

INVITATION FOR BIDS



FOR CONSTRUCTING

LOS ALAMOS TRUNK SEWER REPLACEMENT SEGMENT 1 (STREAMSIDE DR TO ELAINE DR)

CONTRACT NUMBER
C01903

ISSUED BY
CAPITAL PROJECTS ENGINEERING DIVISION
CITY OF SANTA ROSA, CALIFORNIA

2023

ATTENTION
Prebid Conference
See Page 1



STATE OF CALIFORNIA

INVITATION FOR BIDS

CONTAINING:

NOTICE TO BIDDERS

SPECIAL PROVISIONS

BID FORMS

CONTRACT

FOR

**LOS ALAMOS TRUNK SEWER REPLACEMENT
SEGMENT 1 (STREAMSIDE DR TO ELAINE DR)**

Contract No. C01903

**LOS ALAMOS TRUNK SEWER REPLACEMENT SEGMENT 1
(STREAMSIDE DR TO ELAINE DR)**

TABLE OF CONTENTS

NOTICE TO BIDDERS

NOTICE TO BIDDERS.....1

SPECIAL PROVISIONS

GENERAL SPECIFICATIONS

1 General.....6
2 Bidding.....7
3 Contract Award and Execution.....9
4 Scope of Work13
5 Control of Work14
6 Control of Materials.....18
7 Legal Relations and Responsibility to the Public.....21
8 Prosecution and Progress.....25
9 Measurement and Payment.....26

TECHNICAL SPECIFICATIONS29

Section 10 General Construction30
Section 12 Temporary Traffic Control35
Section 13 Water Pollution Control40
Section 14 Environmental Stewardship45
Section 15 Existing Facilities48
Section 16 Clearing and Grubbing.....52
Section 19 Earthwork53
Section 21 Erosion Control56
Section 26 Aggregate Base57
Section 37 Bituminous Seals58
Section 39 Hot Mix Asphalt.....60
Section 39A Hot Mix Asphalt Concrete Trench Paving.....69
Section 40 Concrete Pavement71
Section 43 Crushed Stone (Shale) Surfacing.....74
Section 44 Bike Path Trail Reconstruction75
Section 56 Signs76
Section 64 Plastic Storm Drain Pipe77
Section 65 Reinforced Concrete Pipe79
Section 71 Existing Drainage Facilities80
Section 73 Concrete Curbs and Sidewalks81
Section 80 Fences and Gates84
Section 81 Monuments.....85
Section 83 Railings and Barriers.....86
Section 84 Traffic Stripes and Pavement Markings.....87
Section 85 Pavement Markers.....88
Section 90 Concrete89
Section 101 Trash Enclosure.....90
Section 106 Trench Bracing and Shoring91
Section 112 Tree Protection93
Section 121 Notification.....95
Section 124 Material Recycling96
Section 130 Sanitary Sewer System.....97

Section 131	Sewer Bypass Pumping.....	102
Section 132	Water Distribution System.....	106
Section A	Fees and Permits.....	111
Section B	Reports.....	119
Section C	Storm Water Correction Site Inspection Form.....	120

BID FORMS

Contract Bid	122
Unit Price Schedule.....	123
List of Subcontractors.....	126
List of Previous Similar Jobs.....	127
Noncollusion Declaration.....	128
Bid Bond Affidavit and Bidder's Signature.....	129

CONTRACT

Contract	130
----------------	-----

NOTICE TO BIDDERS

➤	For technical questions regarding this project, contact Andrew Wilt at (707) 543-3878 or email awilt@srcity.org .
➤	For direct access to plans, specifications and planholders' lists, go to www.srcity.org/bids and click on <u>Bid/Proposal Opportunities</u> .
➤	For direct access to bid results, go to www.srcity.org/bids . Under Link to Capital Projects, click on <u>Capital Projects Contracts</u> .

**- IMPORTANT -
REVISED BIDDING PROCEDURES**

All bids shall be submitted and opened according to the following procedure:

Bid Acceptance Deadline

Sealed bids will be accepted at the Transportation and Public Works Department, 69 Stony Circle, Santa Rosa, California 95401 until 2:00 p.m., March 15, 2023, for Los Alamos Trunk Sewer Replacement Segment 1 (Streamside Dr to Elaine Dr), Contract No. C01903. (Engineer's Estimate: \$7,680,000).

Bids tendered after this deadline will not be accepted. The official time clock for accepting bids will be an electric date and time stamping clock, located in the Transportation and Public Works Department, 69 Stony Circle, Santa Rosa, California. In order to be accepted, bids must be received prior to 2:00 p.m. Therefore, a bid stamped in at 1:59 p.m. will be accepted, but one delivered at or after 2:00 p.m. is late and will not be accepted.

Bid Opening

Prospective bidders, subcontractors, and materials suppliers are invited to attend the Bid opening via Zoom video/teleconference or in person at 69 Stony Circle, Santa Rosa, California. The bid opening is scheduled to be held at 2:00 p.m., March 15, 2023.

The teleconference can be accessed at:

<https://srcity-org.zoom.us/j/82397426562?pwd=Z3ZlVVVSeVJyM0NLNUw5c3dpYmcyZz09>

Phone: 1-877-853-5257

Meeting ID: 823 9742 6562

Passcode: 376722

Find your local number: <https://srcity-org.zoom.us/j/82397426562>

Project Description/Scope of Work

This project will replace approximately 5300 linear feet of the existing Los Alamos Trunk sewer that was installed in the 1950s that is undersized and in poor condition. The new trunk sewer will be 24-inches in diameter and will generally be installed adjacent to the existing alignment. Relocation of small portions of other utilities is necessary in certain locations to create adequate separation from the proposed trunk sewer.

Pre-Bid Meetings

Prospective bidders are requested to attend one of two pre-bid meetings. The first date is **March 1, 2023 at 2:00 p.m.**, and the second date is **March 8, 2023 at 2:00 p.m.** These will both be **on site at 4320 Streamside Drive**. Access to any areas of the project requested by the prospective bidders will be provided at the meeting.

Subcontractor Information; Department of Industrial Relations Registration

Bidders shall provide the names, business addresses and license numbers of all subcontractors listed on bidder's List of Subcontractors. No contractor or subcontractor may be listed on a bid for this public works project unless registered with the Department of Industrial Relations (DIR) pursuant to Labor Code section 1725.5. No contractor or subcontractor may be awarded a contract for this public works project unless registered with the DIR pursuant to Labor Code section 1725.5. This public works project is subject to compliance monitoring and enforcement by the DIR.

Contract #: C01903

Project Title: LOS ALAMOS TRUNK SEWER REPLACEMENT SEGMENT 1 (STREAMSIDE DR TO ELAINE DR)

Line #	Description	Units	Quantity
1	TRAFFIC CONTROL	LS	1
2	WATER POLLUTION CONTROL	LS	1
3	GROUNDWATER MANAGEMENT ALLOWANCE	FA	1
4	ADJUST EXISTING VALVE BOXES AND MONUMENTS TO GRADE	EA	33
5	ADJUST EXISTING MANHOLES TO GRADE	EA	7
6	UTILITY CLEARANCES (POTHOLING)	LS	1
7	UTILITY CONFLICT RESOLUTION ALLOWANCE	FA	1
8	CLEARING AND GRUBBING	LS	1
9	SUBGRADE STABILIZATION/DIG-OUT	SY	200
10	ROADWAY EXCAVATION (F)	CY	1,030
11	EROSION CONTROL	LS	1
12	SEAL COAT	SF	5,500
13	ASPHALT CONCRETE SURFACE	TON	1,510
14	ASPHALT CONCRETE BASE	TON	360
15	EDGE GRIND	LF	2,999
16	CONFORM GRIND	LF	224
17	PAVEMENT MILL	SY	1,520
18	GEOSYNTHETIC PAVEMENT INTERLAYER (PAVEMENT GRID)	SY	4,600
19	SPEED BUMP	LS	1
20	PERMANENT TRENCH PAVING	TON	50
21	CONCRETE PAVEMENT	SF	6,030
22	STAMPED COLORED CONCRETE CROSSWALK PAVING	SF	2,230
23	UTILITY ACCESS ROAD	SY	1,770
24	BIKE PATH TRAIL RECONSTRUCTION	SY	950
25	18" HDPE STORM DRAIN PIPE - TYPE A TRENCH	LF	106
26	18" HDPE STORM DRAIN PIPE - TYPE B TRENCH	LF	60
27	12" RCP STORM DRAIN PIPE WITH CONCRETE CAP	LF	84
28	MODIFY EXISTING STORM DRAIN STRUCTURE	EA	5
29	CURB AND GUTTER	LF	1,065
30	CENTER MEDIAN REPLACEMENT	LF	185
31	CURB RAMP	SF	1,100
32	SIDEWALK	SF	3,621
33	DRIVEWAY APRON	SF	475
34	VALLEY GUTTER	SF	735
35	REMOVE AND REPLACE EXISTING FENCE AND GATES	LF	460
36	RANCH GATE	EA	2
37	CITY MONUMENT	EA	13
38	REMOVE AND REPLACE STREET BARICADE	LF	26
39	BOLLARDS	EA	13

Line #	Description	Units	Quantity
40	TRAFFIC STRIPES AND PAVEMENT MARKINGS	LS	1
41	REMOVE AND REPLACE CMU TRASH ENCLOSURE	LS	1
42	TRENCH BRACING AND SHORING	LS	1
43	TREE PROTECTION FENCING	LF	3,025
44	TREE AND STUMP REMOVAL	EA	26
45	SUPPLY AND PLANT TREE	EA	52
46	6" SEWER MAIN - TYPE A TRENCH	LF	24
47	6" SEWER MAIN - TYPE B TRENCH	LF	155
48	8" SEWER MAIN - TYPE A TRENCH	LF	82
49	8" SEWER MAIN - TYPE B TRENCH	LF	90
50	8" SEWER MAIN - TYPE C TRENCH	LF	18
51	24" SEWER MAIN - TYPE A TRENCH	LF	2,762
52	24" SEWER MAIN - TYPE B TRENCH	LF	1,282
53	24" SEWER MAIN - TYPE C TRENCH	LF	1,278
54	4" SEWER LATERAL	EA	12
55	6" SEWER LATERAL	EA	4
56	8" SEWER LATERAL	EA	1
57	60" POLYMER CONCRETE SEWER MANHOLE	EA	27
58	72" POLYMER CONCRETE SEWER MANHOLE	EA	5
59	ABANDON EXISTING SEWER MAIN	LF	4,500
60	ABANDON EXISTING SEWER MANHOLE	17	17
61	REMOVE EXISTING SEWER SYSTEM COMPONENTS	LS	1
62	REMOVE EXISTING PRIVATE SEPTIC TANK	EA	1
63	SEWER BYPASS PUMPING	LS	1
64	12" PVC WATER MAIN - TYPE A TRENCH	LF	108
65	8" PVC WATER MAIN - CALTRANS TRENCH	48	48
66	STEEL WATER MAIN CASING	LF	38
67	4" DUCTILE IRON MANIFOLD SERVICE	EA	1
68	BACKFLOW DEVICE INSTALLATION	EA	1
69	PRIVATE WATER SYSTEM IMPROVEMENTS	LS	1
70	REMOVE AND REPLACE PRIVATE FIRE HYDRANT AND LATERAL ASSEMBLY	EA	1
71	FIRE HYDRANT AND LATERAL ASSEMBLY	EA	1
72	14" DIRECT INSERT VALVE	EA	2
73	14" X 8" CUT-IN TEE ASSEMBLY	EA	1
74	ABANDON OR REMOVE EXISTING WATER SYSTEM COMPONENTS	LS	1
75	TEMPORARY BLOW-OFF	EA	3
76	WATER MAIN TIE-IN	EA	3

The foregoing quantities are approximate only, being given as a basis for the comparison of bids, and the City of Santa Rosa does not expressly or by implication, agree that the actual amount of work will correspond therewith, but reserves the right to increase or decrease the amount of any class or portion of the work, as may be deemed necessary or expedient by the Engineer.

Bids shall be made in accordance with the prevailing hourly rate of per diem wages for this locality and project as determined by the Director of the DIR pursuant to Labor Code sections 1770 *et seq.*

Contractor shall be responsible for compliance with the Immigration Reform Control Act of 1986.

If the project requires the employment of workers in any apprenticeable craft or trade, once awarded, Contractor and subcontractors must apply to the Joint Apprenticeship Council unless already covered by local apprentice standards (see Labor Code section 1777.5).

All bids are to be compared on the basis of the Engineer's estimate of the quantities of work to be performed. No bid will be awarded to a contractor who is not licensed in accordance with the provisions of Chapter 9 of Division 3 of the Business and Professions Code. Contractor must hold a Class A license for this project.

Project plans, bid and contract forms for C01903 Los Alamos Trunk Sewer Replacement Segment 1 (Streamside Dr to Elaine Dr) may be obtained through PlanetBids at www.srcity.org/bids. These documents can no longer be obtained at the Transportation and Public Works Department.

No bid will be accepted unless it is made on the contract bid forms furnished by the Transportation and Public Works Department through PlanetBids. The original of the completed bid forms bearing original signatures must be submitted. A bid will not be accepted unless the bidder registers as a vendor through PlanetBids at www.srcity.org/bids, downloads documents/attachments, and is added to the prospective bidders list for this project. If there is an addendum, bidders must log into PlanetBids and acknowledge the addendum to be eligible for bidding.

