor before or during demolition work. Affected utility companies include but may not be limited to:

- A. Pacific Gas & Electric Company
- B. AT&T
- C. Comcast
- D. Marin Municipal Utility District
- E. City of Sausalito storm drain and sanitary sewer

Selective Demolition: Perform selective demolition work in a systematic manner. Use methods required to complete work indicated on the Plans in accordance with demolition schedule and governing regulations. Conduct selective demolition operations and debris removal in a manner to ensure minimum interference with roads, streets, walks, and other adjacent occupied or used facilities.

Traffic: Do not close, block or otherwise obstruct streets or other occupied or used facilities without written permission from the Engineer. Provide alternate routes around closed or obstructed traffic ways if required by governing regulations.

Clean up: The Contractor shall perform daily cleanup operations to keep the job site and adjacent properties free from accumulation of waste materials and debris resulting from the Contractor's operations. The Contractor shall deposit waste material in on-site containers or at a legal disposal area away from the site at the end of each working day.

Damages: Attention is also directed to Section 15, "Existing Facilities," of the State Standard Specifications. If the Contractor damages an existing improvement, which is to remain, he/she shall promptly restore such improvement to as good a condition as existed before the damage or shall replace the improvement, when restoration is not acceptable, with an improvement of at least equal quality. Cost of such restorations or replacements shall be the Contractor's expense.

Contractor Salvage: Items indicated on the Plans as to be removed but of salvageable value to the Contractor may be removed from site as work progresses. Contractor shall transport such items from site as they are removed. Storage or sale of removed items on site will not be permitted.

Disposals: The Contractor shall be responsible for disposal of material, which may include but is not limited to soil, concrete, asphalt, pipe, rock, and vegetation. The Engineer has made no arrangements for disposal of materials. All excess and unsuitable material shall be disposed of by the Contractor in accordance with Section 14-10 "Solid Waste Disposal and Recycling" of the State Standard Specifications_ and this Section.

There is no analytical testing data available for soil within the project limits. The Contractor shall assume that all soil has levels of contamination that exceeds environmental screening levels listed by the California Regional Water Quality Control Board for residential land use or commercial/industrial land use but is non-regulated and non-hazardous. All material shall be disposed of in an appropriate landfill with all-weather access. Contractor shall be responsible for testing soil as required by the disposal site. The Contractor shall dispose of material such as asphalt, concrete, organic, and wood in a recycling facility. All other materials shall be disposed in a legal facility.

ANSI A10.6, Safety Requirements for Demolition Operations and to the codes and regulations of the City. Dust Control shall conform to the provisions of Section 10-5, "Dust Control" of the State Standard Specifications. Nothing in these Specifications shall relieve the Contractor from his responsibilities as provided in Section 7-1.09, "Public Safety," of the Standard Specifications. Nothing herein shall be construed as relieving the Contractor of their responsibility for final cleanup of the site as provided in Section 4-1.13, "Cleanup", of the Standard Specifications. All work shall conform to

10-8.05 MEASUREMENT AND PAYMENT

The contract price paid per square foot for "Remove Pavement & Base" (**Bid Items 5 & 1a**) of the various types (including concrete driveway, curb, gutter, and asphalt pavement) shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work complete in place, including sawcutting, dust control, demolition removal, hauling, recycling, disposal, cleanup and other incidental work, as shown on the Plans, as specified in the Standard Specifications and these Specifications, and as directed by the Engineer.

The contract price paid per linear foot for "Remove Curb & Gutter" (**Bid Item 6**) of the various types shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work complete in place, including sawcutting, dust control, demolition removal, hauling, recycling, disposal, cleanup and other incidental work, as shown on the Plans, as specified in the Standard Specifications and these Specifications, and as directed by the Engineer.

The contract price paid for each "Lamp Hole Abandonment" (**Bid Item 7**) shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work complete in place, including CDF backfill, removals, disposals, plugging inlet and outlet pipes, sawcutting, hot mix asphalt plug, and other incidental work of the various materials necessary for abandonment as shown on the Plans, as specified in the Standard Specifications and these Specifications, and as directed by the Engineer.

The contract price paid for each Lamp Hole Frame & Lid Removals (**Bid Item 8**) shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals for all work in place, including sawcutting, dust control demolition removal, disposal, cleanup and other incidental work. The lamp hole frame and lid shall not be re-used and shall become the property of the Contractor.

Full compensation for "Abandoning Sanitary Sewer Lines" includes furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in, as shown on the Plans, as specified in the Standard Specifications, these Specifications, and as directed by the Engineer, and shall be considered as included in the contract prices for the various items of work and no additional compensation will be made therefor.

SECTION 10-9 – SCARIFICATION

This work shall consist of the scarification and compaction of native soil underneath the new asphalt and concrete pavement sections as shown on the plans.

Upon excavation to subgrade depth in locations to receive new asphalt or concrete pavement, the soil shall be scarified to a minimum depth of 6 inches, moisture conditioned to within 2 to 5 percentage points above optimum moisture content, and compacted to a minimum relative compaction of 90 percent relative compaction to the maximum dry density as determined in the laboratory according to ASTM D1557.

The Contractor shall protect from damage all existing improvements, drainage facilities, sanitary sewage facilities, water facilities, traffic signal facilities, landscaped areas, trees and shrubbery that are not required to be removed during construction. Any existing improvements, drainage facilities, sanitary sewage facilities, water facilities, traffic signal facilities, landscaped areas, etc., damaged as a result of the Contractor's construction activities shall be replaced by the Contractor at no cost to the City.

Shallow utilities may be located within the scarification area. The contractor shall identify these utilities and protect during scarification.

It is the Contractor's responsibility to plan the preparation of the subgrade with respect to weather conditions. If poor weather creates excessive moisture in the subgrade or the inability to meet minimum compaction standards, the Contractor shall implement alternative methods as approved by the Engineer to continue subgrade preparation in accordance with these Plans and Specifications.

PAYMENT - Full compensation for conforming to the provisions in this section, not otherwise provided for, shall be considered as included in prices paid for other elements of work and no additional compensation will be allowed therefor.

SECTION 10-10 – CONCRETE PAVEMENT

10-10.01 GENERAL

The Contractor shall place concrete pavement and other elements to complete the project. All work in this section shall be done in accordance with and Section 73 of the Standard Specifications, except as modified in these General and Supplemental Conditions. All concrete work shall be completed to the satisfaction of the Engineer prior to placement of pavement.

Concrete curb and gutter shall conform to the Uniform Construction Standard (UCS) plan 105 (Type "A") and as directed by the Engineer. All Work shall be done to the satisfaction of the Engineer.

Damage to the street, sidewalk, curbs and gutters from construction activities shall be repaired to the satisfaction of the Engineer.

10-10.02 SUBMITTALS

The Contractor shall submit the concrete mix design and strength data to the Engineer for favorable review the following.

Supplier's certificates showing conformance with this specification shall be delivered to the Engineer with each shipment of materials delivered to the job site.

10-10.03 MATERIALS

- Portland Cement Concrete for fixed form concrete surface improvements shall be minor concrete conforming to the requirements of Section 90-2 "Minor Concrete" of the Standard Specifications with at least 505 pounds of cementitious material per cubic yard and 1-inch maximum graded coarse aggregate. No bagged mix is permitted. Hand mixing of Portland Cement Concrete for use in concrete surface improvements shall not be permitted. For concrete paving subjected to vehicular traffic, strength of concrete in place shall be 4,000 psi at 28 days. No admixtures shall be used without approval of the Engineer.

Maximum slump of fresh concrete permitted in these items shall be 4 inches. Slump shall be determined by either ASTM C-143 or California Test Method No. 520 at the Engineer's discretion.

- Dowels, where noted or called for on the Plans or detail drawings, shall be smooth billet-steel bars conforming to the requirements of ASTM Designation A615 for Grade 40 bars.

10-10.04 EXECUTION

The Plans provide the general location and description of the work to be performed. The Contractor shall review field conditions and layout the improvements consistent with the applicable City and CALTRANS standard drawings. The Contractor shall furnish sufficient measuring equipment to verify that grades are compliant with accessible standards. The Contractor shall discuss the proposed improvements with the Engineer and when approved, begin rough grading.

After removal of the existing concrete, the Contractor shall excavate and prepare the subgrade as to include scarification to 90% and placement of aggregate base to 95% relative compaction. The Contractor shall use extreme caution when excavating near tree roots and shall notify the City arborist if roots greater than 1-inch are encountered.

The Contractor shall take extra caution in areas where there is existing utilities under the existing sidewalk at the new curb ramp locations. The Contractor shall repair any damaged utilities at no additional cost to the project.

Concrete Placement

All new concrete curb & gutter shall be doweled and epoxied into the existing concrete using #4 rebar at 18" O.C. (minimum of 2).

The Contractor shall install formwork and receive approval from the Engineer prior to ordering concrete. The Contractor shall have sufficient personnel on site to manage the placement of the concrete.

Immediately after the surface of the concrete is finished, application of curing compound shall be made in accordance with Section 90-7.01B, "Curing Compound Method," of the Standard Specifications. The quality and quantity to be used shall be approved by the Engineer. The liquid compound shall contain a coloring matter which does not permanently alter the natural color of the concrete, but which will color sufficiently at the time of application to indicate readily the areas covered.

Time

The Contractor shall replace removed concrete with the final improvements within five (5) calendar days.

Surface Restoration

The Contractor shall grade the adjacent areas to conform to the existing conditions. This may include placing topsoil. Topsoil shall be procured and imported from a local supplier. The Contractor shall restore private property improvements. For conform grading within the public right of way, the Contractor shall place mulch once grading is complete.

10-10.05 MEASUREMENT AND PAYMENT

The contract price paid per square foot for "Concrete Pavement" (**Bid Item 9**) shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals and for doing all the work involved in placing concrete, sawcutting, complete in place, including, excavation, subgrade preparation, placement of Class II aggregate base, rebar, dowels, forming work, and finishing, as shown on the Plans, and specified herein, and as directed by the Engineer.

The contract payment for "Concrete Pavement is a revocable item and may be deleted entirely or in part from the Work at the option of the City. The provisions of Section 9-1.06B, "Increases of More Than 25 Percent", and Section 9-1.06C, "Decreases of More Than 25 Percent", of the Standard Specifications shall not apply to such omission, and no compensation will be allowed the Contractor by reason of such omission.

The contract price paid per linear foot for "Concrete Curb & Gutter (UCS #105) (Type A)" (**Bid Item 10**) and "Concrete Curb & Gutter (UCS #105) (Type E) 8-inch" (**Bid Item 11**) shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals and for doing all the work involved in placing concrete, sawcutting, complete in place, including, excavation, subgrade preparation, placement of Class II aggregate base, forming work, and finishing, as shown on the Plans, and specified herein, and as directed by the Engineer.

SECTION 10-11 – ASPHALTIC CONCRETE GRINDING/MILLING

10-11.01 GENERAL

Specifications for providing asphaltic concrete grinding/milling as indicated in the plans. Related section includes Section 10-12 - Hot Mix Asphalt (Type A).

Protect concrete pavements and walks, curbs and bases, and other improvements adjacent to the operations with suitable materials. The Contractor shall be responsible for any damage caused by the Contractor's employees or equipment and shall make necessary repairs. Building and other surfaces shall be covered with paper or other protection, where required. All damage caused by the Contractor's operations shall be prepared or replaced as required. Damage to the existing curb and gutter resulting from operating the grinding machine or the "hand" clearing operations shall be corrected, to the satisfaction of the Engineer, by the Contractor at the Contractor's expense. The required grinding is to be performed without disturbing the existing curb and gutter which may be cracked and fragile. Any concrete gutters chipped by the pavement grinding operations shall be epoxy patched and "Mason's mix" shall not be permitted.

10-11.02 EXECUTION

Preparation

- a. Sawcutting shall be performed prior to the pavement grinding operations at intersections and conforms. The requirement to sawcut may be waived where a minimum one inch vertical face transverse to the conform point can be provided.
- b. The Contractor shall notify business owners forty-eight (48) hours in advance of grinding operations to cover parked vehicles or other personal items located in exposed areas.

Limits

- a. Limits of grinding are indicated in the Plans and shall be marked by the Engineer prior to grinding operations. The contractor shall be responsible to notify the Engineer for marking of limits a minimum of 48 hours prior to startup time.
- b. No additional compensation shall be made for Pavement Grinding in excess of the limits marked or as shown on the Plans unless so directed by the Engineer.

Operation: Pavement Grinding shall be in accordance with the applicable provisions of Section 42-3 of the Standard Specifications and shall involve:

- a. Full Width Grinding (to eliminate asphalt hump): Full Width Grinding shall provide a minimum grind depth as indicated in the Plans across the roadway between the gutter pans on each side of the asphalt hump.

In those areas where the existing asphalt pavement extends to the curb face over the P.C. gutter pan and is left after the grinding operation, the Contractor shall clear this residue asphalt pavement to the curb face. The area requiring "hand" clearing shall be that area between the edge of the grinding wedge left by operating the grinding machine to the curb face. The Contractor shall then use suitable methods to clear residue asphalt concrete from the gutter pan (grinding lip to curb face).

Pavement Grinding shall be accomplished by a grinding machine having a cutter head at least six feet wide and shall be operated so as not to produce excessive fumes or smoke.

At pavement grinding pavement conforms, immediately after performing the pavement grinding, the Contractor shall place temporary cutback asphalt to provide a smooth ramp for vehicular traffic. The cutback asphalt shall be maintained by the Contractor until overlay work has begun at which time all cutback asphalt shall be removed and disposed of.

Residue from grinding shall be removed from the roadbed by sweeping immediately after grinding.

The residue material ground from the roadway surface shall become the property of the Contractor who shall make arrangements for disposal outside the right-of-way.

10-11.03 MEASUREMENT AND PAYMENT

The contract price paid per square foot for "Asphaltic Concrete Grinding/Milling" (**Bid Item 2a**) shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals and for doing all the work involved in milling, including disposal, complete in place, as shown on the Plans, and specified herein, and as directed by the Engineer.

The quantities to be paid for shall be to the specified dimensions of grinding regardless of the number of passes required to conform to the depth requirement shown on the Plans.

SECTION 10-12 - HOT MIX ASPHALT (TYPE A)

10-12.01 GENERAL

Specifications are for providing asphaltic concrete paving as indicated on drawings. Contractor shall protect concrete pavements and walks, curbs and bases, and other improvements adjacent to the operations with suitable materials. The Contractor shall be responsible for any damage caused by the Contractor's employees or equipment and shall make necessary repairs. All damage caused by the Contractor's operations shall be prepared or replaced as required.