The successful bidder will be required to hold a current City of Santa Rosa business tax certificate issued pursuant to Chapter 6.04 of the Santa Rosa City Code before commencing work on this project. For information regarding the business tax, contact Revenue and Collections at (707) 543-3170.

For any moneys earned by Contractor and withheld by the City of Santa Rosa to ensure the performance of the Contract, Contractor may, at its request and expense, substitute securities equivalent to the amount withheld in the form and manner and subject to the conditions provided in Section 22300 of the California Public Contract Code.

The City of Santa Rosa reserves the right to reject any or all bids and the right to waive minor irregularities or informalities in any bid or bonds.



TRACY DUENAS
Supervising Engineer

2/14/23

Date

SPECIAL PROVISIONS

General Specifications

CITY OF SANTA ROSA, CALIFORNIA

LOS ALAMOS TRUNK SEWER REPLACEMENT SEGMENT 1 (STREAMSIDE DR TO ELAINE DR)

1 GENERAL

The work described herein shall be done in accordance with the "Contract Documents," which are the:

1. Special Provisions
2. Project Plans, consisting of 33 sheets entitled Los Alamos Trunk Sewer Replacement Segment 1 (Streamside Dr to Elaine Dr), 2018-0043
3. City of Santa Rosa Design and Construction Standards (City Standards)
4. City of Santa Rosa Construction Specifications for Public improvements (City Specifications)
5. State of California Department of Transportation Standard Specifications 2010 (Standard Specifications), and
6. State of California Department of Transportation Standard Plans 2010 (Standard Plans).

In the event of a conflict in any of these documents, the order of precedence shall be determined by Section 5-1.02 of these Special Provisions.

Whenever the Standard Specifications use the terms State of California, Department of Transportation, Director, Engineer, or Laboratory, the following terms shall be substituted therefor, and any reference to any of the foregoing terms shall be understood and interpreted to mean and refer to such substituted terms as follows:

For State of California - the City of Santa Rosa;

For Department - the City of Santa Rosa Department of Transportation and Public Works or the City of Santa Rosa Water Department;

For Director - the City Engineer of the City of Santa Rosa;

For Engineer - the City Engineer of the City of Santa Rosa or the City Engineer's authorized agents;

For Laboratory – Materials Engineering of the City of Santa Rosa Transportation and Public Works Department, or such other laboratory as may be authorized by the City.

Unless otherwise provided, whenever in these Special Provisions attention is directed to specific provisions in the Standard Specifications, such direction shall not be interpreted as excluding other applicable provisions of the Standard Specifications.

Unless otherwise provided, when sections and subsections of the Standard Specifications are used in these Special Provisions, such use is not exclusive and shall not be interpreted as excluding other applicable provisions of said sections and subsections but is only intended to add to or modify such sections or subsections.

Unless otherwise provided, full compensation for compliance with these Special Provisions is included in the contract price and no additional allowance will be made to Contractor therefor.

The Standard Specifications are hereby modified to delete any reference or incorporation of provisions providing for or requiring arbitration of any and all claims and disputes arising under this contract.

2 BIDDING

2-1.06 Bid Documents: Prospective bidders will be furnished with an Invitation for Bids which will state the location and description of the contemplated public works project and will show the approximate estimate of the various quantities and kinds of work to be performed and materials to be furnished with a schedule of items for which unit prices are requested.

2-1.07 Approximate Estimate: The quantities given in the Contract Documents are approximate only, being given as a basis for the comparison of bids, and the City does not, expressly or by implication, agree that the actual amount of work will correspond therewith, but reserves the right to increase or decrease the amount of any class or part of the work or to omit parts of the work, as may be deemed necessary or advisable by the Engineer.

2-1.31 Examination of Project Plans, Specifications, City Standards, Invitation for Bids and Work Site: Prior to submitting a bid, the bidder shall carefully examine the Project Plans, Invitation for Bids, City Standards and the proposed work site. If any person contemplating submitting a bid for this public works project is in doubt as to the meaning of any part of the Contract Documents, or finds discrepancies in or omissions from the Contract Documents, he or she may submit a written request for interpretation or correction to the Engineer. The written request must be received by the Engineer a minimum of 96 hours prior to bid opening. Any interpretation or correction of the Contract Documents prior to bid opening will be made only by written addendum issued by the City. A copy of such addendum will be mailed or faxed to each Planholder. The City will not be bound by any other explanations or interpretations of the Contract Documents.

2-1.33 Bid Document Completion: Any references to Opt Out of Payment Adjustments for Price Index Fluctuations in the Standard Specifications are deleted in their entirety.

2-1.33A Bid Forms: All bids shall be made on bid forms obtained from PlanetBids at www.srcity.org/bids. The bidder shall submit its bid on the original bid forms furnished by the City. Bids submitted on forms other than the forms furnished to the bidder by the City will not be considered.

The bid forms to be submitted at the time of and with the bid are:

1. Unit Price Schedule
2. List of Subcontractors
3. List of Previous Similar Jobs
4. Noncollusion Declaration
5. Bid Guaranty Information and Bidder's Information and Signature
6. Bid Guaranty (Bid Bond or alternate security)

All bids shall give the proposed prices and must bear the original signature of the bidder. Bidders shall fill in all blanks on the bid forms where required. A bid will not be accepted unless the bidder registers as a vendor through PlanetBids at www.srcity.org/bids, downloads documents/attachments, and is added to the prospective bidders list for this project. If there is an addendum, bidders must log into PlanetBids and acknowledge the addendum to be eligible for bidding.

2-1.33B Registration with DIR: No contractor or subcontractor may be listed on a bid for this public works project unless registered with the Department of Industrial Relations (DIR) pursuant to Labor Code section 1725.5. No contractor or subcontractor may be awarded a contract for this public works project unless registered with the DIR pursuant to Labor Code section 1725.5. This public works project is subject to compliance monitoring and enforcement by the DIR.

2-1.33C Subcontractors: The Subletting and Subcontracting Fair Practices Act, Public Contract Code sections 4100-4113, inclusive (the "Act") shall apply to all subcontracts in excess of one-half of one percent of the total amount of a bid. The Act requires subcontractors, if used for such work, to be listed in the contractor's bid and prohibits the substitution of subcontractors, except as authorized by the Act. Each bidder shall, with respect to the work of any subcontractor in excess of one-half of one percent of the total amount of the bid, include as part of the bid on the bid form provided:

1. The name, business address and DIR registration number of each subcontractor who will perform work or labor or render services to the Contractor in or about the construction of the work or improvement, or a subcontractor licensed by the State of California who, under subcontract to the Contractor, specially fabricates and installs a portion of the work or improvement according to detailed drawings contained in the Project Plans or other Contract Documents in an amount in excess of one-half of one percent of the Contractor's total bid; and
2. The portion of the work that will be done by each subcontractor. Only one subcontractor shall be listed for each portion.

The purchase of sand, gravel, crushed rock, batched concrete, aggregate, ready-mixed concrete, and/or any other materials produced and furnished by established and recognized commercial plants, together with the delivery of such materials to the work site by the source of the materials or by recognized commercial hauling companies, is not considered as subcontracting under this section.

2-1.33E Rejection of Bids Containing Alterations, Erasures or Irregularities: Bids may be rejected if they show any alterations of forms, additions not called for, conditional bids, incomplete bids, erasures or irregularities of any kind.

2-1.34 Bid Guaranty: All bids shall be presented under sealed cover and shall be accompanied by cash, cashier's or certified check, or by a bidder's bond made payable to the City of Santa Rosa and executed as surety by a corporate surety authorized and admitted to transact a surety business in the State of California in an amount equal to ten percent of the amount of the bid. No bid shall be considered unless such cash, cashiers or certified check, or bidder's bond is enclosed with the bid. Any bidder's bond shall contain provisions for forfeiture consistent with California Public Contract Code section 20172.

2-1.40 Withdrawal of Bid: A bid may be withdrawn prior to, but not after, the hour fixed in the public notice for the opening of bids, provided that a written request to withdraw the bid, executed by the bidder or the bidder's authorized representative, is filed with the Engineer before this deadline. The withdrawal of a bid shall not prejudice the right of a bidder to submit a new bid.

2-1.43 Public Opening of Bids: Bids will be opened and read publicly at the time and place indicated in the Notice to Bidders. Bidders or their authorized agents are invited to be present.

2-1.46 Disqualification of Bidders: Serial bids from the same bidder will not be accepted. This section shall not be interpreted to mean that the same contractor may not be the contractor in one bid and listed as a subcontractor in another bid, provided that no collusion exists.

2-1.48 Competency of Bidders: No bid will be accepted from or contract awarded to a contractor that is not licensed in accordance with the law, that does not hold a license qualifying it to perform work under this contract, to whom a bid form has not been issued by the Engineer, or that has not successfully completed projects of similar character, scope and cost to the proposed project. Bidders will be required to provide a list of previous similar jobs with their bids.

3 CONTRACT AWARD AND EXECUTION

3-1.04 Contract Award: The City reserves the right to reject any or all bids. Bids are required for the entire work described herein. All bids will be compared with the Engineer's estimate of the quantities of work to be completed. Contract award, if any, will be made to the lowest responsible bidder within sixty days from the date bids are opened.

3-1.05 Contract Bonds: Within ten days after receipt of the Notice of Award, the successful bidder shall provide the following bonds to the City:

- a. **Performance Bond:** A performance bond to guarantee the faithful performance of the terms and conditions of the Contract by Contractor, which shall be executed in a sum of not less than one-half of the Contract price;
- b. **Labor and Materials Bond:** A labor and materials bond (payment bond) in accordance with Part 6 of Division 4, sections 8000 *et seq.* of the California Civil Code, to guarantee against any and all claims of subcontractors or other third parties furnishing labor, materials, or supplies for the Contract, which shall be executed in a sum of 100% of the Contract price; and
- c. **Material Guaranty Bond:** A material guaranty bond (warranty bond) to serve as surety for the guarantee requirements outlined in Section 6-3.01B, which shall be executed in a sum of not less than one-half of the Contract price.

The bond(s) shall be provided in a form acceptable to the City and issued by a corporate surety in good financial standing and authorized and admitted to transact a surety business in the state of California for the purposes and in the amount(s) stated above.

Whenever the financial or legal status of any surety on any such bond(s) is/are unacceptable to the City, it may make a demand to Contractor for further bond(s) or additional surety, not exceeding the sums originally required. Thereafter, no payment shall be made upon the Contract to Contractor or any assignees of Contractor until such bond(s) or additional surety has/have been provided to the City.

3-1.07 Indemnification and Insurance: **Indemnification:** Contractor shall defend, hold harmless and indemnify City, its officers, agents and employees, and each and every one of them, from and against any and all actions, damages, costs, liabilities, claims, demands, losses, judgments, penalties, costs and expenses of every type and description, including, but not limited to, any fees and/or costs reasonably incurred by City's staff attorneys or outside attorneys and any fees and expenses incurred in enforcing this provision (hereafter collectively referred to as "Liabilities"), including but not limited to Liabilities arising from personal injury or death; damage to personal, real or intellectual property or the environment; contractual or other economic damages, or regulatory penalties, arising out of or in any way connected with the performance of or the failure to perform the Contract by Contractor, any subcontractor or agent, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, whether or not such Liabilities are caused in part by a party indemnified hereunder, or such Liabilities are litigated, settled or reduced to judgment; provided, that the foregoing indemnity does not apply to liability for any damage or expense for death or bodily injury to persons or damage to property to the extent arising from (i) the sole negligence, or willful misconduct of, or defects in design furnished by City, its agents, servants, or independent contractors who are directly responsible to City (excluding Contractor), or (ii) the active negligence of City.

The existence of any of the insurance policies or coverages described in this Contract shall not affect or limit any of City's rights hereunder, nor shall the limits of such insurance limit Contractor's liability to the City hereunder. The provisions of this section shall survive any expiration or termination of the Contract.

Insurance: Contractor shall maintain in full force and effect all of the insurance coverage described in and in accordance with the insurance requirements set forth below. Maintenance of such insurance coverage during the entire performance of the Contract is a material element of the Contract. Failure by Contractor to (i) maintain or renew coverage, (ii) provide notice of any changes, modifications, or reductions in coverage, or (iii) provide evidence of renewal, if necessary, may be deemed a material breach of the Contract by Contractor, whereas the City shall be entitled to all rights and remedies at law or in equity. Notwithstanding the foregoing, any failure by Contractor to maintain required insurance coverage shall not excuse or alleviate Contractor from any of its other duties or obligations under the Contract. In the event Contractor retains or utilizes any subcontractors or sub-consultants in performance of the work, Contractor shall assure that any such subcontractor has first obtained, and shall maintain, all of the insurance coverage requirements herein set forth below.

Insurance Requirements:

A. Insurance Policies: Contractor shall maintain and keep in full force and effect, the following policies of insurance with minimum coverage as indicated below and issued by insurers with an AM Best rating of no less than A:VI or a rating otherwise acceptable to the City.