10-12.02 SUBMITTALS

Contractor shall submit Certificate of Compliance from manufacturer for approval prior to installation.

Contractor shall provide submittal for each Respective manufacturer's product data for manufactured products.

10-12.03 MATERIALS

- Hot Mix Asphalt shall be Type A using the Method process and shall conform to the provision in Section 39 "Hot Mix Asphalt" of the Standard Specifications and these Specifications. Hot Mix Asphalt shall be compacted to a relative compaction of not less than 95 percent.

Aggregate grading for the hot mix asphalt shall conform to the grading specified in Section 39-2.02B "Aggregate Gradations" of the Standard Specifications. The base and leveling courses shall be dense graded, 3/4-inch maximum aggregate size and the surface course shall be medium graded 1/2-inch maximum aggregate size. When material used in the surface course is to be hand raked, 3/8-inch maximum size shall be used.

The amount of asphalt binder to be mixed with the aggregate shall be between 4 percent and 6 percent by weight of the dry aggregate. The exact amount of asphalt binder to be mixed with the aggregate will be approved by the Engineer. The Contractor must submit mix design for approval to the Engineer.

Asphalt binder to be mixed with aggregate shall be a steam-refined asphalt conforming to the provisions in Section 92, "Asphalt Binders" and have a viscosity grade of PG 64-10. The pavement surface upon which hot mix asphalt is to be placed and all adjacent vertical surfaces of existing pavement, curbs, gutters, etc. shall be thoroughly cleaned prior to paving. The Contractor shall furnish and operate a self-loading motor sweeper with spray nozzles before and after paving operations where feasible. All other areas will require hand sweeping. The pavement shall be free of dust, dirt, water, and vegetation prior to paving.

- Asphaltic emulsion shall be applied to the surface of existing pavements preparatory to resurfacing with hot mix asphalt, and to all concrete surfaces which will be in contact with hot mix asphalt surfacing. Asphalt emulsion shall be SS-1H conforming to Section 37 of the Standard Specifications. The Contractor shall submit a copy of Certificate of Compliance for asphaltic emulsion

10-12.04 EXECUTION

The surfaces upon which HMA is to be placed shall be thoroughly cleaned of all dirt, vegetation, and debris. Prior to application of tack coat, the parking lot shall be cleaned with a vacuum street sweeper and be clean of all dust

1. Placing Asphalt Concrete
 - a. The asphalt paving machine shall be equipped with an electronic "sonic ski" system with a minimum of three (3) sensors to be positioned a minimum of 10-foot in front, 10-foot behind and adjacent to the drum of the paving machine. The system shall be designed to optimize a smooth and consistent road profile. All settings and inputs shall be programmed and adjusted to yield an average thickness equivalent to the paving thickness shown on the Plans. The engineer can cancel the use of the "sonic ski" system at any point without incurring any penalties by the contractor.
 - b. Areas to be paved shall be covered with a layer of hot asphalt concrete surfacing not less than the thickness indicated after compaction. Where not indicated, compacted thickness shall three inches for roads, driveways, and aisles of parking areas.
 - c. Paving asphaltic concrete shall be delivered, laid, rolled, and finished in accordance with Section 39 of the Caltrans Standard Specifications.
 - d. Before placing asphalt concrete, a tack coat (paint binder) shall be applied to all vertical surfaces against which asphalt concrete surfacing will be placed. Asphaltic emulsion shall be applied to the surface of existing pavements at the approximate rate of one-sixteenth (1/16) gallon per square yard. Pools or unevenly distributed areas shall be redistributed by means of hand brooms. The emulsion shall be applied only so far in advance of the surfacing work that it has sufficient time to set, as required by the Engineer.
 - e. After a tack coat of asphalt emulsion has been applied, hot mix asphalt shall be spread and compacted. It is contemplated that hot mix asphalt will be laid

to a compacted thickness as specified. All loose material tracked out onto the new compacted surface shall be removed before an adjacent pass is made by the asphalt paver. All layers of hot mix asphalt shall be laid using an asphalt paving machine as specified in Section 39, Hot Mix Asphalt, of the Standard Specifications.

- f. The Contractor shall taper the new pavement thickness adjacent to the gutters in the streets designated by the Engineer. Tapering to the edge of the gutters shall be performed in such manner that adequate binding of the very fine asphalt material to the existing surface is obtained. Contractor shall, at the direction of the Engineer and pursuant to field conditions, apply additional binding material in these areas prior to the placement of the new hot mix asphalt, and shall adequately rake the coarse material so as to obtain the desired result. Crown heights may be adjusted at the direction of the Engineer. Aggregate segregation will be grounds for rejection.
- g. The location of all utility and City-owned structures that are covered over by the new pavement shall be legibly marked with paint on the new pavement and on the adjacent curb and/or sidewalk. In addition, the Contractor must make a list of each utility cover that is paved over and not raised to grade during the paving job (e.g. PG&E utility covers) and must notify the utility in writing of the location of said utility cover and the date that it was paved over. A copy of this written notification must be sent to the City. If utility cover is paved over and not raised to grade during the paving job, the pavement must be at least 1-1/2 inches thick over the utility cover and no depression in the roadway surface can be left over the utility cover. If 1-1/2 inches of pavement cannot be laid over a recessed utility cover, then the hot mix asphalt shall be feathered to the grade of the utility cover and arrangements with the utility must be made to raise it to grade. Hot mix asphalt rolled gutters shall be resurfaced as directed by the Engineer as part of the overlay resurfacing work and no additional payment will be made therefor.
- h. Hot mix asphalt shall not be placed when the atmospheric temperature is below 50 degrees F (10 degrees C) or during unsuitable weather.
- i. Compaction of the asphalt shall be achieved using mechanical rollers. Rolling shall be performed in such a manner that cracking, shoving, or displacement will be avoided. Any displacement occurring as a result of reversing the direction of the roller or from any cause shall at once be corrected by the use of rakes and fresh asphalt mixture where required.
- j. Areas inaccessible to the rollers shall be compacted by use of a power compactor of the high impact vibration plate type capable of attaining the same compaction as the rolled areas. An adequate number of rollers shall be used with each paving operation.
- k. The completed surface shall be thoroughly compacted, smooth, and true to grade and cross section, free from ruts, humps, depression, irregularities, or segregated material.
- l. Finish paving shall conform to finish elevations within plus or minus 0.01 of a foot and shall be level to within plus or minus 1/4 inch in 10 feet when measured with a 10 foot straightedge in any direction. Finish surface of the wearing course shall be thoroughly compacted, smooth, and free from ruts, humps, depressions, cold joints, or other irregularities.

- m. Public traffic shall be permitted the use of the street area providing that such traffic does not interfere with the continuity of the paving operations. When street operations are suspended, all equipment shall be removed from portions of the streets that are to be used by the public traffic. Where work is unfinished at a pedestrian crosswalk at the end of a working day, the edge of the paved surface to said crosswalk shall be feathered to provide a smooth pathway for foot traffic. The pavement shall be protected from traffic until thoroughly cooled and set. Hot mix asphalt rolled gutters shall be compacted as directed by the Engineer as part of the overlay resurfacing work and no additional payment will be made therefor.
 - n. Any rollers shall be equipped with pads and water systems that prevent sticking of asphalt mixtures to the steel-tired wheels. A parting agent, which will not damage the asphalt mixture, as determined by the Engineer, may be used to aid in preventing the sticking of the mixture to the wheels.
 - o. The finished surface shall be cat-tracked within 24 hours of completion of paving work. Final striping shall be applied within one week of completion of paving work.
 - p. Pavement fabric shall be installed per Manufacturer's recommendation.
2. Field Quality Control
- a. The Contractor shall control the quality of the work and shall provide adequate testing to assure compliance with these Specifications.
 - b. After completion of paving work, all paving shall be inspected. Any resulting "ponds" shall be ringed with chalk. Such hollows shall be corrected with addition of asphalt paving materials and rerolling until all paving is completely level and free from hollows and high spots.
 - c. As part of its quality control program, Contractor shall employ a competent qualified testing subcontractor to perform in-place density and compaction tests of the completed pavement in accordance with California Test 375 to determine compliance with specified requirements. A minimum of: three (3) tests shall be performed at each roadway location and/or as directed by the Engineer to verify compliance. Contractor shall provide all test results to the Engineer by the end of the next business day.

The HMA shall be placed in 3-inch maximum lifts. Conform sections shall be squared off and hand raked to a neat straight line. Edges at curb shall be hand raked and rolled with a small roller or tamper when larger roller cannot be used.

Finished pavement shall be free from ripping, ruts, humps, depressions, improper conforms, and other irregularities per the State Standard Specifications. Unacceptable paving shall be removed by cold planing and repaved 1-inch deep.

10-12.05 MEASUREMENT AND PAYMENT

Full compensation for providing "Hot Mix Asphalt (Type A)" (**Bid Items 12, 1b and 2b**) will be measured by the tons of asphalt installed and shall include furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in furnishing and placing aggregate base and compaction tests complete in place as shown on the Plans, as specified in the Standard Specifications and these Specifications, and as directed by the Engineer. The

Contractor will not be paid for asphalt thickness above that which is specified. Contractor shall submit asphalt tags upon arrival of the delivery truck, or as directed by the Engineer.

SECTION 10-13– DIG OUT REPAIR

10-13.01 GENERAL

Specifications are for providing digouts as directed by the Engineer. Contractor shall protect asphalt and/or concrete pavements and walks, curbs and bases, and other improvements adjacent to the operations with suitable materials. The Contractor shall be responsible for any damage caused by the Contractor's employees or equipment and shall make necessary repairs. All damage caused by the Contractor's operations shall be prepared or replaced as required.

10-13.02 SUBMITTALS

Contractor shall provide submittal for each Respective manufacturer's product data for manufactured products.

10-13.03 MATERIALS

- See Section 10-10 Concrete Pavement
- See Section 10-12 Hot Mix Asphalt (Type A)
- See Section 10- 16 Aggregate Base

10-13.04 EXECUTION

As indicated in the field by the Engineer in white paint, the Contractor shall coordinate quantities for standard and deep dig-out repairs. Contractor shall grind all limits of dig-outs and field determine with the Engineer the appropriate depth of dig-out. Contractor shall assume 4" minimum to 10" maximum grind depths for deep dig-outs. Contractor shall be responsible for removal, hauling, and disposal of excess materials.

- See Section 10-10 Concrete Pavement
- See Section 10-12 Hot Mix Asphalt (Type A)
- See Section 10- 16 Aggregate Base
-

10-13.05 MEASUREMENT AND PAYMENT

The contract price paid per square foot for "Dig Out Repair" (**Bid Item 13**) shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals and for doing all the work involved in repairing damage asphalt, complete in place, including, grinding, asphalt removal and disposal, placing aggregate base and asphalt and concrete placement, as shown on the Plans, and specified herein, and as directed by the Engineer.

SECTION 10-14 – CURB PAINT

10-14.01 GENERAL

Specifications for providing curb paint as indicated.

10-14.02 SUBMITTALS

Contractor shall submit shop drawings and diagrams, indicating location, color, and dimensions of curb paint.

10-14.03 MATERIALS

- Curb paint shall conform to the requirements in ASTM Designation: D 6628-01.
- Retroreflectivity of the paint traffic stripes and pavement markings shall conform to the requirements in ASTM Designation: E 1010.
- Paint type shall be Waterborne Traffic Line conforming to the requirements of Federal Specification TT-P-1952E.

Painted curb markings work consists of painting curbs with (red, white, or blue) paints as shown in the Plans. All work shall be performed in conformance with the provisions in Section 84, "Traffic Stripes and Pavement Markings," of the Standard Specifications and these Specifications at the locations shown on the Plans and as directed by the Engineer.

10-14.04 EXECUTION

1. Application shall consist of two separate coats of traffic paint of the appropriate color to the face and top of the curb.
2. Nothing in these Specifications shall relieve the Contractor from their responsibilities as provided in Section 7-1.09, "Public Safety," of the Standard Specifications.

10-14.05 MEASUREMENT AND PAYMENT

The contract lump sum price paid for "Curb Paint" (**Bid Item 14**) shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in painting red curbs as shown in the Plans, as specified in the Standard Specifications and these Specifications, and as directed by the Engineer.

SECTION 10-15 – PAVEMENT STRIPING AND MARKINGS

10-15.01 GENERAL

Specifications for providing traffic striping and control markings on pavement as indicated.

10-15.02 SUBMITTALS

Contractor shall submit shop drawings and diagrams, indicating stripe width of roadway divider stripes, style and size of letters for pavement marking designation, configuration and dimensions of arrows and any other traffic control markings on pavement.

Contractor shall submit evidence or affidavit which certifies that paint to be used complies with latest CARB/VOC regulations.

A certificate of compliance shall be provided by the Contractor to the City that all materials used for pavement marking and legends conform to the Specifications.

10-15.03 MATERIALS

- Traffic stripes and pavement markings shall be installed per Section 84 of the Standard Specifications and these Specifications.
- All striping and pavement markings shall be Thermoplastic and conform to either State Specifications 8020-41G-19 or 8010-41G-21. State Specifications for thermoplastic material and glass beads may be obtained from the Transportation Laboratory, P.O. Box 19128, Sacramento, California, 95819- (916) 739-2400. Thermoplastic material for all pavement markings shall be applied at a minimum thickness of 0.070-inch.

10-15.04 EXECUTION

1. All existing pavement markers and thermoplastic stripes and legends within the roadway reconstruction shall be completely removed immediately prior to hot mix asphalt paving. Markers, stripes, or legends which are removed shall be replaced with temporary markers, stripes and legends prior to opening the roadway to vehicular or pedestrian traffic.
2. All traffic striping, pavement markings (legend), and pavement markers removed prior to excavation or grinding shall be replaced except as modified in the Plans or as directed by the Engineer. Prior to replacement, the Contractor shall layout all striping patterns and marking locations by cat tracking or other suitable means for review and approval by the Engineer. Any striping and/or markings installed by the Contractor that the Engineer has not pre-approved, and that the Engineer determines are installed improperly or in the wrong location, shall be removed and replaced to the satisfaction of the Engineer at the Contractor's sole expense.
3. Surfaces which are to receive markings shall be thoroughly cleaned, free from loose materials and dry. Such areas shall be prepared by the Contractor to the satisfaction of the Engineer.
4. Any damage to existing or newly placed traffic striping due to the failure of the Contractor to protect the work, and correction of errors, shall be repaired by the Contractor at no additional cost.
5. All new traffic stripes and pavement markings shall meet the following requirements for applications with enhanced wet night visibility:

Quality Control and Assurance

1. Within 14 days of applying a thermoplastic traffic stripe or pavement marking with enhanced wet night visibility, the retroreflectivity must be a minimum of 700 millicandelas per square meter per lux for white stripes and markings and 500 millicandelas per square meter per lux for yellow stripes and markings. Test the

retroreflectivity under ASTM E 1010. Have a reflectometer as described in ASTM E 1010 at the job site for making these measurements.

2. Thermoplastic traffic stripes and pavement markings with enhanced wet night visibility must consist of a single uniform layer of thermoplastic and 2 layers of glass beads as follows:
 - a. The first layer of glass beads must be on the Authorized Material List under high-performance retroreflective glass beads for use in thermoplastic traffic stripes and pavement markings. The color of the glass beads must match the color of the stripe or marking to which they are being applied.
 - b. The 2nd layer of glass beads must comply with AASHTO M 247, Type 2.
3. Both types of glass beads must be surface treated for use with thermoplastic under the bead manufacturer's instructions.

Construction

1. Use a ribbon extrusion or screed type applicator to apply a thermoplastic traffic stripe.
2. Operate the striping machine at a speed of 8 mph or slower during the application of thermoplastic traffic stripe and glass beads.
3. Apply a thermoplastic traffic stripe at a rate of at least 0.38 pounds per foot of 4-inch wide solid stripe. The applied thermoplastic traffic stripe must be at least 0.090 inch thick.
4. Apply a thermoplastic pavement marking at a rate of at least 1.06 pounds per square foot. The applied thermoplastic pavement marking must be at least 0.100 inch thick.
5. Apply a thermoplastic traffic stripe and both types of glass beads in a single pass. Apply the thermoplastic 1st, followed immediately by consecutive applications of high-performance glass beads and then AASHTO M 247, Type 2 glass beads. Use 2 separate applicator guns for the glass beads, 1 applicator gun for each type of glass bead.
6. Contractor may apply glass beads by hand methods on pavement markings.
7. Distribute all glass beads uniformly on traffic stripes and pavement markings. Apply high-performance glass beads at a rate of at least 6 pounds per 100 square feet of stripe or marking. Apply AASHTO M 247, Type 2 glass beads at a rate of at least 8 pounds per 100 square feet of stripe or marking. The combined weight of the 2 types of glass beads must be greater than 14 pounds per 100 square feet of stripe or marking.

10-15.05 MEASUREMENT AND PAYMENT

The contract lump sum price for "Pavement Striping and Markings" (**Bid Item 15**) shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in preparing the surface (including striping and marker removal) and installation of pavement striping as shown in the Plans, as specified in the Standard Specifications and these Specifications, and as directed by the Engineer.

SECTION 10-16 – AGGREGATE BASE

10-16.01 GENERAL

Specifications for furnishing, spreading, and compacting aggregate base course for pavements as indicated.

Damage to the street, sidewalk, curbs and gutters from construction activities shall be repaired to the satisfaction of the City Engineer.

10-16.02 SUBMITTALS

Contractor shall provide submittal for the Respective manufacturer's product data for manufactured products.

10-16.03 MATERIALS

Aggregate base shall be Class 2, 3/4" maximum. When the aggregate base is constructed in more than one layer, the previously constructed layer shall be cleaned of loose and foreign matter by sweeping with power sweepers or power brooms, except that hand brooms may be used in areas where power cleaning is not practicable. Adequate drainage shall be provided during the entire period of construction to prevent water from collecting or standing on the area to be covered with aggregate base.

10-16.04 EXECUTION

1. Examination
 - a. Call for an inspection by the Engineer and obtain written acceptance of the prepared subgrade or subbase before proceeding with the placement of aggregate base course.
 - b. The subgrade or subbase to receive aggregate base course, immediately prior to spreading, shall conform to the compaction and elevation tolerances indicated for the material involved and shall be free of standing water and loose or extraneous material.
2. Installation Standards
 - a. Aggregate base course shall be applied over the prepared subgrade or subbase and compacted in accordance with Section 26 of the Caltrans Standard Specifications or as approved by the Geotechnical Engineer.
 - b. Aggregate base course shall be minimum uniform thickness after compaction of dimensions indicated. Where not indicated, compacted thickness shall be six inches for driveways/sidewalks and eight inches for roadways.
 - c. All compaction expressed in percentages in this section refers to the maximum dry density as determined by California Test Method No. 216.
3. Spreading of Material
 - a. Aggregate for base course shall be delivered as uniform mixture of fine and coarse aggregate and shall be spread in layers without segregation.

- b. Aggregate base course material shall be free from pockets of large and fine material. Segregated materials shall be remixed until uniform.
 - c. Aggregate base material shall be moisture-conditioned to near optimum moisture content in accordance with the applicable requirements of Section 10 of the State Standard Specifications.
 - d. Aggregate base course six inches and less in thickness may be spread and compacted in one layer. For thicknesses greater than six inches, the base course aggregate shall be spread and compacted in two or more layers of uniform thickness not greater than six inches each.
4. Compacting
- a. Relative compaction of each layer of compacted aggregate base material shall be not less than 95 percent based on maximum dry density as determined by California Test Method No. 216 or as noted in the design plan.
 - b. Thickness of finished base course shall not vary more than 3/4 inch from the indicated thickness at any point. Base which does not conform to this requirement shall be reshaped or reworked, watered, and recompact to achieve compliance with specified requirements.
 - c. The surface of the finished aggregate base course at any point shall not vary more than 3/4 inch above or below the indicated grade.
5. Field Quality Control
- a. Perform field tests in accordance with ASTM D2922 or ASTM D1557 as directed by the Geotechnical Engineer to determine compliance with specified requirements for density and compaction of aggregate base material, and with ASTM D3010 to determine moisture-content compliance of the installed base course.

10-16.05 MEASUREMENT AND PAYMENT

Full compensation for providing "Aggregate Base" shall include furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in furnishing and placing aggregate base and compaction tests complete in place as shown on the Plans, as specified in the Standard Specifications and these Specifications, and as directed by the Engineer shall be considered as included in the contract prices for the various items of work and no additional compensation will be made therefor.

SECTION 10-17 – SEWER FLOW CONTROL AND BYPASS PUMPING

10-17.01 DESCRIPTION OF REQUIREMENTS

The existing sewers are currently and continuously receiving and conveying wastewater (sewage), and those functions shall not be interrupted except as specified herein. The Contractor shall coordinate the work to avoid any interference with normal operation. Contractor shall immediately correct any undesirable conditions, which result from bypassing or other operations.

Contractor shall provide labor, equipment, materials, and supervision to temporarily control flow around the Contractor's work during construction. Contractor shall not interrupt the functions of

the existing sewers or cause sewer backups and is responsible for penalties and expenses in the event, that their operations cause any violation of the City's discharge **permit or in the event their operations result in any sewage spills.**

It shall be the Contractor's responsibility to always maintain, the sewer flows through the project site. A bypass shall be made by plugging existing maintenance holes upstream of the Contractor's work and pumping the sewage to maintenance holes downstream of the Contractor's work. Pumps and bypass piping shall be adequately sized to handle the flows to be bypassed without surcharging the system. Pumping system shall be sized for normal to peak conditions. Contractor shall monitor the level in the upstream maintenance hole at all times to prevent system surcharging. The bypassing system shall be subject to approval by the Engineer.

Bypass pumping shall be done in a manner that will not damage private or public property or create a nuisance. At no times shall a private lateral be used for bypass purposes. The pumped sewage shall be in an enclosed pipe or hose that is adequately protected from traffic and/or pedestrians and shall be redirected into the sanitary sewer system. A temporary tank of adequate capacity may also be proposed for bypass pump discharge. Discharging of sewage on private property, gutters, streets, sidewalks, or into storm sewers is prohibited. The Contractor shall be liable for all damages or fines (including fines imposed on the City as a result, of the Contractor's operations) associated with this work. After the work is completed, flow shall be restored to original conditions and temporary facilities shall be removed.

The Contractor shall provide 48-hour advance notice to the Engineer of the location and schedule of flow control. Contractor shall setup and test the bypass operation and demonstrate proper operation a minimum of 48-hours prior to disrupting flows in section to be bypassed.

The Contractor shall clean and repair without cost to the City any damage that may result from his negligence, inadequate or improper installation, maintenance and operation of bypassing and flow control system including mechanical or electrical failure.

The Contractor shall coordinate sewer bypass and flow interruptions with the City at least 14 days in advance and with the property owners and businesses at least 72 hours and again at 24 hours prior to disruption.

10-17.02 BYPASS PUMPING SUBMITTALS (AS APPLICABLE)

A bypass pumping plan for sewage flow control as required for construction of new sewer system. These plans shall be coordinated with the Traffic Control Plans and submitted for City approval. The Contractor shall submit bypass pumping plan for each bypass location at least 20 working days prior to pipe installation and/or rehabilitation. Submittals shall include:

1. Drawings showing location of temporary bulkheads, plugs, pumps, bypass piping (including diameter), discharge points, and all locations where pipelines will be buried or placed above grade. Include all provisions required to maintain access around/over bypass piping/pumping equipment.
2. Methods of controlling main pipeline flow, including location where sewage flows are to be diverted, type of pipe to be used for bypass, and the method of side sewer and lateral flow control.
3. Drawing to include location of maintenance holes to be monitored as part of system check for sewer flow control system.
4. Capacities of pumps and standby equipment.
5. Design calculations prepared by a licensed Professional Engineer in the State of California demonstrating hydraulic capacity of the bypassing system and selected

- equipment.
6. Drawing and design of temporary bulkheads.
 7. Emergency response plan to be followed in the event of a failure of the bypass pumping system or sewer pipeline being surcharged to an unacceptable level.
 8. Identify and designate full-time responsible person for Contractor that shall be responsible for monitoring and correcting problems with the by-pass/diversion system(s).
 9. Traffic control and/or diversion plan during bypass pumping operation.
 10. Catalog data for generators, pump controls and audible alarms.
 11. Operation plan that describes how the system will be monitored and controlled.

10-17.03 JOB CONDITIONS

Flow Data:

1. There is no flow data available. Contractor shall verify flows prior to construction and provide a bypass system capable of handling the flows.
2. The Contractor shall be responsible for design, construction, and operation of an adequate and properly functioning bypass system. Any testing or gathering of flow data is the responsibility of the Contractor. The Contractor shall coordinate all bypassing with the Construction Manager or Resident Engineer.
3. Where bypassing is required, the Contractor shall ensure that service for connecting laterals is not disrupted. The Contractor shall control all sewage flow around work site.

Protection:

1. Bypassing and dewatering operations resulting in discharges to the ground surface, streams, creeks, culverts, ditches, storm drains, or groundwater shall not be permitted. The Contractor shall perform work to protect both the public from potential health hazards and the environment from contamination.

10-17.04 MATERIAL

Primary Flow Control Pumps and Generators

1. Provide suitable "trash-type" primary pump capable of bypassing all flows around the worksite.
2. A minimum of two pumps are required for each flow control system in a duty and standby configuration. Standby pump shall be plumbed and capable of automatically starting on failure of the duty pump.

Bypass Flow Control Piping

1. The flow control piping shall be completely leak free. Any drips or leaks shall be repaired by the Contractor immediately.

Temporary Bulkheads and Plugs

1. Design and provide bulkheads and plug to withstand anticipated upstream differential head without leakage or displacement.
2. A watertight seal is required to prevent sewage flows from entering the work area.
3. Design plugs to have an emergency deflate system so plugs can be removed at any time without requiring confined space entry.

Standby Equipment

1. The Contractor shall have available on-site sufficient equipment and materials to ensure continuous and successful leak-free operation of the sewage flow control system.
2. Generator shall be always fueled. Generators shall be placed on spill guard mats or other approved double containment devices to eliminate the possibility of fuel spills to ground

surface. Provide sound attenuated enclosures if required by the Engineer.

10-17.05 SEWER FLOW CONTROL AND BYPASS PUMPING EXECUTION

Monitoring and Supervision of Sewage Flow Control Systems

1. The Contractor shall take all necessary precautions including constant monitoring (requires 24 hours per day, 7 days per week continuous monitoring by on-site Contractor personnel while sewage flow control systems are in place) of sewage flow control pumping and diversion plug or bulkhead to ensure that there are no spills, and no private properties are subjected to a backup.
2. The Contractor shall not shut down sewage flow control systems between shifts, on holidays or weekends, or during work stoppages without written permission from the Engineer.
3. Contractor shall monitor the group of maintenance holes as provided on the submitted maintenance hole monitoring plan that will constitute flow control and diversion system check. The Contractor personnel responsible for monitoring the flow control and diversion shall inspect each maintenance hole a minimum of once per 4 hours.

Noise Control

1. All pumps and generators shall be enclosed within sound baffling to reduce noise level.
2. The Contractor is made aware that additional noise barriers, which may include an insulated plywood shield, shall be erected to enclose all pumps and generators at the request of the Construction Manager or Resident Engineer and at no additional cost to the Owner.
3. Contractor shall use noise attenuated pumps, motors, and generators.
4. Contractor shall locate pumps and generators away from residences to the maximum distance possible.

Odor Control

1. The Contractor is required to minimize to the extent possible all odor associated with this work. The Construction Manager may request additional odor reducing measures if complaints about odor are received, at no additional cost to the Owner.

Pedestrian and Vehicular Access

1. The flow control pumping systems shall be adequately protected from traffic and shall be located to minimize disruption to vehicle and pedestrian traffic.
2. At locations where sewage flow control piping crosses driveway entrances, cross streets, or pedestrian crosswalks, the piping shall be placed in trenches constructed by the Contractor and backfilled or plated to allow traffic to cross unimpeded. Contractor shall not install sewage flow control within trenches.
3. When moving bypass piping from one location to another the disruption to vehicle and pedestrian traffic shall be minimized. The Contractor shall not drag long lengths of pipe along improved right-of-way unless approved by the Construction Manager in writing. The piping shall be cleaned and plugged prior to moving to prevent fluid discharge.
4. Flow control piping on private property shall not interfere with parking, access, or movement of supplies and materials. Contractor shall obtain consent in writing from private property owners prior to using their property for storage of materials or when locating any portion of the bypass pumping operation on private property.
5. It is the Contractor's responsibility to contact, coordinate, and acquire written permission from the private property owner for use of private property for location of flow control piping. The Contractor shall provide signed agreements to the Construction Manager prior to any work on the private property. Provide signed agreements with submittals.