	Insurance	Minimum Coverage Limits	Additional Coverage Requirements
1.	Commercial general liability	\$5 million per occurrence \$5 million aggregate	Coverage must be at least as broad as ISO CG 00 01 and must include products liability and completed operations coverage which shall continue for a period of three years after acceptance of the work by the City. If insurance applies separately to a project/location, aggregate may be equal to per occurrence amount. Coverage may be met by a combination of primary and umbrella or excess insurance, but umbrella and excess shall provide coverage at least as broad as specified for underlying coverage. Completed Operations Coverage can be provided in the form of an endorsement to Contractor's insurance (at least as broad as ISO Form CG 20 37 04 13. See endorsements below for other Additional Insured Requirements. Coverage shall not exclude subsidence.
2.	Business auto coverage	\$3 million	Coverage at least as broad as ISO Form Number CA 00 01 covering any auto (Code 1). Insurance shall cover owned, non-owned and hired autos.
3.	Workers' compensation and Employer's Liability	\$1 million	As required by the State of California, with Statutory Limits and Employer's Liability Insurance with limit of no less than \$1 million per accident for bodily injury or disease. The Workers' Compensation policy shall be endorsed with a waiver of subrogation in favor of the City for all work performed by Contractor, its employees, agents and subcontractors.

- | | | | |
|----|---|--|---|
| 4. | Contractor's pollution legal liability and/or asbestos legal liability and/or errors and omission | \$1 million per occurrence or claim
\$2 million aggregate | If the work involves lead-based paint or asbestos identification/remediation, the pollution liability policy must not contain lead-based paint or asbestos exclusions. If the work involves mold identification, the pollution liability policy must not contain a mold exclusion and a definition of "Pollution" in said policy shall include microbial matter including mold. |
| 5. | Course of construction/builders' risk | Amount of completed value of project without co-insurance provisions | Required for construction projects over \$3 million. The City shall be named as loss payee. |

B. Endorsements:

1. All policies shall provide or be endorsed to provide that coverage shall not be canceled by either party, except after prior written notice has been provided to the City in accordance with the policy provisions.
2. Liability policies shall provide or be endorsed to provide the following:
 - a. For any claims related to this Contract, Contractor's insurance coverage shall be primary, and any insurance or self-insurance maintained by City shall be in excess of Contractor's insurance and shall not contribute with it. Endorsements at least as broad as 20 01 04 13 or evidence of policy language will be required in non-ISO CGL policies.
 - b. **The City of Santa Rosa, its officers, agents and employees are to be covered as additional insureds on the CGL policy.** Additional Insured Endorsements at least as broad as 20 10 04 13 or 20 38 04 13 are required.
 - c. **The owner of Assessor Parcel Numbers 031-240-006, 031-240-007, 031-240-067, and 032-300-005 is to be covered as additional insureds on the CGL policy.** Additional Insured Endorsements at least as broad as 20 10 04 13 or 20 38 04 13 are required.

C. Verification of Coverage and Certificates of Insurance: Contractor shall furnish City with original certificates and endorsements effecting coverage required above. Certificates and endorsements shall make reference to policy numbers. All certificates and endorsements are to be received and approved by the City before work commences and must be in effect for the duration of the Contract. The City reserves the right to require complete copies of all required policies and endorsements during the duration of the Contract and for a period of three years following City's acceptance of the work.

D. Other Insurance Provisions:

1. No policy required by this Contract shall prohibit Contractor from waiving any right of recovery prior to loss. Contractor hereby waives such right with regard to the indemnitees.
2. All insurance coverage amounts provided by Contractor and available or applicable to this Contract are intended to apply to the full extent of the policies. Nothing contained in this Contract limits the application of such insurance coverage. Coverage for an additional insured shall NOT be limited to the insured's vicarious liability. Defense costs must be paid in addition to coverage amounts.
3. Self-insured retentions above \$10,000 must be approved by the City. At the City's option, Contractor may be required to provide financial guarantees.

4. City reserves the right to modify these insurance requirements, including limits, based on the nature of the risk, prior experience, insurer, coverage, or other special circumstances.

3-1.18 Contract Execution: The fully executed Contract, original bonds and insurance certificates and endorsements required under the Contract shall be delivered to the City within ten calendar days of Contractor's receipt of the Notice of Award.

The Engineer will supply Contractor with up to ten sets of the Invitation for Bids and Project Plans. At least one complete set of the Invitation for Bids and Project Plans shall be kept at the construction site in good condition and made available to the Engineer at all times. Additional copies of the Invitation for Bids and Project Plans will be provided by the Engineer at Contractor's cost.

3-1.20 Failure to Execute Contract: Contractor's failure to deliver to the City the fully executed Contract within ten calendar days of Contractor's receipt of the Notice of Award shall be cause for the cancellation of the award and the forfeiture of the bid guaranty to the City. If the successful bidder refuses or fails to execute the Contract, the City may award the Contract to the second lowest responsible bidder. If the second lowest responsible bidder refuses or fails to execute the Contract, the City may award the Contract to the third lowest responsible bidder. The refusal or failure by the second or third lowest responsible bidder to deliver to the City the fully executed Contract within ten calendar days of receipt of the Notice of Award to the respective bidder shall likewise be cause for the cancellation of the award and the forfeiture of the bid guaranty of the respective bidder. In its discretion, the City may then re-advertise the project or construct it by day labor.

3-1.21 Return of Bid Guarantees: Within ten days after the opening of bids, the City will return the bid guarantees to all bidders except the three lowest responsible bidders. The bid guarantees of the three lowest responsible bidders will be retained until the Contract has been fully executed. In the event all bids are rejected, all bid guarantees will be returned to the respective bidders.

3-1.22 Subcontractors: The successful bidder shall furnish a list of all subcontractors as required under Sections 2-1.33C. The list shall include the name, business address, DIR registration number and the state contractor's license number of each subcontractor on the list and the names of the responsible managing employees whose names appear on the subcontractors' licenses.

4 SCOPE OF WORK

4-1.05 Changes and Extra Work: All changes to the Contract shall be made by written change order only.

All extra work shall be recorded by Contractor on a daily report signed by both the City and Contractor. The “daily reports” shall thereafter be considered the true record of extra work performed. A copy of the daily reports will be furnished to Contractor. Contractor is directed to Section 9-1.04 of this Invitation for Bids.

4-1.05C Compensation for Altered Quantities: Payment and compensation for altered quantities shall conform to the provisions of Section 9-1.06 of the Standard Specifications, except as modified herein.

5 CONTROL OF WORK

5-1.02 Contractor's Copies of Contract Documents: In the event of a conflict in any of the Contract Documents, the order of precedence from highest to lowest shall be as follows:

1. Special Provisions
2. Project Plans, consisting of 33 sheets entitled Los Alamos Trunk Sewer Replacement Segment 1 (Streamside Dr to Elaine Dr), 2018-0043
3. City Standards
4. City Specifications
5. Standard Specifications
6. Standard Plans

5-1.05 Order of Work: The work as shown on the Project Plans and as specified in the Invitation for Bids shall be constructed in a sequence that is satisfactory to and approved by the Engineer.

Contractor shall prepare a work schedule per Section 8-1.02 of the Standard Specifications.

Attention is directed to Section 10-7 Work Plan & Conceptual Order of Work of these Special Provisions.

The Contractor shall schedule the work such that the work requiring access to temporary construction easement areas indicated on the Project Plans is completed within the timespan that the temporary construction easements are active as indicated in Section 5-1.20D.

With the exception of trenching, all existing street, street light base, curb and gutter, storm drain, water line, and sewer line work shall be completed before any existing street paving is removed.

Full compensation for the conformance to the requirements of this section is included in the Contract price and no additional allowance will be made to Contractor for this work.

5-1.17 Character of Workers: Contractor is directed to Section 5-1.17 of the Standard Specifications which states:

"If any subcontractor or person employed by the Contractor shall appear to the Engineer to be incompetent or to act in a disorderly or improper manner, he shall be discharged immediately on the request of the Engineer, and such person shall not again be employed on the work."

No additional compensation shall be granted to Contractor in the event City exercises any part of its rights under this section and any and all costs related to such exercise shall be borne by Contractor.

5-1.20 Cooperation with Other Entities: Attention is directed to Section 5-1.20 of the Standard Specifications.

Other construction including but not limited to utility, power, and pipe line relocation, may be in progress by other forces within and adjacent to the project area at the same time work is being performed under this Contract by Contractor.

Contractor shall cooperate with the forces performing other work, to the end that such forces may conduct their operations with as little inconvenience and delay as possible. Contractor shall grant such forces access to the project area as is reasonable and necessary to transport materials and equipment to the site of operations by the other forces.

5-1.20B(4)(a) Offsite Staging Areas and Construction Yards: Attention is directed to Santa Rosa City Code section 20-52.040, Temporary Use Permit.

A Temporary Use Permit shall be obtained for any offsite construction yard on private property to be used for any of the following:

- a. Stockpiling of equipment and/or materials;
- b. Staging of construction;
- c. Placement of work trailers or mobile offices;
- d. Storage of trench spoils; or
- e. Other construction related activities not specifically enumerated above.

5-1.20D Contractor Use of Temporary Construction Easement Areas: The temporary construction easement areas indicated on the Project Plans are anticipated to be active within the following dates:

- Temporary Construction Easements over APN 032-530-002 and APN 032-530-001 are currently active but will expire on May 31, 2023.
- Temporary Construction Easements over APN 032-140-003, APN 032-010-069, APN 032-010-010, and APN 032-010-054 will be active between May 1, 2023 and April 30, 2025.
- Temporary Construction Easements over APN 032-010-050, APN 031-240-068, and APN 031-240-071 are currently active but will expire on March 31, 2024.
- Temporary Construction Easements over APN 031-140-061, APN 031-140-069, APN 031-140-064, APN 031-140-065, APN 031-140-072, and APN 032-300-001 will be active between July 1, 2023 and June 30, 2025.
- Temporary Construction Easements over APN 031-240-006 and APN 031-240-067 are currently active but will expire on March 31, 2025.

The Contractor shall schedule the work in accordance with Section 5-1.05 as necessary to complete the work requiring use of the temporary construction easement areas prior to their expiration. No work shall be performed in the temporary construction easement areas after their expiration.

5-1.26 Lines and Grades: Contractor shall carefully preserve all bench marks, grade stakes, and all other survey markers. In the case of willful or careless destruction, Contractor shall bear the cost of replacing the markers.

Contractor shall contact the Engineer directly for coordination of survey staking. Written staking requests must be submitted at least two working days in advance of the date and time stakes are needed.

5-1.27B Examination and Audit: Pursuant to California Government Code section 8546.7, any contract with the City involving expenditures in excess of \$10,000 shall be subject to the examination and audit of the California State Auditor for a period of three years after final payment is made to Contractor by City under this Contract. Any such examination and audit will be confined to those matters connected with the performance of this Contract.

5-1.30A Inspection: Contractor shall bear all costs associated with the re-inspection of any defective, rejected or unauthorized work as determined by the Engineer in Engineer's sole discretion. Such costs of re-inspection, including any costs incurred by the City for additional staff time or fees for third-party consultant inspectors, will be deducted from one or more progress payments hereunder.

5-1.36A Property and Facility Preservation: Attention is directed to Section 5-1.36 of the Standard Specifications.

At Contractor's sole expense, all fences, gates, landscaping, drainage ditches, sidewalks, irrigation systems, and any other improvements that are damaged, removed or destroyed because of Contractor's operations, shall be replaced in accordance with City Standards at a minimum and restored to the same or better condition. Concrete surface treatment and score marks shall match adjacent existing concrete improvements.

5-1.36E Obstructions: Attention is directed to Section 5-1.36 of the Standard Specifications and to the possible existence of underground gas mains, high voltage lines, telephone ducts, storm drains and water and sewers systems, the locations of which are not shown on the Project Plans. The determination of the location of these facilities and the cost of repair or replacement in the event of damage to such facilities are the sole responsibility of Contractor.

Should Contractor alter any public utility or private improvements to facilitate its operations or for its sole benefit, which alteration would not be otherwise required, Contractor shall make whatever arrangements are necessary with the owner or controlling authorities and shall bear all expenses in connection therewith. Any damages to any public utility or private improvement caused by Contractor shall be repaired by Contractor at its sole expense and to the full satisfaction of the Engineer or the controlling authority.

Any subsurface information and data furnished under any part of this Contract are not intended as a representation or warranty but are furnished for information only. It is expressly understood that the City will not be responsible for the accuracy thereof or for any deduction, interpretation or conclusion drawn therefrom by Contractor. The information is made available so that Contractor may have ready access to the same information available to the City and is not part of this Contract.

PRIOR TO STARTING ANY EXCAVATION, CONTRACTOR SHALL (AT LEAST TWO WORKING DAYS IN ADVANCE) CALL UNDERGROUND SERVICE ALERT (USA) toll free at (800) 227-2600 and provide USA with all necessary data relative to the proposed excavation. USA will accept calls and process information to participating agencies who have underground facilities in the area between the hours of 7:30 a.m. and 5:00 p.m. daily, except Saturdays, Sundays, and holidays. Between the hours of 5:00 p.m. and 7:30 a.m., calls will be recorded and then processed after 7:30 a.m. For emergency situations, after hours, and on Saturdays, Sundays and holidays, Contractor shall contact the owner of the affected facility.

Contractor shall coordinate all work with the appropriate City field personnel. When City work forces are required at the job site to perform Contract items of work, Contractor shall give a minimum of two working days advanced notification to the appropriate field office:

Water Division:	(707) 543-4200
Sewer Division:	(707) 543-4200
Street Division:	(707) 543-3880
Survey Division:	(707) 543-3834

5-1.43 Potential Claims and Dispute Resolution: "Claim" means a separate demand by Contractor sent by registered mail or certified mail with return receipt requested, for one or more of the following: (A) A time extension, including, without limitation, for relief from damages or penalties for delay assessed by the City under the Contract; (B) Payment by the City of money or damages arising from work done by, or on behalf of, Contractor pursuant to the Contract and payment for which is not otherwise expressly provided or to which the claimant is not otherwise entitled; or (C) Payment of an amount that is disputed by the City.