Sewage Flow Control and Diversion

1. The Contractor shall set up and test the sewage flow bypassing systems for a minimum of 48-hours prior to removing the sewer from service for the start of the construction work. The Contractor shall correct any deficiencies in the system as required to provide a leak-free bypass system that will not cause overflows, backups or spills as specified.
2. The Contractor shall provide continuous flow control pumping and/or diversion of sewage flows for acceptable completion of the project. Where bypassing is required, the flows shall be redirected from a minimum of one maintenance hole upstream of the start of the alignment into the system downstream of the work area.
3. The Contractor can discharge bypassed wastewater flow to other sewers. It is the Contractor's responsibility to determine the allowable flows that can be discharged to the sewers. The bypassed flows shall not cause overflows, deterioration, or any adverse conditions on the existing systems.
4. Dumping or free flow of sewage on private property, gutters, and streets, into storm sewer, creeks, or flood control channels is prohibited. No bypassing is permitted to ground surface, receiving waters, or which results in groundwater contamination or potential health hazards.
5. The Contractor shall be liable for all clean up damages and resultant fines and in the event of a sewage spill. Contractor shall repair without cost to the City any damage that may result from his negligence, inadequate or improper installation, maintenance and operation of bypassing and a dewatering system including mechanical or electrical failures.
6. The Contractor shall be liable for all clean up damages, and resultant fines in the event of a sewage spill.

10-17.06 MEASUREMENT AND PAYMENT

Full compensation for providing "Sewer Flow Control and Bypass Pumping" shall include furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in furnishing and placing aggregate base and compaction tests complete in place as shown on the Plans, as specified in the Standard Specifications and these Specifications, and as directed by the Engineer shall be considered as included in the contract prices for the various items of work and no additional compensation will be made therefor.

SECTION 10-18 – SANITARY SEWER FACILITIES

10-18.01 GENERAL

Specifications for furnishing, installing, and testing sanitary sewer pipe as indicated.

10-18.02 SUBMITTALS

Contractor shall provide submittal for the Respective manufacturer's product data for manufactured products.

10-18.03 MATERIALS

- POLYVINYL CHLORIDE PVC C-900 (RUBBER RING JOINTS) - OPEN TRENCH CONSTRUCTION. This specification designates general requirements for unplasticized polyvinyl chloride (PVC) Plastic Pipe with integral wall bell-and-spigot joints. All PVC pipe shall be white or green. PVC Pipe and Fittings shall conform to all the requirements of AWWA C-900 for pipe with a DR = 18. All pipe, fittings, and accessories shall be of the same manufacture in order that bell-and-spigot configurations will be identical. Pipe shall be made up with rubber ring joints to provide for expansion and contraction. The bell shall consist of an integral wall section stiffened with two PVC retainer rings which

securely lock the solid cross section rubber ring into position. Methods of installation shall be in strict conformance with the recommendations of the manufacturer. The rubber ring gaskets shall consist of synthetic rubber compounds meeting the requirements of ASTM F-477. All fittings for C-900 pipe shall be one piece and shall meet the requirements of ASTM D-1784. Fittings shall conform to requirements of DR 18. Bells shall be gasketed joint conforming to ASTM D-3139 with gaskets conforming to ASTM F-477.

- **POLYETHYLENE PIPE AND FITTINGS (HDPE PIPE) - PIPE BURSTING.** Polyethylene pipe and fittings shall be Type III Category 5, Grade P34, with a DR=17. Joint type shall be butt-fusion welded, de-beaded, and accepted by the Engineer prior to pipe installation. The polyethylene resin shall contain 2% carbon black antioxidant, well dispersed, and be stabilized against ultraviolet degradation to provide protection during processing and subsequent weather exposure. The interior of the pipe shall be gray. All pipe fittings and specials shall be furnished by the same pipe manufacturer. Pipe shall be homogeneous throughout and be free of visible cracks, holes, foreign material, blisters, or other deleterious faults. The supplier shall provide polyethylene pipe with a permanently imprinted manufacturer's brand name, pipe size, and other identification for tracing pipe quality to raw material source. The HDPE pipe shall also be identified with a green stripe.
- **PLASTIC METALLIC TAPE.** Directly above the pipeline as shown on the plans, the Contractor shall install a continuous twelve (12) inch wide green plastic/metallic tape. Plastic tape to assist in easy location of the pipeline shall be Detectable tape as manufactured by Allen Systems, Inc, 108 East Wesley, Wheaton, IL, 60187, or Terra Tape as manufactured by Griffolyer Company, Div of Reef Industries, Inc, P O Box 33248, Houston, TX 77033, or approved equal. Legend printed on the tape shall be "CAUTION: SEWER MAIN BELOW"
- **LOCATOR WIRE.** The locator wire shall be Copperhead No. 12 AWG-Solid HS-CCS tracer wire, 30 mil HDPE, 30 volt as manufactured by Copperhead Industries, LLC or equal. Locator wire shall be terminated in maintenance holes or in a precast concrete traffic box with a cast iron traffic lid. The continuity of the locator wire shall be tested prior to final paving. All wire connections shall be made with copper crimps wrapped with electrical tape.
- **BACKWATER PREVENTION DEVICE (BPD).** BPD shall be as indicated in the Contract plans with Sewer Popper Model S62-304 in hardscape areas. In landscape or softscape areas, BPD shall be Genplex - Kelly Backwater Device (No-Hub & IPS) or DDR Sewer Relief Device (SRD) or approved equal.
- **UTILITY BOXES.** Cleanout boxes in non-traffic areas shall be Christy B09 box with D&L Cover I-2821-01 or approved equal. Cleanout boxes in traffic areas shall be Christy B16 box with precast concrete lid or approved equal.
- **RODDING INLET CAST IRON FRAME AND COVER.** D&L Foundry H8026 or approved equal.
- **ADJUSTABLE REPAIR COUPLINGS.** For connections of dissimilar side sewer lateral pipe materials, utilize Fernco, 5000 Series RC coupling with Type 316 Stainless Steel hardware or approved equal.

10-18.04 EXECUTION

BACKWATER WATER PREVENTION DEVICES

SEWERPOPPER and SSCO in Christy model BO9 Box with D&L Foundry V-09 grated cast iron lids as indicated in plans or approved equal shall be installed within hardscaped locations where the sewer exits the structure foundation within 18"-24". The BPD shall be located at least 6 inches below the building finished floor.

In landscapes or softscape locations where no roadway, driveway, walkway, pedestrian or vehicular traffic is to occur, utilize either a Kelly Backwater Device (No-Hub & IPS) or DDR Sewer Relief Device (SRD) or approved equal where the sewer exits the structure foundation within 18"-24". The BPD shall be located at least 6 inches below the building finished floor.

Contractor shall be responsible for locating the backwater prevention device and coordinating with the homeowner and Engineer. Contractor shall remove and dispose of all pavement, vegetation, and earthwork as needed for installation.

OPEN TRENCH CONSTRUCTION

The Contractor is specifically cautioned as to the possibility of empty pipeline floating due to flooding of the excavation by groundwater, rainwater, or backfill consolidation. For this reason, "jetting" for backfill consolidation will not be allowed for plastic pipe materials. Should any pipe sections be floated by water in the excavation, that reach of pipeline shall be removed, and damaged pipe repaired, the area re-excavated, de-watered, and the pipe reinstalled at the Contractor's expense.

Pipe shall be loaded, off-loaded, and otherwise handled in accordance with AWWA M23 and the manufacturer's recommendations.

The interior of pipes shall be kept free from dirt and debris as the pipe laying progresses. Open ends shall be plugged watertight when work is stopped, or for any other reason work is left unattended. All openings in the pipeline shall be kept covered or always plugged. Care shall be taken to prevent excavation water from entering the pipeline during all stages of construction.

All pipes shall be laid and maintained to lines and grades shown on the plans. The cover shall be measured from the established street grade or the surface of the permanent improvement of the top of the pipe barrel. No deviation shall be made from the required line or grade except with written consent of the Engineer.

The installation of PVC pipe shall conform to ASTM D2321 and these Special Provisions. Pipe bedding, trench backfill, and relative compaction shall be in accordance with the Contract Plans and these Technical Provisions

Contractor shall protect pipe from damage during handling and installation per the manufacturer's recommendations. Pipe damaged because of impact shocks, free fall, or other event must be inspected and approved by the Engineer prior to installation. The Engineer may reject the entire piece of pipe or require the damaged portion to be removed and discarded.

Pipe shall be laid up-grade with the socket or collar ends of the pipe up-grade unless otherwise authorized by the Engineer. Pipe shall be laid to Plan line and grade, with uniform bearing under the full length of the barrel of the pipe. Suitable excavation shall be made to receive the socket or collar, which shall not bear upon the subgrade or bedding. Any pipe which is not in true alignment or shows any undue settlement after laying shall be taken up and re-installed at the Contractor's expense.

Before joining bell and spigot PVC pipe, the plain end of the pipe shall be beveled to avoid damage to the rubber ring/gasket as the pipe is pushed home. The bell socket and the plain end

of the entering pipe shall be clean and free of foreign material prior to the seating of the rubber ring. The ring groove shall be cleaned prior to inserting a clean rubber ring. The ring shall be seated evenly all around and be free from twists. The rubber rings should NOT be lubricated. The spigot end of the pipe shall be lubricated with lubricant recommended by the pipe manufacturer. No other lubricant shall be used.

Whenever the work ceases for any reason, the end of the pipe shall be securely closed with a tight-fitting plug or cover.

Whenever existing pipes are to be cut or abandoned, the open ends of said pipes shall be securely closed by a tight-fitting plug or wall of concrete not less than 0.5-foot thick, or by a tight brick wall 0.67-foot thick with cement mortar joints.

Stoppers for pipes and branches left unconnected shall be made of the same material as the pipe or of resilient joint material (Flexible compression joints in clay pipe and resilient joint materials to be used therein shall conform to the requirements of ASTM Designation: C-425). After placing the stopper, it shall be covered with a layer of sealant. The sealant shall be sufficiently fluid to insure free flow around the stopper.

Pipe will be inspected in the field before and after laying. If any cause for rejection is discovered in a pipe after it has been laid, it shall be rejected, at the sole discretion of the Engineer. Any corrective work shall be approved by the Engineer and shall be at no cost to the City.

When connections are to be made to any existing pipe, conduit, or other appurtenances, the actual elevation or position of which cannot be determined without excavation, the Contractor shall excavate for, and expose, the existing improvement before laying any pipe or conduit. The Engineer shall be given the opportunity to inspect the existing pipe or conduit before connection is made. Any adjustments in line or grade, which may be necessary to accomplish the intent of the Plans, will be made at no extra cost to the city.

All junctions connecting any pipe or fitting to a PVC sanitary sewer main shall be made with a "Wye" fitting. "Tee" connections or "Taps" will not be permitted on any new pipe.

Trench Tape Installation:

Install trench tape along the line of pipe approximately one (1) foot above and along the center line of the pipe. Where the tape is not continuous, the tape ends at the discontinuity shall be overlapped a minimum of twelve (12) inches.

PIPE BURSTING CONSTRUCTION

The trenchless pipe replacement process shall utilize High Density Polyethylene Pipe as the carrier pipe. When shown on the plans sewer mains shall be pipeburst using a method that will not cause undue vibration or impact in the ground around the pipe or damage adjacent utilities.

Insertion/Receiving Pits: Insertion/receiving pits shall be prepared and backfilled in accordance with Trench Section Detail indicated in the Contract plans or as approved by the Engineer. All pits shall be adequately shored and braced, to insure safe work areas.

The locations for the insertion/receiving pits are to be determined by the Contractor and approved by the Engineer. In considering locations for insertion/receiving pits, the Contractor shall consider the size of the existing sewer and new pipe, locations of obstructions and services, locations of maintenance holes, pulling distances, traffic conditions, and locations of utilities. Insertion pits shall have a maximum slope of 2.5:1 entry slope and shall be shaped to permit as long a radius in the new pipe as feasible. This radius shall not be less than 35 times the outside diameter at pipe. If

existing maintenance holes are destroyed or damaged while constructing the insertion/receiving pits, they shall be reconstructed and/or repaired at no cost to the District.

The Contractor shall backfill all points where the new pipe has been exposed, such as insertion pits, outside of maintenance holes, lateral connections, critical utility crossings, etc. The backfill material shall be Class 2 aggregate base rock compacted according to the surface restoration or as approved by the Engineer.

The Contract shall excavate to provide air gaps at utility crossings for existing utilities with less than 2'-0" clearance to the outside diameter of the new sewer pipe. All loose soil shall be removed from the excavation prior to backfilling.

The Contractor shall physically disconnect all laterals from the existing main prior to pipe bursting, as shown in the Contract Plans.

The pipe will be installed in a manner so the pipe curve radius is never less than the pipe manufacturer's recommended minimum bending radius.

The Contractor shall install the pipe by utilizing static bursting or cone cracking methods. The use of hydraulic or pneumatic bursting devices shall be approved by the Engineer. The void created by the bursting device shall be sufficient in size to accommodate the pipe which shall be installed immediately after the void has been formed.

Where pipe is installed by pulling in tension, the recommended Safe Pulling Force, according to the pipe supplier, shall not be exceeded.

Pipe bursting through a maintenance hole shall not be allowed unless approved by the Engineer. Maintenance hole inverts and bottoms shall be removed to permit access for installation equipment and the larger proposed pipe. Maintenance holes must be inspected prior to performing any surface repairs. Structural damage to maintenance holes during pulling operations shall be repaired by the Contractor at no extra cost.

The Contractor shall anchor the pipe to concrete structures or maintenance holes after the pipe has been installed along the length of sewer replaced. The Contractor shall use a water stop or flange adapter, as supplied by the pipe manufacturer that is firmly seated perpendicular to the pipe axis, around the pipe exterior and cast into the structure base or near the structure wall center. The structure or maintenance hole connection shall be made after adequate time has been allowed for the pipe to relax from the applied tension forces, as specified herein.

Lateral Reconnection: The Contractor shall be responsible for disconnecting and reconnecting all live laterals to the main pipe. Capped/abandoned laterals shall not be reconnected to the new main.

The Contractor shall allow the pipe to return to its original length and shape in the unstressed state prior to trimming the excess pipe in the maintenance holes. The pipe manufacturer's recommendations shall be followed regarding the relief and normalization of stress and strain due to temporary stretching or elongation after pulling operations are completed. Contractor shall consider temperature and pulling time required when calculating required time for stress and strain relief. Time allowed for stress and strain relief shall be not less than 24 hours without a specific recommendation otherwise from the pipe manufacturer.

The Contractor shall allow a minimum of six (6) hours to elapse after pipe bursting mainlines prior to connecting permanent lateral connections to the new main, in order to allow the pipe to relax from the applied tension forces. The Contractor shall provide temporary lateral connections and or bypassing as required to prevent overflows from side sewers.

After the polyethylene pipe has been inserted in the existing maintenance hole, the Contractor shall trim the polyethylene pipe and anchor the pipe to the maintenance hole base. Care must be exercised to prevent the new pipe from slipping out of position prior to final sealing of the maintenance hole. The polyethylene replacement pipe shall protrude far enough into the maintenance hole to allow the sealing and trimming operations to be performed.

A minimum of twelve hours after pipe insertion, a rubber seal shall be placed in the annular space between the polyethylene pipe outside diameter and the inside diameter of the existing hole in the maintenance hole at each maintenance hole location, together with caulking and non shrink grout.

All rehabilitated sewer mains shall be tested, cleaned and TV-inspected as specified herein.

RECONNECT EXISTING SEWER LATERALS

All existing laterals shall be reconnected to the sanitary sewer line with suitable adapters or couplings.

All sanitary sewer lateral runs shall have a minimum of 1/4 inch per foot slope for 4-inch pipe and smaller, and a minimum of 1/8 inch per foot for 6-inch pipe and larger.

Where excavation is required for reconnection of laterals from the outside of the pipe, the Contractor's price shall include provisions for excavations as required, and for complete restoration of existing surface improvements damaged by his operations. Surface restoration shall include, but not be limited to, landscaping, irrigation, sidewalk, and pavement restoration. This work shall be done by the Contractor at no additional expense to the contract.

Where excavation for reconnection of laterals threatens walls, structures, large or valuable trees, laterals may be rerouted with the approval of the Engineer and paid as extra work to the contract.

PIPE TESTING

The Contractor shall perform a video recorded inspection of the sewer mains after the installation/rehabilitation of a new sewer main in compliance with the NASSCO PACP reporting format and coding standards. Such inspection shall be performed by a firm who has been actively performing such services for a minimum of two (2) years and an operator who has completed NASSCO PACP certified training, or an equivalent training program subject to approval by the Engineer.

Prior to conducting closed circuit television inspection it shall be the responsibility of the Contractor to plug and monitor or bypass sewer flows around the work and to thoroughly clean the host pipe. The word 'clean' in this specification is defined as the removal of all accumulations including sludge, dirt, sand, rocks, asphalt, concrete, grease, roots, and any other solid or semisolid material in the pipe down to the parent material with 100 percent debris removal.

It will be the Contractor's responsibility to make as many cleaning passes as necessary to meet the above definition of "clean". Acceptance of the cleaning, as determined by the District or its appointed Representative, shall be based upon the subsequent video inspection of the sewer and the lining manufacturer's cleaning requirements.

Tree and plant roots shall be removed from within the sewers. Special attention should be used during the cleaning operation to assure removal of roots from the joints and laterals. Procedures may include the use of mechanical equipment such as rodding machines, root cutters, porcupines, and high-velocity jet cleaners.

Water Usage: The Contractor may use fire hydrants with temporary meters obtained from Marin Municipal Water District (MMWD) to supply water for this cleaning. The Contractor will be required to complete a hydrant meter application and obtain a fire hydrant flow meter and will be responsible for paying all applicable deposits and fees for use of the meter and water. The Contractor shall contact Joseph Eischens at (415) 945-1531, to obtain a fire hydrant flow meter.

Cleaning Equipment: Sewer line cleaning shall be performed with high-velocity jet equipment. When using a high-velocity jet machine, it shall not remain stationary while cleaning the sewer line. Selection of equipment shall be based on field condition such as access to maintenance holes, quantity of debris, size of sewer, pipe bursting activities, and pipe lining activities. The equipment shall be capable of removing dirt, grease, rocks, sand, and other materials and obstructions from the sewer lines and maintenance holes. During sewer cleaning operations, precautions shall be taken by the Contractor in the use of cleaning equipment to avoid any damage to the pipe.

Removal and Disposal of Material:

- Sludge, dirt, sand, rocks, grease, and other solids or semi-solid material resulting from the cleaning operation shall be removed at the downstream maintenance hole of the section being cleaned. Passing materials to downstream sewer reaches is not permitted.
- Trucks hauling solids or semi-solids from the site shall be watertight so that no leakage or spillage will occur. Under no circumstances shall sewage or solids be dumped onto the ground surface, streets, in the sewer system, catch basins, or within storm drains.
- Material removed from the sewers during the cleaning operation shall be deposited in a sealed water-tight container and disposed legally by the Contractor at:

Redwood Landfill and Recycling Center
8950 Redwood Highway
Novato, CA 94948
Tel. (415) 892-2851

All debris and containers shall be removed from the right-of-way at the end of each work day. The Contractor shall coordinate with the District prior to each delivery at the landfill. Acceptable material at the landfill includes grit and grease. Non-sewer material such as broken pipe, dirt, liner trimmings, etc. will not be accepted by the landfill. Contractor shall make his own arrangements to legally dispose of all items at their own expense.

It is the Contractor's responsibility to determine the quantity of debris and solids to be removed during cleaning. Video recordings of a previous sewer inspection will be made available for the Contractor to examine. The tapes are for information only and the District does not guarantee the accuracy of the information provided.

Not less than ten (10) working days prior to performing a video recorded inspection of the sewer main, the Contractor shall submit to the Engineer the name and qualifications of the firm and personnel who will be performing the video inspection, the specifications of the video inspection system to be used, and the date of the proposed video inspection for review and approval by the Engineer.

Video Equipment. The video equipment shall include a multi-angle color video camera capable of spanning 360-degrees circumference and 270-degrees on horizontal axis to televise sewer lines 6-inch diameter or larger and focal distance shall be adjustable through a range of one (1) inch to infinity (∞). The video camera shall have a minimum of 400 lines of resolution, be specifically designed and constructed for operation in connection with sewer inspection, and for operation in sewers under 100% humidity conditions. The camera shall be mounted on a self-propelled wheel or track-mounted transporter. Lighting and camera quality shall produce a clear, in-focus picture

of the entire periphery of the pipe for a minimum distance of six (≥ 6) feet. The transporter and camera assembly shall be equipped with a slope measuring device (inclinometer) capable of detecting pipe grade variations ± 5 degrees from true horizontal ($\pm 8.7\%$ grade) with a maximum error of ± 0.1 degree with readings taken at minimum intervals of two (2) feet. Inclinometer data shall be capable of being displayed in both numerical and graphical formats that can be printed or exported to an external database. The inclinometer data submitted shall be correlated with the proper footage and allow easy identification of any high and/or low sections.

Inspection Procedures and Requirements. The video recorded inspection shall be done with no flow in the sewer. The camera shall be moved through the pipeline in the downstream direction at a uniform rate, stopping when necessary to ensure proper documentation of the sewer's condition. In no case shall the television camera be pulled or propelled at a speed greater than thirty (30) feet per minute. The camera height shall be adjusted such that the camera lens is always centered in the pipe being inspected. The equipment shall have an accurate footage counter, which shall display on the monitor the exact distance of the camera from the centerline of the starting maintenance hole. Unless otherwise required by the Engineer, footage measurements shall begin at the centerline of the upstream maintenance hole.

The recorded video inspection shall be continuous and be of such quality to provide a clear, sharp, color image when played back. The image shall show sufficient detail and quality to determine the approximate size of cracks in the pipe, offset joints, leaking joints, sags, and other defects or flaws in the installed sewer main. The date, identification of sewer reach(es) by upstream and downstream maintenance hole numbers, and maintenance hole to maintenance hole footage shall be always displayed on the video data view.

Video inspection logs submitted by the Contractor shall be typed or printed as a computerized report. The Engineer will provide the log format, or a sample copy may be submitted for approval. Data of significance includes the locations of service connections, types of upstream and downstream maintenance hole structures, and any pipe defects.

The inspection video shall be submitted on either CD-ROM or DVD-R disks in either MPEG-2 (352x240 minimum) or MPEG-4 (640x480 minimum) format viewable on a standard PC running MS Windows with Windows Media Player. If a different video software is required to play the files on the submitted disk, a fully licensed version of that software shall be included with the submittal at no additional cost to the City. Each disk shall have a protective case and be permanently labeled with the Contractor's name, date recorded, project name, street name(s), identification of the sewer reach(es) inspected, and run number. Labeling shall consist of either hand or computer printed information in non-water-soluble ink on a circular disk label that equally covers the surface of the disk. All video recordings shall become the property of the City.

All video recorded inspection shall be done in the presence of the Engineer. Upon completion of the video recording, the video shall be replayed for the Engineer. Any video recordings not meeting the quality standards stated above and as determined by the Engineer will be rejected and the video recording process repeated at no cost to the city.

After inspection of the video recording by the Engineer, the Contractor, at his/her own expense, shall replace or repair any materials or workmanship, which, in the opinion of the Engineer, do not meet the specification requirements. Upon completion of the repairs or replacements, the repairs shall be video inspected a second time and the process repeated until all the specification requirements are met.

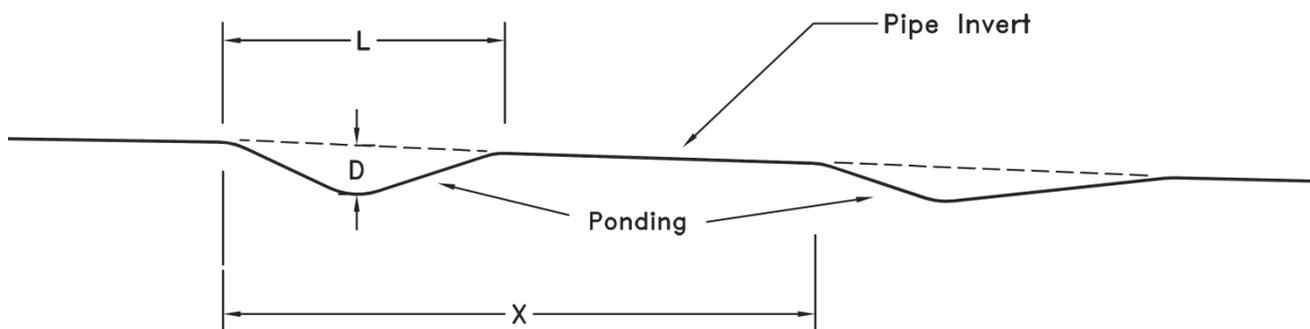
Construction Deficiencies. The following construction deficiencies shall be considered as in need of correction prior to acceptance of the work:

- Damaged pipes including cracks, gauges, and chipped ends of pipe sections.
- Slope less than the specified or absolute minimum slope.
- Changes in slope greater than $\pm 0.05\%$ of the design slope.
- Low spots, sags or bellies that hold water (see limits below).
- Dropped, offset, or separated joints including failed welds.
- Excessive gap between pipe ends within a coupling or fitting (greater than 0.5" to 0.75", depending upon materials, size, and conditions).
- Oversized, raised or protruding internal weld beads including melted pipe material ($\leq 0.25"$ for pipe $\leq 8"$, $\leq 0.50"$ for 10" to 18" pipe).
- Infiltration/leaking joints; or
- Other noted deficiencies.

Sags: The table below lists the allowable limits of sags (low spots, bellies, etc.) in sanitary sewer pipes. Newly constructed pipes that exceed these limits must be excavated and reinstalled or replaced if the pipe has been damaged. The allowable sag in pipes installed by trenchless methods is zero (0). For cured in place pipe lining and/or pipe bursting projects, all sags in existing pipes shall be removed by the Contractor prior to or during pipe bursting/lining operations, unless specifically allowed to remain by the Engineer.

SAG LIMITS

Nominal Pipe Size inch	Allowable Depth of Sag (D) inch	Allowable Length of Sag (L) feet	Allowable Distance between Sags (X) feet
Any Size by Trenchless	None	None	None
4" by Open Ex.	None	None	None
6" by Open Ex.	None	None	None
8" by Open Ex.	$\leq 0.25"$	$\leq 4'$	$\geq 40'$



AIR TEST

All gravity lines shall be tested with air as the test medium, unless otherwise approved by the District.

Each section of new sewer and its appurtenant connected laterals shall be tested between

successive maintenance holes or structures by plugging and bracing all openings in the sewer lines. If any leaks are found, the air pressure shall be released, the leaks eliminated, and the test procedure re-started.

The pipeline shall be thoroughly cleaned prior to testing.

The Contractor shall test the air tightness of all new or rehabilitated gravity sanitary sewer pipelines. Testing shall be performed in the presence and under the direction of the District or its appointed Representative.

- PVC piping shall be tested in accordance with Uni-Bell PVC Pipe Association, B-6 Recommended Practice for Low Pressure Air Testing of Installed Sewer Pipe, latest edition and as specified herein.
- HDPE piping shall be tested in accordance with ASTM F 1417, Standard Practice for Installation Acceptance of Plastic Non-pressure Sewer Lines Using Low-Pressure Air.

Air testing sewer mains, particularly larger diameter mains, can be very dangerous due to the very large forces developed. The Contractor shall be fully responsible and take all precautions necessary to ensure the safety of their workers. All plugs shall be adequately braced and restrained to support the full load developed. No workers shall be allowed in the excavation or maintenance hole while the line is under pressure. The Contractor shall make provisions for reading the pressure at the ground surface and for safely releasing the air pressure without entering the maintenance hole or excavation.

The following procedure shall be used for air testing:

- Plug all pipe outlets with suitable test plugs. Brace each plug securely.
- If the pipe to be tested is submerged in groundwater, insert a pipe probe by boring or jetting into the backfill material adjacent to the center of the pipe, and determine the pressure in the probe when air passes slowly through it. This is the backpressure due to groundwater submergence over the end of the probe. All gauge pressures in the test shall be increased by this amount.
- Add air slowly to the portion of the pipe being tested until the internal pressure is raised to 4.0 psig.
- Check exposed pipe and plugs for abnormal leakage by coating with a soap solution. If any leakage is observed, bleed off air and make necessary repairs.
- After an internal pressure of 4.0 psig is obtained, allow at least two (2) minutes for air temperature to stabilize, adding only the amount of air required to maintain pressure. After two (2) minute period, disconnect the air supply.
- Begin the test period. In no case shall the air pressure within the line be less than four (4) pounds per square inch at the beginning of the test period.
- Main Sewers:
 - If the pressure drop during the required test period equal to or less than 1 psi (6.9 kPa), the line has passed. If the pressure drop is greater than 1 psi (6.9 kPa) during the test time, the line has failed the test. Side Sewers: If the pressure remains constant during the test period, the line has passed. If the pressure drops during the test time, the line has failed the test.
 - The required test time shall be based on the diameter and length of pipe to be tested and in accordance with the following, or 10 minutes, whichever is greater:

Minimum Test Time for Various Sewer Main Pipe Sizes	
Nominal Pipe Size (inches)	Test Time (min/100 ft)
6	0.7

- At the District's option, one half of the test time specified above may be used with a maximum pressure drop of 0.5 psi (3.45kPa), but in no case will a test time of less than 10 minutes be allowed.
- Side Sewers: Side sewers shall be tested for a minimum period of ten (10) minutes. If the pressure remains constant during the test period, the line has passed. If the pressure drops during the test time, the line has failed the test.