Upon receipt of a Claim, the City shall conduct a reasonable review of the Claim and, within a period not to exceed 45 days, shall provide Contractor a written statement identifying what portion of the Claim is disputed and what portion is undisputed, provided, the parties may extend the 45 day time period by mutual agreement.

If the City needs approval from the City Council to provide the claimant a written statement identifying the disputed portion and the undisputed portion of the Claim, and the Council does not meet within the 45 days or within the mutually agreed to extension of time following receipt of a Claim, the City shall have up to three days following the next duly publicly noticed meeting of the City Council after the 45-day period, or extension expires to provide Contractor a written statement identifying the disputed portion and the undisputed portion.

Any payment due on an undisputed portion of the Claim shall be processed and made within 60 days after the City issues its written statement. If the City fails to issue a written statement, the Claim shall be deemed rejected in its entirety.

If a Contractor disputes the City's written response, or if the City fails to respond to a Claim within the time prescribed, the Contractor may demand in writing an informal conference to meet and confer for settlement of the issues in dispute. Upon receipt of a demand in writing sent by registered mail or certified mail, return receipt requested, the City shall conduct a meet and confer conference within 30 days for settlement of the dispute. Within 10 business days following the conclusion of the meet and confer conference, if the Claim or any portion of the Claim remains in dispute, the City shall provide the Contractor a written statement identifying the portion of the Claim that remains in dispute and the portion that is undisputed. Any payment due on an undisputed portion of the Claim shall be processed and made within 60 days after the City issues its written statement. Any disputed portion of the Claim, as identified by Contractor in writing, shall be submitted to nonbinding mediation, with the City and the Contractor sharing the associated costs equally. The City and Contractor shall mutually agree to a mediator within 10 business days after the disputed portion of the Claim has been identified in writing. If the parties cannot agree upon a mediator, each party shall select a mediator and those mediators shall select a qualified neutral third party to mediate with regard to the disputed portion of the Claim. Each party shall bear the fees and costs charged by its respective mediator in connection with the selection of the neutral mediator.

6 CONTROL OF MATERIALS

6-2.01 Source of Supply and Quality of Materials: All materials required to complete the work under the Contract shall be furnished by Contractor and shall be free of hazardous substances.

6-3.01 General: Statistical means will not be used by the City for determination of Standard Specification compliance. Whenever both operating range test results and Contract compliance requirements are specified in these special provisions, the operating range requirements shall apply to the individual test results.

6-3.01A Material Submittals: Upon award of the Contract by City, Contractor shall submit to the Engineer a list of all materials proposed to be used on this project and any supporting documentation and/or samples required and source of supply.

For material listed on the “Engineer’s List of Approved Items” which is located in the Sewer and Water sections only of the City Standards, the Engineer shall be provided with the name of the manufacturer and model/part number for all material proposed for this project, unless that item has been replaced as shown on the Project Plans or in the Invitation for Bids.

For all other materials used on this project, regardless of the type of work, Contractor shall provide to the Engineer the name of the manufacturer and model/part number along with supporting documentation and/or samples that will allow the Engineer to determine the material’s acceptability.

The Engineer reserves the right to reject any proposed material, whether on the City’s “Engineer’s List of Approved Items” or not. If the City obtains information indicating that a listed item is not performing satisfactorily or is found to be defective, that item will be rejected and Contractor shall submit a replacement for review at no additional cost to the City.

6-3.01B Material Guarantee: Before any contract is awarded, the bidder may be required to furnish samples of materials and detailed descriptions of equipment to be used in the construction of the project. The materials samples may be subjected to the tests provided for in the Standard Specifications or in this Invitation for Bids to determine their quality and fitness for the project. The successful bidder shall unconditionally guarantee project materials and workmanship for a period of one year from the date of recording of the Notice of Completion. The guarantee shall cover 100% of all costs of repairs within the one year period, including all costs of labor, materials, equipment, and incidentals. Except as may be otherwise provided in Section 3-1.05, the successful bidder shall provide a surety bond executed by a corporate surety authorized and admitted to transact a surety business in the state of California in the minimum amount of one-half of the Contract price to cover this guarantee.

6-3.05 Quality Assurance: California Test 216 (Relative Compaction) testing will be modified as follows: A mechanical compactor (Ploog Engineering Co. Model M 100 or equivalent) with 10-pound hammer and split compaction molds shall be used in lieu of the specified manual compaction equipment.

California Test 231 (Nuclear Gage Determination of In-Place Density) will be modified as follows: In-place density and relative compaction may be determined on the basis of individual test sites in lieu of the area concept, at the discretion of the Engineer.

6-4 Water Utility

6-4.01A Construction Water: All water required for the performance of the work shall be provided by Contractor. Prior to obtaining water from the City’s water system, Contractor shall obtain a Water

Use Permit from the City of Santa Rosa Water Department and rent a hydrant or bridge meter. Contractor is responsible for the cost of all water and the cost of all deposits, permits and fees.

Contractor is prohibited from operating gate valves or fire hydrants on the City system.

The acquisition of water from the City's water system through un-metered hydrants or other facilities is a violation of City ordinance and State law. The use of water from sources other than the City's water system must be approved by the Engineer in advance of the use.

Citations and fines will be levied for violation of these and other utility regulations and deductions will be made from payments consistent with Section 7-1.02A(1) of the Standard Specifications.

6-4.01B Water Utility Notification: Contractors or parties requiring work of any kind by the City of Santa Rosa Water Department forces shall request such services a minimum of 48 hours in advance of the time such services are desired. Work requests which will involve the City of Santa Rosa Water Department forces for more than eight hours or an extensive number of City parts shall be requested a minimum of seven calendar days in advance.

If it is necessary to terminate or disrupt utility service to any customer, Contractor shall make the request for such work by City forces an additional 72 hours (three additional working days for a total of five working days advance notice) in advance of the time such services are desired to allow affected customers a minimum of 72 hours' notice. Contractors who fail to keep field appointments will be billed for scheduled City of Santa Rosa Water Department crew standby time which was used and the Contractor shall bear the costs incurred by the City of Santa Rosa's Water Department for re-notification of customers.

City of Santa Rosa Water Department crews work a 9/80 schedule. This schedule may prohibit shutdowns for tie-ins on alternating Fridays. After hours work or weekend work may be performed if prior authorization from the Engineer is obtained.

Other than the hours specified in this Invitation for Bids, requests by Contractor for after hours or weekend work is to be avoided whenever possible. Any overtime costs incurred by City for such work shall be borne by Contractor.

Interruption of utilities service to commercial customers shall be coordinated with the customer to minimize disruption to the enterprise to the greatest extent practicable. After notification by the Contractor of the need, the City of Santa Rosa Water Department will contact all commercial customers and inform Contractor accordingly.

6-4.01C Water Facility Damage: All damage caused to the City's water system shall be immediately reported to the Engineer.

Damage caused to the City's water system by Contractor's operations shall be repaired by the Contractor at Contractor's sole expense in a manner satisfactory to the City of Santa Rosa Water Department. Such repairs shall not be charged to the City or any City project. All repair work shall be witnessed and approved by the City of Santa Rosa Water Department prior to backfilling the excavation. The City will require re-excavation if backfilling occurs prior to inspection, which costs shall be borne by Contractor.

Contractor is responsible for, at its sole cost and expense, the repair and remediation of damage to property and facilities caused by any of the following circumstances:

- a. Contractor fails to make a written request for a markout or begins excavation without providing the City of Santa Rosa Water Department a reasonable opportunity to mark facilities;

- b. Contractor destroys markouts;
- c. Contractor fails to perform hand digging or probing for utilities near markouts; or
- d. Contractor fails to use reasonable caution, regardless of whether markouts are present or clear. Reasonable caution includes any efforts to avoid damaging existing facilities, such as when excavating in the vicinity of water mains.

City may, in its discretion, opt to make the repairs for which Contractor is responsible with its own forces. In such cases, the repairs will be made at Contractor's expense in accordance with the emergency repair rate schedule of the City of Santa Rosa Water Department. The City may make repairs whenever restoration of service requires extraordinary speed or special equipment. Contractor will be billed accordingly and City shall have the right and option to withhold payment hereunder, or a portion thereof, for any such costs billed but not promptly paid by Contractor.

6-4.02 Salvage: All valves, hydrants, and other appurtenances of the water system that are the property of City and removed by Contractor shall be delivered to the City's Municipal Services Center (55 Stony Point Road) unless Contractor has obtained specific written approval from the City of Santa Rosa Water Department to otherwise dispose of the materials.

6-4.03 Trade Names and Alternatives: Unless otherwise specified, material and equipment specifications that identify a particular patent, trade name or manufacturer, may be satisfied through substitute materials and equipment accepted by the City. Contractor may offer substitute materials and equipment of equal or better quality to the City. Any such offer shall be made in writing to the Engineer at least four weeks in advance of the time Contractor wishes to order the materials or equipment. Contractor shall include sufficient data which, together with any other information the Engineer may require, will enable the Engineer to determine the acceptability of the materials and equipment. When the substitute materials or equipment necessitate changes to any part of the work, the information shall include drawings and details showing all such changes and Contractor shall perform these changes as a part of any acceptance of substitute materials or equipment. The use of substituted materials and equipment will be permitted only after written acceptance of the materials and equipment by the Engineer. Such acceptance shall not relieve the Contractor from full responsibility for the sufficiency, quality and performance of the substitute materials and equipment.

The City will not, under any circumstances, acknowledge or consider any offers to accept substitute materials or equipment between the dates of public notice of advertisement and the bid opening.

7 LEGAL RELATIONS AND RESPONSIBILITY TO THE PUBLIC

7-1.02A(1) Forfeitures for Health and Safety Violations: Contractor shall comply with all applicable provisions of the Santa Rosa City Code and any failure to do so shall constitute a breach of the Contract. In the event of any violation of the Santa Rosa City Code that may impact public health and safety, including, but not limited to Chapter 17-12, "Storm Water" and Chapter 13-04, "Street Encroachments," City shall have the right to impose a charge against Contractor in an amount equal to \$500.00 per violation per day. Prior to the imposition of any charge hereunder, City shall first provide a written notice to Contractor of the violation and setting forth a reasonable period of time for Contractor to cure the violation(s). In the event Contractor fails to cure any such violation within the time provided, City shall have the right, in addition to all other rights and remedies available to City, to deduct and withhold as a permanent forfeiture by Contractor the appropriate amounts from any payment otherwise due Contractor under this Contract.

7-1.02K(2) Wages: Pursuant to Labor Code sections 1770 *et seq.*, each laborer or mechanic of Contractor or any subcontractor engaged in work on the project under this contract shall be paid not less than the hourly wage rate of per diem wages set forth in the prevailing wage rate schedule published by the Director of Industrial Relations, regardless of any contractual relationship which may be alleged to exist between Contractor or any subcontractor and such laborers and mechanics. A copy of the schedule of prevailing wage rates can be obtained online at www.dir.ca.gov or from the Department of Transportation and Public Works at 69 Stony Circle, Santa Rosa.

Any laborer or mechanic employed to perform work on the public works project under this Contract, which work is not covered by any of the foregoing classifications, shall be paid not less than the prevailing wage rate of per diem wages specified herein for the classification which most nearly corresponds to the work to be performed by the worker.

The foregoing specified prevailing wage rates are minimum rates only, and Contractor may pay any wage rate in excess of the applicable rate.

Pursuant to Labor Code Section 1775, Contractor as a penalty to the owner shall forfeit not more than \$200.00 for each calendar day, or a portion thereof, for each worker paid less than the prevailing wage rate established by the Department of Industrial Relations for such work or craft in which such worker is employed. The difference between such prevailing wage rates and the amount paid to each worker for each calendar day or portion thereof for which the worker was paid less than the prevailing wage rate shall be paid to each worker by Contractor.

Contractor shall only provide prevailing wage reports upon written request from City. When requested, these prevailing wage reports must be redacted by the Contractor prior to providing them to City.

7-1.02K(4) Apprentices: Contractor agrees to comply with Chapter 1, Part 7, Division 2, sections 1777.5 *et seq.* of the California Labor Code. These sections require contractors and subcontractors to employ apprentices in apprenticeable occupations in a ratio of not less than one hour of apprentice work for each five hours of journeyman work (unless an exception is granted in accordance with Section 1777.5), and the contractors and subcontractors shall not discriminate among otherwise qualified employees as apprentices solely on the ground of sex, race, religion, creed, national origin, ancestry, or color. Only apprentices as defined in Labor Code section 3077, who are in training under apprenticeship standards and who have written apprentice agreements will be employed on public works in apprenticeable occupations. The responsibility for compliance with these provisions is fixed with the prime contractor for all apprenticeable occupations.

7-1.02K(6)(a)(1) Notice to Vendors: Attention is directed to the current OSHA Standards. All equipment, tools and materials which are furnished and/or installed as part of this Contract shall meet or exceed the aforementioned standards in order to be considered acceptable.

7-1.02K(6)(b) Excavation Safety: When the digging or excavation occurs during project construction, Contractor shall:

- a. Promptly notify City in writing of the following conditions before any such conditions are disturbed:
 1. Material that the Contractor believes may be hazardous waste as defined in Health and Safety Code section 25117 that is required to be removed to a Class I, Class II or Class III disposal site in accordance with provisions of existing law;
 2. Subsurface or latent physical conditions at the site differing from those indicated in the Invitation for Bids; and
 3. Physical conditions at the site of any unusual nature, materially different from those ordinarily encountered and generally recognized as inherent in the type of work under the Contract.
- b. The City will investigate the conditions and will issue a change order under the terms of the Contract if it finds that the conditions warrant it.
- c. If a dispute arises between City and Contractor as to whether a change order is warranted, Contractor shall not be excused from any scheduled completion date provided for in the Contract but shall proceed with all work to be performed under the Contract.

7-1.02K(6)(b)(1) Trench Excavation Safety Plans: When the estimated cost for the excavation of any trench or trenches five feet or more in depth will exceed \$25,000.00, Contractor shall submit to the Engineer in advance of excavation a detailed plan showing the design of shoring, bracing, sloping or other provisions to be made for worker protection from the hazard of caving ground during the excavation of such trench or trenches. If such plan varies from the shoring system standards established by the construction safety orders, or if the trench is anticipated to be greater than 20 feet, the plan shall be prepared by a registered civil or structural engineer.

A permit to do the above described work shall be obtained from the State of California, Division of Industrial Safety. Proof of such permit shall be submitted to the Engineer prior to starting the trench work.

Full compensation for complying with the provisions of this section shall be considered as included in the Contract price and no additional allowance will be made for the work.

7-1.02K(6)(d) Confined Space Safety: Any confined space entry for this project, including but not limited to manhole or water storage tank entry, will require a confined space entry permit pursuant to Cal/OSHA regulations as set forth in title 8 California Code of Regulations (CCR) sections 5157 or 5158. Confined space entry shall have the meaning ascribed in title 8 CCR sections 5157 and 5158. For any confined space entry for construction operations regulated by title 8 CCR section 1502, Contractor shall comply with title 8 CCR section 5158, "Other Confined Space Operations." For any other confined space operations, Contractor shall comply with title 8 CCR section 5157, "Permit-Required Confined Spaces."

Attention is directed to the technical specifications in the Special Provisions for information regarding entry to any City maintained confined space. Pursuant to title 8 CCR section 5157, Contractor is required to obtain any available information regarding hazards and operations for any City maintained confined spaces. The City maintained Confined Space Entry Manual is available

for viewing at the City of Santa Rosa Water Department or Transportation and Public Works Department office at 69 Stony Circle, Santa Rosa.

Contractor shall immediately inform the Engineer of any previously unidentified hazards confronted or created during confined space entry.

7-1.02L(2)(a) Patents and Royalties: All fees, royalties, or claims for any patented invention, article, process or method that may be used upon or in any manner connected with the work under this Contract shall be paid by Contractor. Contractor and its sureties shall protect and hold harmless City and its officers, agents, and employees from any and all demands made for such fees royalties or claims brought or made by any third party, and before the final payment is made on the account of the Contract, Contractor shall, if requested by City, furnish acceptable proof of a proper release from all such claims and liabilities.

Should Contractor, its officers, agents, or employees, or any one of them be enjoined from furnishing or using any invention, article, material, or plans supplied or required to be supplied or used under the Contract, Contractor shall promptly substitute other articles, materials, or appliances in lieu thereof of equal efficiency, quality, finish, suitability, and market value, and satisfactory in all respects to the Engineer. In the event that the Engineer elects, in lieu of such substitution, to have supplied and to retain and use any such invention, article, materials, or plans as may be required to be supplied by the Contract, Contractor shall pay such royalties and secure such valid licenses as may be requisite and necessary for City, its officers, agents, and employees, or any one of them to use such invention, article, materials, or appliance without being disturbed or in any way interfered with by any proceeding in law of equity on account thereof. Should Contractor neglect or refuse to make the substitution promptly or to pay such royalties and secure such licenses as may be necessary, then in that event the Engineer shall have the right to make such substitutions or City may pay such royalties and secure such licenses and charge Contractor even though final payment under the Contract may have been made.

7-1.02M(3) Mined Materials: California Public Contract Code section 20676 prohibits surface mining operators which are subject to the Surface Mining and Reclamation Act of 1975 (SMARA) from selling California mined construction material to the City unless the operator is identified in a list referred as the **3098 List**. The List, which is maintained by the Department of Conservation's Office of Mine Reclamation (OMR), changes throughout the year and can be viewed at the OMR website: http://www.consrv.ca.gov/OMR/ab_3098_list/index.htm. To confirm whether or not a specific operator is on the List at any given time, Contractor shall call the OMR at (916)323-9198.

7-1.03A Maintaining Traffic: Attention is directed to Sections 7-1.04 of the Standard Specifications and to the following modifications thereof.

If construction is within City owned right-of-way, provisions shall be made for the safe passage of public traffic through the work site at all times consistent with the requirements of Santa Rosa City Code Chapter 13-04.

Except for projects to be performed under a minor contract, Contractor shall install and maintain project identification signs at each end of the project or as directed by the Engineer two weeks prior to any construction activity. City shall furnish the appropriate sign panels upon request from Contractor. To mount the sign panels, Contractor shall furnish and install 4" X 4" posts or mount by other appropriate methods as approved by the Engineer. These sign panels shall be returned to the City Corporation Yard at 55 Stony Point Road after completion of the project.

Two weeks prior to any construction activity, advance notice signs for road closures shall be furnished and installed by Contractor at each end of the project and shall remain in place throughout the duration of the subject closure. Details of panel construction and lettering shall be approved by the Engineer.

Contractor shall furnish, install, and maintain at its expense all barricades, signs, lights, and other devices necessary to adequately warn of any obstructions to the traveled and pedestrian way and provide flaggers as necessary for the safety of public traffic and pedestrians and to provide access to property adjacent to the work site and Contractor shall comply with the Americans with Disabilities Act of 1990 (42 U.S.C. 12101, *et seq.*) (ADA) and any regulations and guidelines issued pursuant to the ADA.

Contractor shall comply with the current edition of the California Manual of Uniform Traffic Control Devices (CA MUTCD) for all items related to traffic within the work site.

Rain and other occurrences that may cause the suspension or delay of the work shall in no way relieve Contractor of its responsibility to provide traffic control and public access through the work site as specified herein. At all times, Contractor shall keep at the work site such materials, forces and equipment as may be necessary to keep roads, streets, and driveways within the work site open to traffic and in good repair and shall expedite the passage of such traffic, using such forces and equipment as may be necessary.

Should Contractor fail, in the opinion of the Engineer, to provide all the materials, forces and equipment necessary to maintain traffic through the work site as set forth herein, City may take steps necessary to remedy any such failure, including but not limited to causing such work to be performed and/or suspending any further work under the Contract. Any such remedial cost and expense incurred by the City, plus an administrative charge of 15%, shall be immediately due and payable by Contractor and may be deducted from any amounts owed to Contractor hereunder. In the event there are insufficient sums owed to Contractor hereunder to cover the foregoing costs and charges, City shall have the right to pursue any other remedy to recover the same, including but not limited to, proceeding against any surety or bond in favor of City. City's rights under Section 7-1.02 are intended to be in addition to and not in lieu of any charges imposed by City against Contractor under Section 7-1.02A(1) above for violations of the Santa Rosa City Code.

Contractor shall be responsible for informing emergency response agencies operating within the area of the work of obstructions to either public or private roads caused by reason of Contractor's operations hereunder.

Contractor shall make provisions for the safe passage of pedestrians around the project work site at all times.

8 PROSECUTION AND PROGRESS

8-1.01A Assignments: Once awarded, this Contract shall not be transferred, assigned, or sub-contracted, except as herein expressly provided without the prior written consent of the City in the City's sole and absolute discretion. See Section 5-1.12 of the Standard Specifications.

8-1.04B Standard Start: Contractor shall begin work within ten calendar days after the date authorized in the Notice to Proceed and shall diligently prosecute the Contract to completion before the expiration of:

275 WORKING DAYS

8-1.05 Time: Working days will be counted beginning with the day the Contractor begins work or with the tenth day after the date authorized in the Notice to Proceed, whichever occurs first.

All work between STA 10+20 to STA 19+25 shall be performed as **NIGHT** work between the hours of 8 p.m. and 5 a.m. All work related to HWY 12 water main improvements, Sheet 28 of Project Plans, shall be performed between 9 a.m. and 4 p.m. on non-holiday weekends.

Attention is direct to Section 12-4.01 Maintaining Traffic and 131-1.03 Bypass Pumping System Description for special working hours associated with Sewer Bypass Pumping.

Unless otherwise indicated in these Contract Documents or directed by Engineer, Contractor shall not conduct any activities that generate noise earlier than 7:00 a.m. or later than 7:00 p.m..

8-1.10 Liquidated Damages: Contractor hereby agrees that Contractor shall pay to the City liquidated damages for each and every calendar day delay over and above the number of working days prescribed above for finishing the work in the amount shown in Section 8-1.10 of the Standard Specifications. Businesses

9 MEASUREMENT AND PAYMENT

9-1.04 Force Account Work: All work done on a force account basis shall be recorded daily on report sheets prepared by Contractor and signed by both the Engineer and Contractor. Such reports shall thereafter be considered the true record of force account work performed during the project. Such reports shall be furnished to the Engineer and a copy retained by Contractor.

All extensions of labor, equipment, and material costs shall be completed by Contractor and submitted to the Engineer within 30 days of the completion of the extra work. Completed and extended extra work reports received later than the times herein prescribed may be deemed invalid and rejected without payment at the discretion of the Engineer.

9-1.07 Payment Adjustments For Price Index Fluctuations: Any references to Opt Out of Payment Adjustments for Price Index Fluctuations in the Standard Specifications are deleted in their entirety.

9-1.16 Progress Payments: Once each month for progress pay purposes, the City will prepare a written estimate of the total amount of completed work and accepted materials purchased by Contractor but not installed. The City shall retain five percent of such estimated value of the completed work and the unused materials and pay Contractor the balance after deducting all previous payments and all sums to be retained under the provisions of the Contract. No such estimate or payment shall be required to be made when, in the judgment of the Engineer, the work is not proceeding in accordance with the provisions of the Contract or when, in the Engineer's judgment, the total value of the completed work since the last estimate is less than \$500.00. No such estimate or payment shall be construed to be an acceptance of any defective work or improper materials.

After Contract acceptance, the Engineer will prepare a written proposed final estimate of the proposed final quantities of work completed under the Contract and the value of such work and will submit such estimate to Contractor. The City shall retain five percent of such estimated value of the work done and shall pay to Contractor the balance after deducting all amounts to be retained under the provisions of the Contract.

The City may, at its option and at any time, retain out of any amounts due Contractor sums sufficient to cover any unpaid claims of City or others, provided that sworn statements of all non-City claims shall have been filed with the Director of Finance.

9-1.16E(6) Substitution of Securities for Withheld Amounts: Pursuant to Public Contract Code section 22300, securities may be substituted for any moneys withheld by City to ensure performance under this Contract, provided that substitution of securities provisions shall not be required in contracts in which there will be financing provided by the Farmer's Home Administration of the United States Department of Agriculture pursuant to the Consolidated Farm and Rural Development Act (7 USC sections 1921 *et seq.*), and where federal regulations or policies or both do not allow the substitution of securities. At the request and expense of Contractor, securities equivalent to the amount withheld shall be deposited with the City, or with a state or federally chartered bank as the escrow agent, which shall then pay such moneys to Contractor. The Director of Finance is authorized to execute substitution of securities agreements on behalf of the City. The City will return the securities to Contractor upon satisfactory completion of the Contract as determined by City in its sole discretion and the resolution of all outstanding claims against the securities. Contractor shall be the beneficial owner of any securities substituted for moneys withheld and shall receive any interest thereon.

Securities eligible for investment under this section shall include those listed in Government Code section 16430, bank or savings and loan certificates of deposit, interest bearing demand deposit accounts, standby letters of credit or any other security mutually agreed to by Contractor and the

City, provided that the substituted security is equal to or not less than five percent of the Contract amount.

Security substitutions must be submitted by Contractor and approved by City prior to the time of the first progress payment to be made under the Contract. No other method of substituting securities for retention will be accepted. The security substitution shall be done only upon execution of an agreement satisfactory to City which includes the following provisions:

- a. The amount of securities to be deposited;
- b. The terms and conditions of conversion to cash in case of the default of Contractor; and
- c. The procedure for return of securities upon completion of the Contract.

9-1.17D Final Payment and Claims: The processing of payment of the final estimate shall not be commenced less than 35 days after the date of recording of the Notice of Completion with the County Recorder's Office. Contractor is advised that it takes approximately ten days for a check to be issued following a request for payment.

Contractor shall submit its written statement of all claims for additional compensation under the Contract to the Engineer within 15 days after submission to Contractor of the proposed final estimate.

If Contractor does not file a claim within the 15 day period, or upon Contractor's approval, the Engineer will issue a final written estimate and the City shall pay to Contractor the entire sum due after deducting all previous payments, if any, and all amounts to be retained under the provisions of the Contract.