Hydrostatic testing of gravity pipelines may be performed in lieu of air testing if approved by the District, testing shall be in accordance with the following procedures:

- After installation of new sewer pipeline it shall be thoroughly cleaned prior to pressure testing. A section of sewer shall be prepared for testing between two structures by plugging the inlet side of the discharge maintenance hole and all openings in the upstream maintenance hole except the discharge opening. All plugs shall be properly braced against the maintenance hole wall to withstand the forces of the test in order to prevent loss in the event of a failure.
- The section of the piping shall be tested by filling it with water to an elevation ten (10) feet above the top of pipe at the upstream end of the test section, or ten (10) feet above the existing groundwater elevation, whichever is greater. If the water level is maintained for a minimum of fifteen (15) minutes, the line has passed.

When leakage exceeds the amount allowed by the specifications, the Contractor shall locate the leaks, submit a repair procedure for the District review, make the necessary repairs, and re-test the segment at no additional cost to the District.

10-18.05 MEASUREMENT AND PAYMENT

The contract price paid per linear foot for each size of sewer pipe (**Bid Items 16 and 17**) shall include full compensation for furnishing all labor, materials, tools, equipment testing and incidentals, and for doing all the work involved in saw-cutting, trench excavation, dewatering, removal of existing pipe and materials, construction of new sewer main pipe and connecting to existing maintenance hole, furnishing and placing trench backfill materials, pavement restoration, verifying existing utilities, cleaning and testing including video, in place, as shown on the plans and as herein specified; and no additional compensation will be allowed therefor.

The contract price paid per each "Sanitary Sewer Cleanout (Include Utility Boxes)" (**Bid Items 18**) shall include full compensation for furnishing all labor, materials, tools, equipment, testing and incidentals, and for doing all the work involved, including saw-cutting, excavation, bypass system, dewatering, removal of existing pipe and materials, connections, furnishing and placing trench backfill materials, pavement restoration, utility boxes, coordination, complete in place, as shown on the plans and as herein specified; and no additional compensation will be allowed therefor.

SECTION 10-19 – SANITARY SEWER MAINTENANCE HOLE REHABILITATION

10-19.01 GENERAL

The Contractor shall rehabilitate sewer maintenance hole as shown on the Plans, specified herein, and as approved by the Engineer.

10-19.02 SUBMITTALS

Contractor shall provide submittal for the Respective manufacturer's product data for manufactured products.

10-19.03 MATERIALS

Maintenance hole shall be of the size, shape, and depth as indicated on the Project Contract Documents or required by these Specifications and Contract Plans, but maintenance holes shall never be less than 4 feet inside diameter with 5-inch thick walls.

- Mainstay ML-10, Hydraulic cement mortar to repair SSMH leaks consider as weepers or equivalent as approved by the Engineer
- Mainstay ML-72 Sprayable Microsilica Restoration Mortar or equivalent as approved by the Engineer
- Mainstay DS-5 Solids epoxy coating or equivalent as approved by the Engineer

10-19.04 EXECUTION

Interior Lining & Coating work includes:

1. Preparation of interior surface of maintenance holes using hydro-blasting to remove all debris, materials and loose concrete to get to a good substrate, according to product's manufacture.
2. Repairing any existing leaks consider as weepers using Mainstay ML-10 or approved equal. Applying up to 1-inch of Mainstay ML-72 (Portland cement-based, microsilica-enhanced, high-strength structural restoration and resurfacing mortar) or equal per manufacturer recommendations up to 5" on vertical and overhead surfaces and troweled it to get a smooth finish.
3. Spraying 100 mils of Mainstay DS-5 or approved equal, to create a smooth transition between the bench and the walls of the maintenance hole to avoid debris accumulation.
4. Maintenance hole rehabilitation includes all bypass work, sealing, plugging, patching and coating of the structure from the bench up to the frame.
5. No work on the channel included unless otherwise directed by the Engineer.

Testing:

Two (2) maintenance holes at a minimum shall be hydrostatically tested. The Engineer shall designate the maintenance holes to be tested. The test shall consist of plugging all inlets and outlets and filling the maintenance hole with water to the top of the cone section. Leakage in each maintenance hole shall not exceed 0.1 gallon per hour per foot of head above the invert. A maintenance hole may be filled 24 hours prior to time of testing, if desired, to permit normal absorption into the walls to take place. Minimum time for a test shall be 1 hour.

Repair all maintenance holes that do not meet the leakage test or are unsatisfactory from visual inspection. Maintenance holes shall be watertight to infiltration, and any leakage of groundwater shall be eliminated by permanent repairs.

If any maintenance holes tested fail to hydrostatic test, the Contractor will be required to test all or as many maintenance holes as the Engineer may deem necessary.

The Sanitary Sewer Maintenance Hole – Rehabilitation shall have its frame and cover replaced with a D&L Foundry model number H-8026.

10-19.05 MEASUREMENT AND PAYMENT

The contract price paid per each "Replace SSMH Frame & Cover" (**Bid Items 19**) shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work involved, including pavement restoration and adjustments to grade, complete in place as shown on the plans and as herein specified; and no additional compensation will be allowed therefor.

The contract price paid per each "Sanitary Sewer Maintenance Hole - Rehabilitation" (**Bid Item 20**) shall include full compensation for furnishing all labor, materials, tools, equipment, testing and incidentals, and for doing all the work involved, including cleaning, patching holes, bypass system, complete in place as shown on the plans and as herein specified; and no additional compensation will be allowed therefor.

SECTION 10-20 – SANITARY SEWER MAINTENANCE HOLE

10-20.01 GENERAL

The Contractor shall furnish and install Maintenance Holes, complete with cast-in-place bases, pipe connections, precast barrel and cone components, preformed joint sealant, grade rings, frames, covers and other appurtenances as shown on the Plans or specified in this Section.

Maintenance Holes shall be concentric type, unless utility conflicts or other issues require the use of an eccentric cone.

Where new maintenance holes are installed on existing piping, the pipe size and material entering the maintenance hole shall match the existing piping.

10-20.02 SUBMITTALS

Contractor shall provide submittal for the Respective manufacturer's product data for manufactured products.

10-20.03 MATERIALS

Maintenance hole shall be of the size, shape, and depth as indicated on the Project Contract Documents or required by these Specifications and Contract Plans, but maintenance holes shall never be less than 4 feet inside diameter with 5-inch thick walls.

MAINTENANCE HOLE BASES

- Maintenance hole bases shall be cast-in-place concrete, unless otherwise approved by the Engineer.
- Inlet and outlet pipe connections shall match the pipe diameter and material of the connecting sewer mains or side sewers.
- Maintenance hole channels shall be shaped to form a smooth transition of uniform cross-section from inlet pipes to the outlet pipe, both horizontally and vertically.

PRECAST CONCRETE COMPONENTS

- Maintenance hole shall be constructed of precast concrete maintenance hole rings.

Precast concrete rings shall be manufactured by a process that will produce a dense, homogeneous concrete ring of first quality.

- Precast concrete sections shall conform to ASTM C478 unless otherwise modified in the Drawings.
- The precast rings shall have a minimum wall thickness of 1/12 of the inner diameter of the Maintenance hole unless otherwise stated.
- Precast maintenance hole components shall be constructed of 5000 psi reinforced concrete (min) at 28 days using cement Type II portland cement as specified in ASTM C150.
- All precast maintenance hole components shall be H20 load rated.
- Eccentric maintenance holes, where required, shall be provided with steps. The maintenance hole frame and cover and steps for eccentric maintenance holes shall be positioned over the maintenance hole shelf.
- The use of pre-cast bases will require District approval. Precast maintenance holes bases shall not be used in areas where the finished grade slope is greater than ten (10) percent.
 - Flexible pipe connectors shall be cast into the base at the pre-cast plant to provide a tight seal between base and pipe.
 - Channels and shelf shall be cast at the pre-cast plant. The Contractor shall field verify size, location, and depth of any existing pipes prior to ordering materials.
- Precast Concrete Components manufacturer shall be approved by the Engineer.

CONCRETE EXPANSION RINGS

- The maintenance hole frame and cover shall be set to such an elevation that the top of the cover is placed at the proposed street grade or the elevation shown on the drawings, with a minimum of one 6-inch precast riser section placed between the top of the reducing slab section and the iron maintenance hole frame. Maximum height of extension rings shall be 12 inches in paved areas, and in unpaved areas only one extension ring of 6 inches shall be used.

FRAME AND COVERS

- Castings for maintenance hole frames and covers shall conform to the requirements of ASTM A48, Class 30B Heavy Duty cast iron construction. Cast-iron covers and frames shall be heavy traffic type, H-20 load rated.
- Frame and cover size, design, and design shall be as shown in the Contract plans and labeled "Sanitary Sewer".
- Castings shall be machined flat bearing surface, non-rocking removable lid, special non-skid cover design.
- Maintenance hole covers shall be sealed to prevent escape of odors.
- Pick hole shall be closed and fit a standard pick.
- Bottom of cover shall indicate manufactured date, month and year.
- All castings shall be dipped in asphalt paint.

JOINTS

- Joints between sections shall have a preformed flexible plastic sealing gasket installed between the tongue and groove joint to make a watertight joint.
- Joint gasket compound shall be suitable for use with wastewater and shall conform to Federal Specification SS-S-00210 (GSA-FSS), Type 1, Rope Form, and hydrostatic pressure tests of ASTM C443.

MORTAR AND GROUT.

- Mortar shall be standard premixed mortar conforming to ASTM C-387 or proportion 1-part Portland cement to 2-parts clean, well-graded sand which will pass a 1/8-inch screen. Admixtures may be used not exceeding the following percentages of weight of cement:

hydrated lime, 10 percent; diatomaceous earth or other inert materials, 5 percent.

WATERPROOFING

- All new maintenance holes shall be provided with a minimum of two coats of waterproofing.
- Treat the concrete with the crystalline waterproofing product/technology, prior to the sealant performs as a combination for damp proofing/waterproofing.

FLEXIBLE PIPE CONNECTOR

- The flexible connector shall be Fernco, 5000 Series RC coupling with Type 316 Stainless Steel hardware or approved equal.
- Pipe connections to precast maintenance hole bases shall be with a flexible pipe connection.
- Flexible pipe connectors shall be cast into the precast base at the precast plant. The connector shall assure that a seal is made between the connector and the structure wall by casting the connector integrally with the structure wall during the manufacturing process in a manner that it will not pull out during pipe coupling.
- Flexible connectors shall be molded from EPDM compound engineered to conform with the requirements of section 4.1.1 of ASTM C-923, latest edition.
- Flexible connector shall meet or exceed all material and testing requirements of ASTM C923. All hardware shall be Type 316 stainless steel.
- The flexible connector shall be sized specifically for the type of pipe being used and shall be installed in accordance with the recommendations of the manufacturer. The Contractor shall verify any existing pipe size, material, and locations prior to ordering materials.

Base rock material shall be clean 1-1/2-inch minus gravel or crushed rock uniformly graded from coarse to fine. Base rock shall be of such nature that it can be readily compacted.

Concrete for special maintenance hole structures shall conform to Section 28-5.02B, "Portland Cement Concrete," of the Standard Specifications.

Reinforcing steel for maintenance hole structures shall conform to Section 52, "Reinforcement," of the Standard Specifications. The payment requirements in Section 52-1.04, "Payment" of the Standard Specifications will not apply.

Large diameter precast sections shall conform to the requirements stated herein for precast maintenance hole sections.

Standard maintenance holes shall conform to City Standard Detail SD-304 and these Special Provisions. Maintenance holes shall be constructed plumb with sections level. Joints shall be tongue-and-groove type.

Standard maintenance hole sections shall conform to the requirements of ASTM C-478 and the following requirements. The Portland cement used in the precast sections shall conform to ASTM C-150, Type II. Reinforcing steel shall have a minimum cross-sectional area of three-tenths (0.30) square inches per foot in both directions.

Cones shall be manufactured of the same materials, strength, and quality requirements as the straight sections. The cones shall be concentric and shall have a maximum height of three (3) feet.

The throat of the maintenance hole, including grade rings and frame, shall not exceed twenty-four (24) inches.

Mortar shall be standard premixed mortar conforming to ASTM C-387 or proportion 1-part Portland

cement to 2-parts clean, well-graded sand which will pass a 1/8-inch screen. Admixtures may be used not exceeding the following percentages of weight of cement: hydrated lime, 10 percent; diatomaceous earth or other inert materials, 5 percent.

Preformed plastic gaskets shall be used to join pre-cast maintenance hole sections and shall be "Kent-Seal No. 2" manufactured by Hamilton Kent Manufacturing Company, Box 178, Kent, Ohio 44240; "Ram-Nek", manufactured by K.T. Snyder Company, Inc., Central National Bank Bldg., Houston, TX 77002; or approved equal, meeting all requirements of Federal Specification SS-S-00210A, "Sealing Compound, Preformed Plastic for Pipe Joints". The size of the preformed gasket material shall be as recommended by the manufacturer of the precast maintenance hole sections. Covers and frames shall conform to the City Standard Detail SD-307 and these special provisions.

Castings shall be close-grained gray iron, free from all defects, and shall conform to ASTM A 48, Class 30B. Plane or grind bearing surfaces to ensure flat, true surfaces. Covers shall be true and seat within ring at all points.

All plastic pipe connections to maintenance holes and stub outs shall a flexible gasket connector/water stop grouting ring constructed of high-quality synthetic rubber and stainless-steel components that meet or exceed ASTM C-923 (WS Series Water stop by Press-Seal Gasket Corp. or approved equal).

Pipe for stub outs shall be the same material as approved and furnished for the project, unless otherwise indicated on the Plans. Each stub out shall be fitted with a rubber gasketed watertight plug or an expandable type of standard sewer plug.

10-20.04 EXECUTION

Backfill around maintenance holes shall be of the quality of new trench backfill immediately adjacent.

Water in the excavation must be removed. Place a minimum of 6 inches of base rock material and thoroughly compact with a mechanical vibrating or power tamper.