If Contractor files a claim within the 15 day period, the Engineer will furnish a semi-final estimate and pay the amount due under the semi-final estimate within 30 days. The semi-final estimate is conclusive as to the amount payable except as may be affected by claims and any amount retained. The Engineer shall then consider and investigate such claim and shall make such revision in the final quantities as the Engineer may find to be due and shall then make and issue a final written estimate. The City will pay the amount due, after deducting all previous payments, if any, and amounts to be retained under the provisions of the Contract.

Any and all prior partial estimates and payments shall be subject to correction in the final estimate and payment.

The final estimate shall be conclusive and binding against both parties to the Contract on all questions relating to the performance of the Contract and the amount of work done thereunder and compensation therefor, except in the case of gross error.

9-1.17D(3) Final Determination of Claims: Claims filed by Contractor shall be in sufficient detail to enable the Engineer to determine the basis and amount of the Claims. Contractor shall also furnish reasonable documentation to the City to support Claims. If additional information is required by the Engineer, Contractor shall provide such information to the Engineer no later than the 15th day after receipt of the written request from the Engineer. If the 15th day falls on a weekend, holiday, or day City offices are closed, then the information shall be provided to the Engineer no later than close of the next business day. Failure to submit the requested information to the Engineer within the time specified will be sufficient cause for denying the Claim.

Contractor shall keep full and complete records of the costs and additional time incurred for any work for which a claim for additional compensation is made. The Engineer or any designated Claim investigator or auditor shall have access to those records and any other records as may be reasonably required by the Engineer to determine the facts or contentions in each Claim. Failure to grant access to such records shall be sufficient cause for denying the Claims.

9-1.22 Arbitration: Any references to Arbitration in the Standard Specifications are deleted in their entirety.

Claims submitted by Contractor shall be accompanied by a notarized certificate containing the following language:

Under the penalty of law for perjury or falsification and with specific reference to the California False Claims Act, Government Code sections 12650 *et seq.*, the undersigned,

(Name)

_____ of
(Title)

(Contractor)

hereby certifies that the claim for additional compensation made herein is supported by a true statement of the actual costs incurred and time expended on this project and is fully documented by records maintained by Contractor.

Dated _____

/s/ _____

Subscribed and sworn before me this _____ day of

Notary Public

My Commission Expires _____

Failure to submit the notarized certificate will be sufficient cause for denying the claim.

Any claim for overhead expenses, in addition to being certified as stated above, shall be supported by an audit report of an independent Certified Public Accountant. Any such overhead claim shall also be subject to audit by the City at its discretion.

Any costs or expenses incurred by the City in reviewing or auditing any claims that are not supported by Contractor's cost accounting or other records shall be deemed to be damages incurred by the City within the meaning of the California False Claims Act.



TECHNICAL SPECIFICATIONS

FOR

**LOS ALAMOS TRUNK SEWER REPLACEMENT SEGMENT 1
(STREAMSIDE DRIVE TO ELAINE DRIVE)**

CONTRACT NO. C01903



DECEMBER 2022

SECTION 10 GENERAL CONSTRUCTION

10-3 Mobilization: Mobilization shall conform to Section 9-1.16D(2) of the Standard Specifications, and any modifications herein.

Mobilization shall include the obtaining of all permits; moving onto the site of all equipment and materials; and other construction facilities as required for the proper performance and completion of the work. Mobilization shall include demobilization as defined herein.

Mobilization shall include but not be limited to the following principal items:

1. Preparation of Contract by the Contractor.
2. Completion of all tasks and submittal of all documents (bonds, insurance, schedule, etc.) required as conditions of issuing the Notice to Proceed.
3. Obtaining all required permits.
4. Installation of project identification signs per Section 7-1.03A of these Special Provisions. The Contractor shall consult with the Engineer for placement.
5. Installing temporary construction water supply, power, wiring, and lighting facilities, as required at individual sites.
6. Providing field office trailers if needed by the Contractor.
7. Moving onto the site(s) of all Contractor's equipment required for operations.
8. Having all OSHA required notices and establishment of safety programs.
9. Attendance at Pre-Construction Conference by Contractor's principal construction personnel.

Demobilization shall include, but not limited to, removal of all equipment, unused materials, all temporary utilities, job trailers and all temporary communication facilities.

10-5 Dust Control: Dust Control shall conform to Section 10-5 of the Standard Specifications, and any modifications herein.

1. All dust-producing work and unpaved construction sites shall require, at a minimum, watering in the late morning and at the end of the workday; the frequency of watering shall be increased if dust is mobilized by wind or construction activities.

Watering shall not produce runoff.

2. Contractor shall maintain dust control to the satisfaction of the City Engineer, 7- days a week, 24-hours per day.
3. At the end of each work day the Contractor shall thoroughly sweep the work zone and remove any debris. Daily sweeping shall be performed in such a manner as to minimize airborne dust.
4. At the Engineer's discretion additional sweeping, watering or general site cleanup may be required, including the use of a commercial street sweeping truck equipped with a rear pick up broom, at any time or place. The use of dry power sweeping is prohibited.

5. All haul trucks transporting material off-site shall be covered.
6. All vehicle speeds on unpaved roads shall be limited to 15 mph.
7. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
8. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
9. The Contractor shall post a publicly visible sign with the telephone number and person to contact at the City regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Bay Area Air Quality Management District's phone number shall also be visible to ensure compliance with applicable regulations.

10-7 Work Plan & Conceptual Order of Work

10-7.01 Work Plan: The Contractor shall submit a detailed work plan that includes a complete written description of the procedures and order of operations to be followed during construction. The work plan shall describe the proposed operating procedures, construction equipment, sequencing (including anticipated duration and work to be completed during bypass pumping operations), and schedules. The Contractor's Work Plan shall be submitted for review by the Engineer at least 10 working days prior to the commencement of construction.

10-7.01 Conceptual Order of Work: In general, the new trunk sewer shall be constructed from the downstream end and progress in an upstream direction while minimizing the duration and extents of bypass pumping. The following Conceptual Order of Work coincides with the Layout, Conceptual Trunk Sewer Bypass Pumping & Construction Access Plan – Sheet 7 (Conceptual Bypass Pumping Plan). The Conceptual Order of Work included herein assumes accompanying work including submittals, notifications, permits, temporary fencing, traffic control, potholing, temporary surfacing, shoring, erosion control, and other ancillary items of work are being provided as required by the contract.

The Contractor's Work Plan shall include an Order of Operations based upon their means and methods of construction. The Conceptual Order of Work provided for bidding purposes is as follows:

1. Construct section of new trunk sewer between approximately STA 1+50 (upstream of existing SSMH 50) and approximately STA 10+30 (just upstream of SSMH 804). Existing trunk sewer adjacent to this section shall remain fully operational during construction of this section.
2. Set-up, test, and operate bypass pumping operation 'A' as indicated on the Conceptual Bypass Pumping Plan. Perform the following work during bypass pumping:
 - a. Construct trunk sewer between STA 10+30 (just upstream of SSMH 804) and temporary connection to existing trunk sewer immediately downstream of existing SSMH 26 as indicated by Item 'C' on the Conceptual Bypass Pumping Plan.
 - b. Set-up, test, and operate bypass pumping operation 'B' as indicated on the Conceptual Bypass Pumping Plan. Perform the following work during bypass pumping:

- i. Tie-in downstream segment of new trunk between STA 1+50 and existing SSMH 50 including modification of existing manhole base and abandonment of existing trunk sewer connection as indicated on the Project Plans.
- c. Tie-in all side sewer mains and laterals downstream of existing SSMH 26 to new trunk sewer.

Remove trunk sewer bypass pumping operation 'A' and 'B' once new trunk sewer including all side sewer mains and laterals downstream of existing SSMH 26 have been completed.

- 3. Perform sewer testing, existing sewer abandonment work, and construct final surfacing improvements west of STA 12+00.
- 4. Construct section of new trunk sewer including side sewer mains, laterals, and other minor incoming sewers between new SSMH 806 and approximately STA 25+75 (just downstream of SSMH 818). Existing trunk sewer adjacent to this section shall remain fully operational during construction of this section.
- 5. Set-up, test, and operate bypass pumping operation 'D' as indicated on the Conceptual Bypass Pumping Plan. Perform the following work during bypass pumping:
 - a. Construct trunk sewer between STA 25+75 and STA 26+50 including new SSMH 818.
 - b. Construct temporary connection between existing trunk sewer and new SSMH 818 as indicated by Item 'E' on the Conceptual Bypass Pumping Plan.

Remove trunk sewer bypass pumping operation 'D' once new trunk sewer including all side sewer mains and laterals downstream of temporary connection between existing trunk sewer and new SSMH 818 have been completed.

- 6. Perform sewer testing, existing sewer abandonment work, and construct final surfacing improvements west of approximately STA 19+20 (Mission Boulevard and Quigg Drive intersection west).
- 7. Construction section of new trunk sewer between STA 26+50 and 28+75. Existing trunk sewer adjacent to this section shall remain fully operational during construction of this section.
- 8. Set-up, test, and operate bypass pumping operation 'F' as indicated on the Conceptual Bypass Pumping Plan. Perform the following work during bypass pumping:
 - a. Construct trunk sewer between STA 28+75 and STA 29+40 including new SSMH 819. Support or remove and replace existing trunk sewer as necessary to construct proposed improvements between these limits.

Remove trunk sewer bypass pumping operation 'F' once new trunk sewer between STA 28+75 and STA 29+40 has been completed and existing trunk sewer is fully operational upstream of new SSMH 818.

- 9. Construct section of new trunk sewer including side sewer mains, laterals, and other minor incoming sewers between STA 29+40 and new SSMH 820. Existing trunk sewer adjacent to this section shall remain fully operational during construction of this section.
- 10. Set-up, test, and operate bypass pumping operation 'G' as indicated on the Conceptual Bypass Pumping Plan. Perform the following work during bypass pumping:
 - a. Construct trunk sewer between new SSMH 820 and temporary connection to existing trunk sewer between existing SSMH 12 and new SSMH 821 at

approximately STA 32+50 as indicated by Item 'H' on the Conceptual Bypass Pumping Plan.

Remove trunk sewer bypass pumping operation 'G' once new trunk sewer including all side sewer mains and laterals downstream of temporary connection between existing trunk sewer and new trunk sewer at approximately STA 32+50 has been completed.

11. Construct section of new trunk sewer including side sewer mains, laterals, and other minor incoming sewers between temporary connection at approximately STA 32+50 and new SSMH 826. Existing trunk sewer adjacent to this section shall remain fully operational during construction of this section.
12. Set-up, test, and operate bypass pumping operation 'I' as indicated on the Conceptual Bypass Pumping Plan. Perform the following work during bypass pumping:
 - a. Construct trunk sewer between new SSMH 826 and new SSMH 828 including new SSMH 827. Support or remove and replace existing trunk sewer at crossings near STA 43+07 and 44+98 as necessary to construct proposed improvements between these limits.

Remove trunk sewer bypass pumping operation 'I' once new trunk sewer between new SSMH 826 and new SSMH 828 has been completed and existing trunk sewer is fully operational upstream of new SSMH 818.

13. Construct section of new trunk sewer including side sewer mains, laterals, and other minor incoming sewers between new SSMH 828 and approximately STA 47+75 (just upstream of SSMH 829). Existing trunk sewer adjacent to this section shall remain fully operational during construction of this section.
14. Abandon existing septic tank at APN 031-240-006 and provide temporary sewer service.
15. Set-up, test, and operate bypass pumping operation 'J' as indicated on the Conceptual Bypass Pumping Plan. Perform the following work during bypass pumping:
 - a. Construct trunk sewer between STA 47+75 (just upstream of SSMH 829) and temporary connection to existing trunk sewer immediately downstream of existing SSMH 17 as indicated by Item 'K' on the Conceptual Bypass Pumping Plan.
 - b. Tie-in all side sewer mains and laterals downstream of existing SSMH 17 to new trunk sewer.

Remove trunk sewer bypass pumping operation 'J' once new trunk sewer including all side sewer mains and laterals downstream of existing SSMH 17 have been completed.

16. Set-up, test, and operate bypass pumping operation 'M' as indicated on the Conceptual Bypass Pumping Plan. Perform the following work during bypass pumping:
 - a. Remove temporary connection between new and existing trunk sewer at approximately STA 32+50.

Remove trunk sewer bypass pumping operation 'M' once temporary connection between new and existing trunk sewer at approximately STA 32+50 has been removed and new trunk sewer including all side sewer mains and laterals downstream of existing SSMH 17 is operational.

17. Construct storm drain replacements, sewer testing, existing sewer abandonment work, and final surfacing improvements west of approximately STA 40+15 (east end of Quigg Drive).

18. Construct section of new trunk sewer including side sewer mains, laterals, and other minor incoming sewers between new SSMH 830 and approximately STA 54+10 (just downstream of existing SSMH 18). Existing trunk sewer adjacent to this section shall remain fully operational during construction of this section.
19. Set-up, test, and operate bypass pumping operation 'L' as indicated on the Conceptual Bypass Pumping Plan. Perform the following work during bypass pumping:
 - a. Tie-in upstream segment of new trunk between STA 54+10 and existing SSMH 18 including modification of existing manhole base and abandonment of existing trunk sewer connection as indicated on the Project Plans.
Remove trunk sewer bypass pumping operation 'L' once new trunk sewer including all side sewer mains and laterals have been completed.
20. Construct remaining storm drain improvements, sewer testing, existing sewer abandonment work, and construct final surfacing improvements.