Construct concrete base in conformance with the Contract Plans. Vibrate to densify the concrete and screed so that the joint for the first precast maintenance hole section can be formed level and uniform for the full circumference.

Form all vertical surfaces with plywood, boards, or other approved material. Trench walls or earth will not be approved form material except as shown on the plans.

Carefully inspect precast maintenance hole sections to be joined. Sections with chips or cracks in the tongue shall not be used. Preformed plastic gaskets shall be installed in strict conformance with the manufacturer's recommendations. Only pipe primer furnished by the gasket manufacturer will be approved.

Stub outs from maintenance holes for future sewer connections shall be installed as shown on the Plans or as required by the Engineer. Maximum length shall be 3 feet outside the maintenance hole wall. Pipe stub outs shall have a rubber water stop tightly bonded to the pipe and cast into the maintenance hole base.

Semi-permanent plugs shall be installed in the end of stub outs. Plugs shall be capable of withstanding all internal or external pressures without leakage. All plugs shall be braced to prevent blowouts.

As part of the concrete base, construct maintenance hole inverts in conformance with details shown on the Plans, and with smooth transitions to ensure an unobstructed flow through maintenance hole. Remove all sharp edges or rough sections which tend to obstruct flow. Where a full section of pipe is laid through a maintenance hole, break out the top section as indicated and cover exposed edge of pipe completely with mortar. Trowel all mortar surfaces smooth.

Install extensions in conformance with the Contract Plans and to the height determined by Engineer. Lay grade rings in mortar with sides plumb and tops level. Seal joints with mortar. Extensions shall be watertight.

Install frames and covers on top of maintenance holes in conformance with the Contract Plans. Frames shall be set in a bed of mortar with the mortar carried over the flange of the ring. Set frames so tops of covers are flush with surface of adjoining pavement or ground surface, unless otherwise shown or directed.

TESTING. Two maintenance holes at a minimum shall be hydrostatically tested. The Engineer shall designate the maintenance holes to be tested. The test shall consist of plugging all inlets and outlets and filling the maintenance hole with water to the top of the cone section. Leakage in each maintenance hole shall not exceed 0.1 gallon per hour per foot of head above the invert. A maintenance hole may be filled 24 hours prior to time of testing, if desired, to permit normal absorption into the walls to take place. Minimum time for a test shall be 1 hour.

Repair all maintenance holes that do not meet the leakage test or are unsatisfactory from visual inspection. Maintenance holes shall be watertight to infiltration, and any leakage of groundwater shall be eliminated by permanent repairs.

If any maintenance holes tested fail to hydrostatic test, the Contractor will be required to test all or as many maintenance holes as the Engineer may deem necessary.

10-20.05 MEASUREMENT AND PAYMENT

The contract price paid per each "Sanitary Sewer Maintenance Hole, Remove and Replace" (**Bid Items 21**) shall include full compensation for furnishing all labor, materials, tools, equipment, testing and incidentals, and for doing all the work involved in saw-cutting, excavation, dewatering, removal of existing sanitary sewer maintenance holes, pipe and materials, connections, frame and cover, furnishing and placing trench backfill materials, pavement restoration, complete in place as shown on the plans and as herein specified; and no additional compensation will be allowed therefor.

SECTION 10-21 – UTILITY ADJUSTMENT TO GRADE (REVOCABLE ITEM)

10-21.01 GENERAL

Valve boxes, manholes, and other similar facilities shall be adjusted to grade after curb ramp, driveway, and/or pavement improvements, where applicable, in accordance with the applicable provisions of Section 15-1.03 of the Standard Specifications. Contractor shall adhere to applicable utility agency requirements for raising utility. Adjustment of PG&E facilities shall be per Greenbook requirements.

10-21.02 SUBMITTALS & MATERIALS

The Contractor shall submit material cut sheets and suppliers' certificates for the following materials, including but not necessarily limited to: grade rings, Portland Cement concrete, and mortar.

10-21.03 EXECUTION

Use of metal riser rings for storm drain maintenance holes is not acceptable. Grade rings, if used, shall be placed before resurfacing. The height of the grade ring shall be equal to the thickness of the overlay pavement to be placed, or shall be of such height so as to adjust the maintenance hole to grade.

Where frames and covers cannot be lowered flush after cold planing or before replacing asphalt surfacing, frames and covers shall be protected utilizing the following alternatives:

- Ramp section (cut-back) around "iron" and paint white
- Place lighted Portable Barricade over iron

Existing water valve access covers and fire hydrants shall be adjusted to grade in accordance with the Marin Municipal Water District (MMWD) Standards and these Specifications.

Where frames and covers cannot be lowered flush after cold planing or before replacing asphalt surfacing, frames and covers shall be protected utilizing the following alternatives:

- Ramp section (cut-back) around "iron" and paint white
- Place lighted Portable Barricade over iron

All utility covers encountered in the area to be overlaid with Hot Mix Asphalt shall be carefully referenced out using spray chalk or similar non-permanent marking media prior to the overlay by the Contractor. Using the reference markings, the locations of the covers shall be painted on the pavement surface immediately after paving to assure they can be found in an emergency.

Covers shall be adjusted so that there will not be any perceptible difference in elevation between the finished pavement surface and the cover. The Engineer shall be the sole judge of the acceptable degree of smoothness of passage of a motor vehicle over the adjusted covers.

Portland cement concrete used for adjusting covers shall be minor concrete conforming to the requirements of Section 90-2 "Minor Concrete" of the Standard Specifications with at least 505 pounds of cementations material per cubic yard and 1-inch maximum graded coarse aggregate. No bagged mix is permitted.

Mortar used in resetting maintenance hole covers shall conform to the provisions in Section 51-1.02F, "Mortar" of the Standard Specifications.

Salvaged materials which are undamaged may be reinstalled as directed by the Engineer.

Structures built of cast-in-place or precast concrete and brick or vitrified clay pipe parts shall be replaced in kind, unless otherwise permitted by the owners of the facilities.

Each of the respective utility company shall retain the ability to decrease the amount of a contract item of work or eliminate in its entirety. No adjustment to the number of working days will be made.

Contractor shall provide at least 48 hours advance notice to each respective utility agency of iron castings to be adjusted to grade.

10-21.04 MEASUREMENT AND PAYMENT

Water (MMWD), gas (PG&E), electrical (PG&E), and telecommunication (ATT&T and Comcast) measurement and payment items are revocable items. Bid items noted as "revocable items" may be deleted entirely or in part from the Work at the option of the City. The provisions of Section 9-1.06B, "Increases of More Than 25 Percent", and Section 9-1.06C, "Decreases of More Than 25 Percent", of the Standard Specifications shall not apply to such omission, and no compensation will be allowed the Contractor by reason of such omission.

The unit price paid for each "Utility Adjustment - Sewer Maintenance Hole" (**Bid Item 22**) shall include full compensation for furnishing all labor, materials, coordination with the utility agency, and equipment necessary to complete the work as shown on the Plans and specified herein and as directed by the Engineer and no additional payment will be allowed therefor.

The unit price paid for each "Utility Adjustment – Gas Valve (Revocable Item)" (**Bid Item 23**) shall include full compensation for furnishing all labor, materials, coordination with utility agency, and equipment necessary to complete the work as shown on the Plans and specified herein and as directed by the Engineer and no additional payment will be allowed therefor.

The unit price paid for each "Utility Adjustment - Water Valve (Revocable Item)" (**Bid Item 24**) shall include full compensation for furnishing all labor, materials, coordination with utility agency, and equipment necessary to complete the work as shown on the Plans and specified herein and as directed by the Engineer and no additional payment will be allowed therefor.

SECTION 10-22 – EXCAVATION AND BACKFILL

10-21.01 GENERAL

The Contractor shall perform all operations necessary to excavate whatever substance encountered, including earth, sand, gravel, rock, buried structures, pipes or debris, to the depth shown on the plans and required for the installation, to remove unsuitable material and replace with suitable material for bedding and backfill, and to restore the ground surface or pavement to conditions satisfactory to the Engineer.

10-21.02 SUBMITTALS

The Contractor shall submit shop drawings to the Engineer of their proposed methods of sheeting, shoring and bracing as approved by the Division of Industrial Safety, per these specifications.

The Contractor shall submit to the Engineer samples of all materials proposed for use as pipe bedding and backfill. When requested by the Engineer, the Contractor shall submit a sieve analysis of the materials proposed to be used at no cost to the District.

10-21.03 MATERIALS

- **CRUSHED ROCK.** Crushed rock shall be hard, sound and durable and shall not slake or disintegrate in water. One and one half inch (1½") crushed rock shall be uniformly graded with one hundred percent (100%) passing a one and one half inch (1½") sieve and not more than five percent (5%) passing a 3/8" sieve. Three-quarter inch (¾") crushed rock shall be uniformly graded with one hundred percent (100%) passing a three-quarter inch (¾") sieve and not more than five percent (5%) passing a ¼" sieve.

- CLASS 2 AGGREGATE BASE. Class 2 aggregate base shall be free from organic matter and other deleterious substances and shall be of such nature that it can be compacted readily with water and rolling to form a firm stable base. All class 2 aggregate base shall be virgin material with a sand equivalent of 25 and shall have the following gradation:

Sieve Size	Percentage passing
1"	100%
3/4"	87-100
No. 4	30-65
No 30	5-35
No. 200	0-12

- CONTROL DENSITY FILL (CDF). CDF shall be flowable to fill the voids and self-leveling within the area to be backfilled. CDF shall be Shamrock Material Mix Number 1503 or approved equal.

10-21.04 EXECUTION

Pipe bedding shall be composed of that portion of the backfill material placed in the bottom of the trench for the pipe barrel to rest on.

Pipe zone backfill shall comprise that portion of the backfill surrounding the installed pipe, extending after compaction from the foundation to a level twelve (12) inches above the top of the pipe.

Intermediate backfill shall comprise the portion of the backfill from twelve (12) inches above the top of the pipe to the surface.

Sound earth shall mean most native soils, with the exception of highly organic spongy soils and fat, highly plastic expansive clays.

Sand with a maximum particle size of 3-inch, or gravel with a minimum grain size of 3-inch, or pea gravel, or crushed rock mixed with sand shall comprise sound granular soil.

Relative compaction shall be taken to mean field density values expressed as a percentage of the laboratory standard maximum density, as determined by the methods of ASTM D-1557-91 and D-1556-90 or ASTM D-2292-91 and D-3017-88 (Nuclear Method).

BRACING AND SHEATHING

The Contractor shall do and be solely responsible for all bracing, sheathing and shoring necessary to perform and protect all excavations as required for reasons of safety and to conform to governing laws. Where required by the Division of Industrial Safety, shoring shall be designed by a registered Civil Engineer. Excavations shall be supported so that the ground alongside the excavations will not slide, and all existing improvements, either on public or private property, will be fully protected from damage. Additional supports requested by the Engineer shall in no way relieve the Contractor of his/her responsibility for the sufficiency of his/her precautions.

All shoring, bracing and sheathing above the top of the pipe shall be removed from the trench or excavation. Sheathing which has been driven below the invert of the pipe must not be removed. Under wet soil conditions, sheathing shall be left in the trench up to the top of the pipe.

The cost of such bracing, shoring and sheathing shall be included in the unit price per lineal foot of pipeline and no additional allowance will be made therefor.

CONTROL OF WATER

The Contractor shall remove all water which may accumulate in the excavation during the progress of the work by pumping or other suitable methods so that all work can be done in the dry. Trenches and other excavations shall be kept free of water while the pipe or structures are being installed, while concrete is setting, and until backfill has progressed to a sufficient height to anchor the work against possible flotation or leakage. Water shall be disposed of in such a manner as to cause no injury to public or private property or be a menace to the public health. Where water is encountered, the trench excavation shall be carried twelve (12) inches below the pipe invert in which case the pipe bedding material shall be one and one half inch (1½") crushed rock.

The cost of such removal of water and additional excavation and pipe bedding material shall be included in the unit bid price per lineal foot of pipeline and no additional allowance will be made therefor.

REMOVAL OF UNSTABLE MATERIAL

Where unstable soil is encountered or where the bearing capacity is unsatisfactory to the Engineer, the soil shall be removed to a depth of twelve (12) inches below the pipe barrel and replaced with one and one half inch (1½") crushed rock.

The Contractor shall not be relieved thereby of his/her responsibility otherwise to employ procedures necessary to keep the trench bottom in a workable condition and provide a firm and adequate bedding for the pipe.

The cost of trench stabilization shall be included in the price per lineal foot of pipeline and no additional payment will be allowed.

EXCAVATION

The excavation shall be made to enable the pipe to be laid to the grades and alignment shown on the plans. Excavated materials not required for fill or backfill shall be removed from the site of the work.

Trenches shall be excavated either by hand or by machine beginning at the outlet structure and proceeding upgrade, except as may otherwise be permitted by the Engineer. Hand excavation, tunneling, jacking or boring will be required when use of a machine will cause unnecessary destruction of trees, shrubs, lawns and existing structures above or below ground.

The narrowest practicable trench width which will allow proper densification of pipe zone backfill materials shall be maintained with vertical sidewalls from the foundation to at least the top of the pipe. Trench width at the top of the pipe shall not exceed the maximum trench width shown in the County Specifications. Where general conditions make this impractical, means must be provided, with the approval of the Engineer, for adequately supporting the increased load on the pipe which such widening will cause.

Where sheathing is required, the width of trench shall be increased sufficiently to accommodate the sheathing and timbers.

Excavation for maintenance holes and other structures shall have twelve (12) inch minimum and twenty four (24) inch maximum clearance on all sides. Bell holes shall be excavated accurately to size by hand.

Excavation shall not be carried below the required level. Excess excavation below the required level shall be backfilled at the Contractor's expense with gravel, crushed rock or concrete, as directed by the Engineer, and thoroughly tamped.

In rock, excavation shall be carried six (6) inches below the bottom of the pipe and replaced with an approved material thoroughly tamped to provide a uniform support for the pipe. Permits for blasting shall be secured by the Contractor from the proper authorities. The cost of drilling and blasting shall be included in the unit bid price for lineal foot of pipeline and no additional allowance will be made therefor.

The bottom of all trenches shall be excavated accurately to the required grade with a firm bed to fit the barrel of the pipe. Minor adjustments in elevation required to produce the required invert slope shall be made by adequately bedding the pipe with sound granular pipe bedding materials, as hereinbefore defined, thoroughly compacted along the length of the pipe, underneath, and on both sides. It is essential that a uniform solid bearing be provided under the entire section of pipe.