10-8 Payment: Full compensation for conforming to the provisions of this section shall be considered as included in the prices paid for the various contract items of work involved and no additional compensation will be allowed therefor.

SECTION 12

TEMPORARY TRAFFIC CONTROL

12-1 General

12-1.01 General: Construction area traffic control devices shall be installed and maintained in accordance with the applicable sections of these Special Provisions, the Standard Specifications, the current Edition of the California Manual on Uniform Traffic Control Devices (CA MUTCD), the Americans with Disabilities Act (ADA) and as directed by the Engineer.

12-1.03 Flagging Costs: The first paragraph of Section 12-1.03, "Flagging Costs" is amended to read:

The cost of furnishing all flaggers, including transporting flaggers, to provide for passage of public traffic through the work under the provisions in Section 7-1.08, "Public Convenience", and Section 7-1.09, "Public Safety", shall be considered as included in the contract lump sum price paid for traffic control and no additional allowance will be made therefor.

12-3 Traffic-Handling Equipment and Devices

12-3.01 General: Prior to commencing construction which will affect existing vehicular and pedestrian traffic, the Contractor shall submit for review by the Engineer, Traffic Control Plans on 11" x 17" sheets of paper which contains only information specifically related to work zone vehicular and pedestrian traffic control. If the Contractor proposes to use the current edition of the CA MUTCD published by Caltrans in lieu of a traffic control plan, in specific work operations, they shall submit in writing for consideration which Typical Application Diagram will be used and how it will be applied for each work operation. Traffic Control Plans or proposals shall be submitted for review at least two weeks prior to implementation.

Additionally, prior to commencing construction which will affect existing vehicular and pedestrian traffic within the California State right-of-way (Highway 12), the Contractor shall submit for review by the California Department of Transportation (Caltrans), a Traffic Control Plan in accordance with the Caltrans Encroachment Permit requirements.

Traffic Control Plans shall contain a title block which contains the Contractor's name, address, phone number, project superintendent's name, contract name, dates and hours traffic control will be in effect, and a space for review acknowledgment.

The content of the Traffic Control Plan shall include, but is not limited to, the following:

1. Show location and limits of the work zone.
2. Give dimensions of lanes affected by traffic control that will be open to traffic.
3. Indicate signing, cone placement, and other methods of delineation and reference to appropriate City or Caltrans Standards.
4. Dimension location of signs and cone tapers.
5. Identify side streets and driveways affected by construction and show how they will be handled.

6. Show how pedestrian traffic will be handled through the construction site. Pedestrian pathways through the work zone shall be in compliance with the requirements of ADA during and after work hours.
7. Identify message board locations. A minimum of 3 changeable message boards shall be required. Location to be determined by Engineer.
8. Demonstrate how traffic will be maintained during non-working hours. A minimum 20' clear width along public roadways shall be provided for emergency vehicle access. A minimum 12' wide access shall be provided for access to parking spaces, storage units, and private driveways.
9. Proposed layout of traffic impacted by bypass locations. A Traffic Control Plan specific to each bypass pumping operation may be required.
10. A bicycle and pedestrian bypass plan for the portion of the Santa Rosa Creek Trail that will be closed during construction will be required for review and approval by the Engineer. The plan shall include adequate signage directing bicycle and pedestrian traffic around the detour route. Maps of the bypass route shall be posted at all Santa Rosa Creek Trail access locations impacted by construction.

No work except for installation of project identification signs will be allowed to commence prior to approval of the Work Zone Traffic Control Plans.

12-4 Maintaining Traffic

12-4.01 Maintaining Traffic:

1. The full width of the traveled way shall be open for use by public traffic on Saturday, Sundays and designated legal holiday(s), after 4:00 p.m. on Fridays and the day preceding designated legal holidays, and when construction operations are not actively in progress; unless work has specifically been authorized by the Engineer or is within one of the following areas:
 - a. Detoured one-lane two-way traffic will be allowed along Quigg Drive, but access to all driveways during non-working hours, as indicated in Item 4 below, will be required.
 - b. The full width of the traveled way along Mission Circle and Mission Boulevard where night work is required, shall be open for public use during normal business hours of 5:00 a.m. to 8:00 p.m. and when construction operations are not actively in progress. During paving and resurfacing operations, the Contractor will be allowed to temporarily close one lane at a time during normal business hours.
 - c. The Mission Professional Center (APN 032-010-054) parking lot, where night work is required, shall be accessible during normal business hours of 5:00 a.m. to 8:00 p.m. and when construction operations are not actively in progress. During paving and resurfacing operations, the Contractor will be allowed to temporarily suspend vehicle access to this parking lot during normal business hours. During bypass pumping operations, the Contractor will be allowed to temporarily suspend access to a maximum of 5 parking spaces.
 - d. The Contractor shall maintain access to the Mission Plaza McDonalds drive thru located at 50 Mission Circle except for times when the drive-thru is closed (Monday-Thursday, midnight to 5 am). Night work is required in this area.

2. The location of traffic control signing, barricades, and other facilities shall be monitored frequently (four to five times per day) by the Contractor to verify their proper location. All traffic signal and other traffic control devices shall be maintained at all times.
3. The Contractor shall conduct his operations so as to cause the minimum obstruction and inconvenience to traffic and to places of business, multiple dwelling units and residences adjacent to the work. The Contractor shall notify the Engineer of his planned work and utility service interruption at least five working days in advance to allow time to notify residents and businesses.
4. When construction activities will prevent vehicle access to individual driveways the Contractor shall notify the affected businesses and residents per Section 12-1.03, "Traffic Control", of these Special Provisions. **12-foot minimum (one-way) access shall be provided to all driveways.**
5. At locations where traffic is routed perpendicular to trench excavation, the excavation shall be conducted in a manner to provide a surface reasonably satisfactory for traffic at all times. Substructure installation or construction shall be conducted on only one-half the width of the roadway at a time, and that portion of the roadway being used by traffic shall be kept open and unobstructed until the opposite side of the roadway is ready for use. Upon completion of the rough grading, the surface of the roadbed shall be brought to a smooth, even condition free from humps and depressions and made satisfactory for traffic.

12-4.01A Construction Traffic: The Contractor shall submit a trucking route along with the traffic controls plans for approval by the Engineer. The route must minimize traffic on residential streets that are not part of the project.

Existing pavement damaged by the Contractor's operations and not shown to be replaced shall be replaced at the Contractor's expense, per City Standards and to the satisfaction of the Engineer.

12-4.02 Closure Requirements: Attention is directed to Section 7-1.03, "Public Convenience" and Section 5-1.05, "Order of Work," of these Special Provisions.

Exact locations of Project Identification signs and Advance Notice signs (Section 7-1.08 "Maintaining Traffic") shall be determined in the field by the Engineer.

Work within the Mission Professional Center (APN 032-010-054) parking lot, along Mission Circle, and across Mission Boulevard to Quigg Drive between the limits indicated on the project plans shall be conducted at night between the hours of 8:00 p.m. and 5:00 a.m. to minimize pedestrian and traffic impacts. During paving and resurfacing operations, the Contractor will be allowed to temporarily suspend vehicle access along one lane of these areas when approved by the Engineer.

Lane closures will be permitted between the hours of 8:30 a.m. and 4:00 p.m. only, except along Quigg Drive and areas of night work. Only one lane at a time may be closed and no lanes shall be closed at any other hours unless specifically approved by the Engineer or indicated otherwise herein. The Contractor shall maintain vehicle access to businesses, homes, and other properties at all times while work is in progress.

The Contractor shall not park construction vehicles contractor employee vehicles, stage materials or stockpiles in front of any business or residential driveway access and the Contractor shall maintain access to private parking lots within the block where work is in progress. Construction vehicles shall not be left running for any length of time if parked in front of a business or residential unit.

On identified local/residential streets the Contractor will normally be allowed use of each block (between nearest intersections) for their sole use, without the need to provide 2-way traffic through that block. The Contractor will be required to maintain vehicle access to homes and other properties within the block where work is in progress.

The Contractor shall keep the City of Santa Rosa Fire Department informed regarding the closure of any traveled way. At a minimum, the Contractor shall call the Fire Department at 543-3535 **and** the Communications Center at 543-3666 **daily** to report any traveled way closure. This means immediately upon closure for that day and again immediately after removal of the closure. For closures over multiple days, the daily notification still applies. This requirement does not apply for single lane closures on multiple lane streets.

The Contractor shall notify Sonoma County Transit at (707) 585-7516, Santa Rosa City Bus at (707) 543-3922, the local Postal Service at (707) 526-0113 and Recology at (800) 243-0291 5 calendar days prior to any lane closures or restrictions in turning movements.

If the Contractor has been given an approved Traffic Control Plan that includes road closures, they shall maintain vehicular access to homes and other properties where work is in progress within the closure area.

Where necessary, and only after receiving written approval from the Engineer, the Contractor may temporarily suspend curb side parking in their immediate work zone. Notification to businesses and residents shall be hand delivered at least 72 hours prior to construction in the affected areas.

Notification shall be as follows:

1. A notice placed on the front door of each home or business where curb side parking will be suspended and attempt made to notify each business or resident verbally that work will be underway within the block and that curb side parking will be suspended during stated working hours and request that vehicles be parked out of the roadway by 8:00 a.m. Service of notice shall not bar use of cars within the block, as individual plans change and emergencies arise.
2. Type 1 barricades every 50 feet adjacent to the curb where parking will be suspended with a notice posted on the barricade stating specific dates and times that curb side parking will be temporarily suspended. If work will not take place in the posted area, then Contractor shall remove "No Parking" notices.

The Contractor shall maintain vehicle access to all homes and other properties along the work zone. During paving operations the Contractor will be allowed to temporarily suspend vehicle access to a limited number of driveways when approved by the Engineer. When approved by the Engineer and at least 72 hours prior to suspending access to any driveway, the Contractor shall give both written and verbal notice to the affected businesses and residents and place barricades adjacent to the driveways with posted notices stating the specific dates and times of the suspension for that area. The notice shall also indicate an alternate parking location. Suspension of access to driveway will be permitted only as approved by the Engineer and only between the hours of 8:00 am and 4:30 pm.

Cross streets will require maintenance of at least one-half (1/2) width of each street for traffic purposes, unless a parallel route is approved by the Engineer. Flagging will only be allowed between the hours of 8:30 am and 4:00 pm.

Barricades and flaggers shall be positioned to allow safe turns at intersections and curves.

The Contractor shall maintain traffic control as necessary and as directed by the Engineer for "cat-tracking" operations by City Forces. Flaggers, barricades, signing, etc., shall remain in place for protection of City personnel until such time as all temporary lane delineation is complete.

12-7 Temporary Pedestrian Walkways

12-7.01 Pedestrian Traffic Control: The Contractor is directed to Chapter 6D, Pedestrian and Worker Safety, in the CA MUTCD, the improvement plans and these Special Provisions.

Pedestrians shall be provided with a safe convenient and accessible path that, at a minimum, replicates the most desirable characteristics of the existing sidewalk, path or footpath. At no point along the road shall the sidewalks on both sides of the road be closed at the same time.

The Contractor shall construct and maintain temporary pedestrian pathways through the work zone, where required, that shall be in compliance with the requirements of the Americans with Disabilities Act (ADA), and the CA MUTCD.

Pedestrian routes shall not be impacted for the purposes of any non-construction activities such as parking of vehicles or equipment, or stock piling of materials. Pedestrians shall not be led into conflicts with work site vehicles, equipment or operations.

Pedestrian routes shall be open and accessible at the end of the work day unless an alternate ADA compliant route has been approved by the Engineer. The construction of curb ramps and/or long sections of sidewalk do not alleviate the Contractor from this requirement.

12-9 Measurement and Payment

12-9.01 Payment: **Traffic Control** shall be paid for at the contract **lump sum** price, which price shall include full compensation for furnishing all labor, materials, tools and equipment, and doing all work involved in vehicular and pedestrian traffic control, including but not limited to, providing, placing, maintaining, and removal of temporary paths and/or ramps, temporary relocation of regulatory signs, changeable message boards, project and public notification signs, flagging, excavation, compaction, furnishing, and placement of asphalt concrete and/or PCC, barricades, toe-rails, hand rails, complying with CA MUTCD Standards for Pedestrian Safety, complying with the Caltrans Encroachment Permit requirements including fees, all other Traffic Control related coordination efforts and any other items necessary for vehicle and pedestrian traffic control not specifically enumerated in the plans or these specifications, and no additional allowance will be made therefor.

SECTION 13

WATER POLLUTION CONTROL

13-1 General

13-1.01A: Water Pollution Control shall be performed in accordance with Section 13, Water Pollution Control, of the Standard Specifications and these technical specifications. In addition, construction activities shall comply with:

1. The California Water Quality Control Board, North Coast Region Order No. R1-2009-0050, National Pollutant Discharge Elimination System Municipal Storm Water Permit, Part 8 – Development Construction Program, Sections 1 through 5, commonly referred to as the “Storm Water Permit”. A copy of the Storm Water Permit is available for review at the City of Santa Rosa Transportation and Public Works Department, 69 Stony Circle, Santa Rosa, CA, and at www.srcity.org/stormwaterpermit.
2. The California Stormwater Quality Association Storm Water BMP Handbook for Construction (CASQA Handbook). BMPs shall be selected, installed and maintained in accordance with the latest edition. A copy of the handbook can be viewed at the City of Santa Rosa Department of Transportation and Public Works office at 69 Stony Circle or downloaded from CASQA, <http://www.casqa.org/>.