For flexible pipe (PVC and polyethylene pipe), the pipe bedding (bottom of trench) shall be firm, but not hard, and shall consist of pipe zone backfill, free from stones or lumps exceeding one (1) inch in greatest dimension which might bear against the pipe. Suitable foundations shall be prepared by providing a one (1) inch minimum leveling course with loose bedding material graded uniformly in one plane for the full length of the pipe. Foundations shall provide uniform support under the haunches of the pipe up to the spring line along the full length of each pipe section.

BACKFILL

After the pipelines and their appurtenances have been properly constructed and inspected and after joints, plaster and concrete have set sufficiently to prevent damage, backfilling shall be done with approved material free from large clods or stones. Unless otherwise specified all backfill shall be compacted to 90 percent relative compaction per ASTM 1557.

The Contractor's attention is called to the fact that it will be his/her responsibility to obtain an encroachment permit for all work to be done in streets, roads, highways or railroad rights-of-way from the proper agency having jurisdiction and that the method of backfilling of trenches must conform to the requirements of such agency. Where imported materials will be required, the cost of furnishing and placing such materials shall be included in his/her bid price for sewer construction and no additional allowance will be made therefor.

PIPE ZONE BACKFILL

Backfill materials shall be so placed that the pipe will not be displaced, excessively deflected, or damaged. Materials placed as pipe zone backfill shall be free of stones or lumps exceeding one (1) inch in greatest dimension and shall be so placed as to prevent the formation of voids. Pipe zone backfill preparation shall be placed and compacted determined on the basis of local native soil conditions and such that vertical ring deflection of flexible pipe will be limited to five percent (5%) of the nominal pipe diameter.

In general, pipe zone backfill shall be placed immediately after laying the pipe, provided the pipe is true to line and grade.

INTERMEDIATE BACKFILL

The backfill shall be blended sufficiently to secure the best practicable degree of compaction and stability.

Compaction may be performed by mechanical or hand tamping methods or by hydraulic methods as is necessary to achieve the required relative compaction.

Care shall be taken during compaction to prevent displacement of the pipe due to floating or shifting and to prevent hydrostatic or impact damage to the pipe and foundation. Heavy mechanical tamping or rolling equipment directly over the top of the pipe, such as might result in excessive reduction of the vertical diameter of the installed pipe, shall be avoided. Intermediate backfill above the pipe zone backfill shall not be placed until conformance with specified relative compaction of pipe zone backfill material has been confirmed.

10-21.05 MEASUREMENT AND PAYMENT

Full compensation for providing "Excavation and Backfill" shall include furnishing all labor, materials, tools, equipment, testing, and incidentals, and for doing all the work involved complete in place as shown on the Plans, as specified in the Standard Specifications and these Specifications, and as directed by the Engineer shall be considered as included in the contract prices for the various items of work and no additional compensation will be made therefor.

SECTION 10-22 – BID ALT #3 - REPLACE WOODEN CAR PORT

10-22.01 GENERAL

Specifications are for replacing portions of wooden car port with soldier pile wall, backfill, and asphalt pavement. The Contractor shall provide tree protection as indicated in the plans.

Overhead and underground utilities including wires, poles and guys are not necessarily shown on the plans and shall be determined from the Contractor's visit to the site. It shall be the responsibility of the Contractor to determine the exact location of all utilities and service connections thereto ahead of any excavations. Vertical clearances of PG&E power lines are listed in Greenbook Electric & Gas Service Requirements.

Contractor shall review with Engineer the exact limits of work and extent of materials to be removed.

1. Examine site and structures and determine exact nature and status of structural elements and above ground and below ground utilities prior to commencing work.
2. Examine existing utility laterals and coordinate shut-off locations with homeowners prior to demolition.
3. The City assumes no responsibility for actual condition of items or structures to be demolished.
4. Prior to commencing the work, the Contractor shall perform document with photos and narrative descriptions all site features adjacent to construction areas that may be damaged.

10-22.02 SUBMITTALS

Contractor shall provide submittal for each Respective manufacturer's product data for manufactured products.

Contractor shall provide shop drawing for all shoring and bracing design to support existing car port.

10-22.03 MATERIALS

- See Section 10-12 Hot Mix Asphalt (Type A)
- See Section 10-16 Aggregate Base
- See Section 10-23 Soldier Pile Wall

10-22.04 EXECUTION

- See Section 10-12 Hot Mix Asphalt (Type A)
- See Section 10-16 Aggregate Base
- See Section 10-23 Soldier Pile Wall

Contractor is responsible for any damage or injury resulting from his construction operations. Contractor shall perform, at his own expense, all necessary repair work or reconstruction.

10-22.05 MEASUREMENT AND PAYMENT

The contract lump sum price paid for "Mobilization / Demobilization" (**Bid Item 3a**) includes full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in mobilizing and demobilizing personnel, materials, and equipment, complete in place, as shown on the Plans, as specified in the Standard Specifications, these Specifications, and as directed by the Engineer.

The contract lump sum price paid for "Construction Phasing and Traffic Control" (**Bid Item 3b**) includes full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in managing traffic, complete in place, including providing all construction area signs, as shown on the Plans, as specified in the Standard Specifications, these Specifications, and as directed by the Engineer.

The contract lump sum price paid for "Demolition (bracing, removals & disposals)" (**Bid Item 3c**) of the various types shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work complete in place, including bracing existing structures, shop drawings, demolition and removal of wooden car port, protecting existing utilities and tree, hauling, recycling, disposal, cleanup and other incidental work, as shown on the Plans, as specified in the Standard Specifications and these Specifications, and as directed by the Engineer.

The contract price paid per linear foot for "Soldier Piles" (**Bid Item 3d**) shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals and for doing all the work involved in soldier piles, including excavation, foundations, and disposal of unsuitable materials, slope stabilization, complete in place, as shown on the Plans, and specified herein, and as directed by the Engineer.

The contract price paid per square foot for "Concrete Retaining Walls" (**Bid Item 3e**) shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals and for doing all the work involved in, including remounting of existing utilities, conforming and connections to existing carport and roadway, complete in place, as shown on the Plans, and specified herein, and as directed by the Engineer.

The contract price paid per ton for "Hot Mix Asphalt (Type A)" (**Bid Item 3f**) shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in furnishing and placing hot mix asphalt and aggregate base backfill, sawcutting, applying paint binder, and performing in-place density and compaction tests, complete in place as shown on the Plans, as specified in the Standard Specifications and these Specifications, and as directed by the Engineer.

SECTION 10-23 – SOLDIER PILE WALL

10-23.01 GENERAL

Specifications are for furnishing and providing Soldier Pile Wall (UCS #165) and Concrete Retaining Wall to replace portions of a wooden car port as indicated in the design plans and specified herein.

Overhead and underground utilities including wires, poles and guys are not necessarily shown on the plans and shall be determined from the Contractor's visit to the site. It shall be the responsibility of the Contractor to determine the exact location of all utilities and service connections thereto ahead of any excavations. Vertical clearances of PG&E power lines are listed in Greenbook Electric & Gas Service Requirements.

10-23.02 SUBMITTALS

Contractor shall provide submittal for each Respective manufacturer's product data for manufactured products.

Contractor shall submit shop drawings for soldier pile wall construction per Section 19-3.01C(3) of the Standard Specifications.

10-23.03 MATERIALS

- Portland Cement Concrete for fixed form concrete surface improvements shall be minor concrete conforming to the requirements of Section 90-2 "Minor Concrete" of the Standard Specifications with at least 505 pounds of cementitious material per cubic yard and 1-inch maximum graded coarse aggregate. No bagged mix is permitted. Hand mixing of Portland Cement Concrete for use in concrete surface improvements shall not be permitted. For concrete paving subjected to vehicular traffic, strength of concrete in place shall be 4,000 psi at 28 days. No admixtures shall be used without approval of the Engineer.

Maximum slump of fresh concrete permitted in these items shall be 4 inches. Slump shall be determined by either ASTM C-143 or California Test Method No. 520 at the Engineer's discretion.

- ¾" Clean crushed Rock
- Mirafi 140N Filter Fabric
- Schedule 40 PVC perforated pipe. Perforations shall be 2 rows of ½" holes on 5" centers, 120° apart.
- Drilled shaft foundations shall be constructed in accordance with applicable requirements of ACI 336.1, ACI 336.3R and ADSC Standards and Specifications for the Foundation Drilling Industry.
- I-Beam (Grade 50) shall be coated with coal tar epoxy or approved equivalent by the manufacturer

- Drilling slurry shall meet the specifications of ACI 336.1, Table 1 - Slurry Specifications
- Steel Shapes and Misc Steel shall conform to the following:
 - Wide Flange (W) – ASTM 992, Grade 50
 - Misc Shapes (i.e. channels, angles, etc...) – ASTM A36
 - Pipe – ASTM A53 Grade B
 - Plates and Bars – A36 (Except for moment frame connections (i.e. continuity, doubler, splice, etc...) which shall be ASTM A572 Grade 50
 - Hollow Structural Sections
 - Square or rectangular – ASTM A1085 Grade B (Fy = 50 ksi)
 - Round – ASTM A500 Grade B (Fy = 42 ksi)
- Bolts shall conform to ASTM A325N-SC as indicated in plans
- Anchor Rods
 - Typical – ASTM F1554 Grade 36 with ASTM A563 Heavy Hex Nuts
 - Weldable – ASTM F1554 Grade 55 S1 with ASTM A563 Heavy Hex Nuts
 - High Strength – ASTM F1554 Grade 105 with ASTM A563 Grade DH Heavy Hex Nuts
- Waterproof membrane shall be 10 mil minimum thickness; 2” min overlap and secured with tape at all edges per manufacturer’s recommendation or as approved by the Engineer

10-23.04 EXECUTION

1. General
 - a. Excavation for shaft foundations by drilling or other methods, as approved by the City’s Engineer, to advance the excavation to the required bottom elevation. Avoid over excavation. Excavation shall be performed through whatever materials are encountered to the dimensions, depths, and tolerances indicated.
 - b. The Contractor shall dispose all excess materials consistent with Section 11 “Disposal” of the Special Conditions.
 - c. When required by the Engineer, drill and core an exploratory hole, approximately three to four inches in diameter, to a depth of 15 feet below the excavation invert and backfill with grout.
 - d. Protect excavated walls with temporary steel casing as necessary to prevent cave-ins, displacement of the surrounding earth, water incursion, injury to personnel, and damage from construction operations. Maintain indicated neat lines of excavation for cased areas.
 - e. Make bottom surfaces level within the tolerances specified herein. Remove loose material, debris, and muck with cleaning buckets.
2. Ground Water Control
 - a. Notify the City immediately when groundwater is encountered.
 - b. Should groundwater be encountered during excavating operations, pumping of water from the shaft excavation will be permitted during construction, provided that the groundwater does not flow into the excavation rapidly enough to carry particles of soil or result in caving of the excavation walls, bottom heaving, or ground settlement.

Under no circumstances or at any time shall the construction result in any material to be discharged, stored, or placed into areas below top of bank unless specifically indicated on plans.

- c. If groundwater incursion endangers the security of the excavation or adjacent property or structures, or exceeds the reasonable pumping capacity, provide such groundwater control measures as may be necessary. Such measures may include temporary steel casing, grouting and the use of drilling-fluid additives, such as bentonite or polymers. The slurry level in the excavation shall be maintained not less than five feet above the groundwater level or higher if necessary to provide a stable hole. The slurry level shall be maintained above any unstable zones a sufficient distance to prevent caving or sloughing of these zones.
- d. During the initial use of drilling-fluid additives, a representative of the additive manufacturer shall be on-site to check that the additives are being used in accordance with the manufacturer's recommendations. The manufacturer's representative shall also perform appropriate field quality tests, including viscosity, pH, density and sand content. Drilling slurry shall meet the specifications of ACI 336.1, Table 1 - Slurry Specifications. The inhole slurry shall meet the specifications prior to concreting. The Contractor shall clean, recirculate, desand, or replace the slurry to maintain the required properties. The slurry shall be mixed in mud tanks on-site or arrive at the site premixed. Combining or mixing slurry in the hole will not be permitted.

3. Inspection

- a. After completion of excavation and prior to placement of reinforcing steel, the condition of the excavation shall be inspected and approved by the City's Engineer in writing. Use clean-out buckets or air lifts to remove any sloughage or other loose material from the shaft prior to placing reinforcing steel and concrete. An accumulation of soil or rock in the bottom of the excavation will not be permitted.

3. Concrete placement

- a. Concrete shall be placed in one continuous operation, without interruption. The concrete shall be a properly designed, high slump mix which will flow readily and retain its fluidity throughout the entire depth of the hole during the full time required for complete placement of all concrete. Place concrete in dry excavations whenever practicable. Use all practicable means to obtain a dry excavation before and during concrete placement. For concrete placed in dry excavations, the Contractor shall employ a drop chute so that the concrete is directed vertically down the center of the shaft without striking the soil sidewalls, the rebar cage, or any other obstruction as it falls. Infiltration of groundwater at or near the bottom of the excavation exceeding 1/4-inch rise per minute will be considered a wet excavation. Where concrete placement in wet excavations is necessary, place concrete by accepted pumping or tremie method.

b. Wet Excavations

- Fill excavation with water or drilling slurry to the natural water level to equalize hydraulic head inside and outside the shaft excavation before starting concrete placement. Use only concrete mix designed for pumping.
- Concrete shall be placed in wet conditions by pumping in one continuous pour, such that, at the time the shaft is topped off with concrete, the initially placed concrete still retains a slump of at least five inches.

- The pump used to deposit the concrete shall be constructed such that it is watertight and will readily discharge concrete. The pipe shall be of sufficient length to reach the bottom of the shaft excavation. A pig or end cap shall be provided for the pump to separate the concrete from the drilling slurry. The discharge end of the pipe shall be immersed a minimum of five feet into the concrete at all times.
- Flow of concrete shall be continuous, and concrete in the pipe shall have sufficient capacity to maintain a positive pressure differential at all times to prevent water intrusion into the shaft concrete. The first placed portion of the concrete flow that comes to the top of the shaft shall be removed until only clean, uncontaminated concrete remains. A continuous record of theoretical concrete volume versus actual concrete volume shall be maintained during placement.

4. Records and Reports

- a. Keep a record, on an approved form, for each drilled shaft foundation installed. Record on the form the location, dimensions, elevations of top and bottom, depth of stratum penetration, elevation of water table during excavation, condition of bottom of excavation, quantity of water entering excavation during concrete placement, concrete placement data, a continuous record of actual concrete volume placed versus theoretical volume, and any other data called for on the approved report form or pertinent to the foundation.
- b. The Geotechnical Engineer shall verify in writing to the Engineer of Record that construction at the site complies with all of the recommendations and conclusions of their report.