In this technical specification the CASQA Handbook BMP numbers are appended to the associated Standard Specification sections. If a conflict occurs the CASQA Handbook BMP's shall govern.

13-1.01B Definitions: Construction phase: The construction phase starts at the start of job site activities and ends at Contract acceptance.

13-1.01C(4)(c) Water Quality Monitoring Reports: The Contractor shall complete and sign the Storm Water Correction Site Inspection form with the City as part of the SWPPP. A copy of the form is included in Section C for reference.

13-1.04 Payment: Full compensation for conforming to the requirements of Section 13 shall be paid for at the contract **lump sum** price for **Water Pollution Control**, which price shall include full compensation for furnishing all submittals, labor, materials, tools and equipment, and doing all the work involved in water pollution control, including preparation of a stormwater pollution prevention plan (SWPPP), and no additional allowance will be made therefor.

Groundwater Dewatering and Discharge will be paid for separately from the lump sum price for Water Pollution Control as indicated in Section 13-4.04 herein.

13-2 Water Pollution Control Program

13-2.01A Summary: This project will disturb more than one acre and is required to have a Storm Water Pollution Prevention Plan (SWPPP), therefore Section 13-2, Water Pollution Control Program, of the Standard Specifications does not apply to this project, but Section 13-3, Storm Water Pollution Prevention Plan, of the Standard Specifications does.

13-3 Storm Water Pollution Prevention Plan

13-3.01A Summary: This project is not exempt from the State Water Resources Control Board General NPDES Permit for the Discharge of Storm Water related to Construction Activities (Construction General Permit) and is required to have a Storm Water Pollution Prevention Plan (SWPPP) prepared by a QSD, therefore Section 13-3, Storm Water Pollution Prevention Plan, of the Standard Specifications applies to this project.

13-3.01B Submittals: The SWPPP required to be submitted under this section of the Standard Specifications shall include a spill contingency plan that establishes clean-up procedures that will be followed in the event of a spill of potentially hazardous, toxic, or polluting materials.

The Contractor's SWPPP shall include the following measures where applicable:

1. Schedule construction activities during dry weather. Keep grading operations to a minimum during the rainy season (October 15 through April 15).
2. Protect and establish vegetation.
3. Stabilize construction entrances and exits to prevent tracking onto roadways.
4. Protect exposed slopes from erosion through preventative measures. Cover the slopes to avoid contact with storm water by hydroseeding, applying mulch or using plastic sheeting.
5. Install straw wattles and silt fences on contour to prevent concentrated flow. Straw wattles should be buried 3 to 4 inches into the soil, staked every 4 feet, and limited to use on slopes that are no steeper than 3 units horizontal to 1 unit vertical. Silt fences should be trenched 6 inches by 6 inches into the soil, staked every 6 feet, and placed 2 to 5 feet from any toe of slope.
6. Designate a concrete washout area to avoid wash water from concrete tools or trucks from entering gutters, inlets or storm drains. Maintain washout area and dispose of concrete waste on a regular basis.
7. Establish a vehicle storage, maintenance and refueling area to minimize the spread of oil, gas and engine fluids. Use oil pans under stationary vehicles.
8. Protect drainage inlets from receiving polluted storm water through the use of filters such as fabrics, gravel bags or straw wattles.
9. Check the weather forecast and be prepared for rain by having necessary materials onsite before the rainy season.
10. Inspect all BMPs before and after a storm event. Maintain BMPs on a regular basis and replace as necessary.

13-3.04 Payment: Payment for preparation of a SWPPP and implementation of its requirements will be considered as included in the **lump sum** price paid for **Water Pollution Control**.

A total of 50% of the lump sum item total will be paid upon approval of the SWPPP. An additional 40% of the lump sum item total will be paid over the life of the Contract. The remaining 10% of the lump sum item total will be paid upon Contract acceptance.

No additional payment per rain event or for each storm water annual report submitted will be made. Failure to submit a completed storm water annual report will result in withholding 25% of the lump sum price paid for Water Pollution Control.

13-4 Job Site Management

13-4.03B: Spill Prevention and Control / CASQA Spill Prevention and Control (BMP WM-4):

If a spill occurs at the construction site and the contractor does not take immediate and adequate steps to contain and clean up the spill, especially if rain is threatening or if a discharge to a storm drain or creek could occur, the City shall have the right, in its sole and absolute discretion, to clean up the spill using City forces or an independent contractor. The cost of any such cleanup, in addition to recovery of any penalty or fine imposed upon the City, plus an administrative charge of fifteen percent (15%) of the costs incurred by the City, shall be deducted from any amounts owed to Contractor hereunder.

In the event there are insufficient amounts owed to Contractor hereunder to cover the foregoing costs and charges, the City shall have the right to pursue any other remedy to recover same, including, but not limited to, proceeding against any surety or bond in favor of the City. The City's rights under this section are intended to be in addition to and not in lieu of any imposed by the City against Contractor for violations of City Code Chapter 17-12, "Storm Water".

13-4.03C(2): Material Storage/CASQA Material Delivery and Storage (BMP WM-1)

13-4.03C(3): Stockpile Management/CASQA Stockpile Management (BMP WM-3):

Do not block storm water flows.

13-4.03D(1): Waste Management/CASQA Solid Waste Management (BMP WM-5):The Contractor shall dispose of all trash, rubbish, and waste materials of any kind generated by the contractor, subcontractor, or any company hired by the Contractor on a daily basis.

13-4.03D(3): Concrete Waste/CASQA Concrete Waste Management (BMP WM-8): Ensure the containment of concrete washout areas and other washout areas that may contain pollutants so there is no discharge into the underlying soil and onto the surrounding areas.

13-4.03D(4): Sanitary and Septic Waste/CASQA Sanitary and Septic Waste Management (BMP WM-9): Sanitation facilities must be maintained periodically by a licensed service to keep them in good working order and prevent overflows. Portable toilets are required to have secondary containment.

13-4.03D(5): Liquid Waste: Liquid waste includes water generated from excavation dewatering.

Minimize transfer piping by locating containers near the excavation to be dewatered while protecting the containers from moving vehicles and equipment.

13-4.03E(1): Water Control and Conservation/CASQA Water Conservation Practices (BMP NS-1 and NS-2)

13-4.03E(3): Vehicle and Equipment Cleaning/CASQA Vehicle and Equipment Cleaning (BMP NS-8)

13-4.03E(4): Vehicle and Equipment Fueling and Maintenance/CASQA Vehicle and Equipment Fueling (BMP NS-9), and CASQA Vehicle and Equipment Maintenance (BMP NS-10)

13-4.03E(7): Paving, Sealing, Sawcutting, Grooving, and Grinding Activities: As listed in Part 9, sections 4 and 5 of the Storm Water Permit, the following additional BMPs shall be implemented for street paving, repaving, reconstruction, patching, digouts or resurfacing:

1. Restrict paving and repaving activity to exclude periods of rainfall or predicted rainfall unless required by emergency conditions;
2. Install gravel bags and filter fabric or other appropriate inlet protection at all susceptible storm drain inlets and manholes to prevent paving products and tack coat from entering the storm drain;
3. Prevent the discharge of release agents including soybean oil, other oils, or diesel to the storm water drainage system or watercourses;
4. Minimize non-storm water runoff from water use for the roller and for evaporative cooling of the asphalt;
5. Clean equipment over absorbent pads, drip pans, plastic sheeting or other material to capture all spillage and dispose of properly
6. Collect liquid waste in a container, with a secure lid, for transport to a maintenance facility to be reused, recycled, or disposed of properly **13-4.03D(5)**;
7. Collect solid waste by shoveling and vacuuming or sweeping and securing in an appropriate container for transport to a maintenance facility to be reused, recycled, or disposed of properly **13-4.03D(5)**;
8. Cover "cold-mix" asphalt (i.e., pre-mixed aggregate and asphalt binder) with protective sheeting during a rainstorm **13-4.03C(3)**;

9. Cover loads with tarp before haul-off to a storage site, ensuring that trucks are not overloaded;
10. Minimize airborne dust by using water spray during grinding **14-9.03** and;
11. Avoid stockpiling soil, sand, sediment, asphalt material and asphalt grindings materials or rubble in or near storm water drainage system or watercourses **13-4.03C(1)**,

13-4.03F: Sweeping/CASQA Street Sweeping and Vacuuming (BMP SE-7)

13-4.04F(1) Payment: Job Site Management shall be paid for at the contract **lump sum** price for **Water Pollution Control**.

13-4.03G: Dewatering: Dewatering consists of discharging accumulated stormwater, groundwater, or surface water from excavations or temporary containment facilities.

Groundwater was only encountered at a relatively deep depth (25.5 feet below existing ground surface) during geotechnical investigations in August 2017. However, groundwater levels may change depending on the time of year and the amount of seasonal rainfall.

It should be anticipated that groundwater will be encountered within deep trench excavations as part of this project. If groundwater is encountered, the Contractor shall immediately notify the City. The Contractor shall **remove all water** which accumulates in excavations during the progress of work until the subgrade has been prepared and backfilling has progressed to a sufficient height above static groundwater levels. The Contractor shall have a minimum of two working pumps available for immediate use at all times.

Water accumulated in excavations shall be discharged to the sanitary sewer under the conditions set forth in the discharge permit issued by the City included in these Special Provisions. Said water shall be disposed of in a manner as to cause no injury to public or private property, or be a menace to public health. Sediment shall be removed from water to be disposed of, prior to discharge, by a placing the pump inlet hose into a sump filled with clean gravel, or a perforated bucket filled with clean gravel. The outlet of the pump shall have a filter sock installed to retain residual sediment.

The discharge shall be monitored to verify the lack of contamination. Periodic samples shall be analyzed by the City's Environmental Compliance Laboratory to confirm the acceptability of the discharge. **If any odor, sheen or other visual discrepancy is noted during excavation or discharge, stop pumping and immediately notify the Engineer.**

Pumped groundwater will not be allowed into any watercourse or storm drain system.

Contractor shall be responsible for constructing, operating and maintaining all necessary features to complete the work including furnishing, installing and maintaining all pumping and other equipment required to dewater any trenches containing water as may be encountered during performance of the work. Dewatering plan for each occurrence shall be approved by the Engineer prior to implementation. At the permanent conclusion of dewatering operations, all dewatering equipment shall be removed from the job site.

13-4.04G(1) Payment: If groundwater is encountered, **Groundwater Management Allowance** will be paid on a **Force Account (FA)** basis up to the contract allowance price and shall include full compensation for furnishing all labor, materials, permits, tools and equipment, for doing all the work involved in providing groundwater management, including, but not limited to, all necessary removal, storage, sediment treatment, pumping equipment, and transportation, for disposal for all groundwater encountered from excavations and trenches at the site, and no additional compensation will be made therefor. Disposal location of groundwater will be determined and directed by the Engineer. The City will pay discharge fees for the necessary disposal of water, if required. The estimated cost designated by the City on a Force Account basis is noted in the Bid Schedule as Groundwater Management Allowance.

13-6 Temporary Sediment Control

13-6.03C: Temporary Drainage Inlet Protection/CASQA Storm Drain Inlet Protection (BMP SE-10)

13-6.04: Payment: Temporary Sediment Control shall be paid for at the contract **lump sum** price for **Water Pollution Control**. The contractor pays all maintenance costs.

13-7 Temporary Tracking Control

13-7.01A: Temporary Tracking Control/Stabilized Construction Entrance and Exit (BMP TC-1), Entrance Outlet Tire Wash (BMP TC-3)

13-7.03 Construction/CASQA Stabilized Construction Site Entrance / Exit (BMP TC-1)

13-7.04 Payment: Temporary Tracking Control shall be paid for at the **lump sum** price for **Water Pollution Control**. The contractor pays all maintenance costs.

13-10 Temporary Linear Sediment Barrier

13-10 Temporary / CASQA Silt Fence and Sand Bag Barrier (BMP SE-1 and SE-8)

13-10.04 Payment: Temporary Linear Sediment Barriers shall be paid for at the **lump sum** price for **Water Pollution Control**. The contractor pays all maintenance costs.

SECTION 14 ENVIRONMENTAL STEWARDSHIP

14-1.01A General Environmental Protections: An Initial Study and Mitigated Negative Declaration has been prepared and adopted for the project which requires the project to implement the mitigation measures listed in a Mitigation Monitoring and Reporting Plan (MMRP). The Contractor shall comply with all applicable requirements of the MMRP. The Contractor's obligations for complying with the MMRP requirements have been incorporated into the project plans and technical specifications.

14-10.01 General: The Contractor shall dispose of all Portland cement concrete (PCC) and asphalt concrete (AC), generated from removal or demolition activities on the project, at a recycler for these materials. The Contractor shall provide receipts verifying delivery and approximate quantity (in tons) of the material delivered to a material recycler.

All other excess materials from the project shall become the property of the Contractor and shall be disposed of by him, at his expense.

14-10.02A(1) Submittals: Submit a Solid Waste Disposal and Recycling Report prior to final acceptance of work performed under the Contract. Show the types and amounts of project-generated solid waste taken to or diverted from landfills or reused on the project.

Submit a Solid Waste Disposal and Recycling Report prior to Contract acceptance. Show the types and amounts of project-generated solid waste taken to or diverted from landfills or reused on the project.

14-11 Hazardous Waste and Contamination

14-11.01: General: Based on communications with the Regional Water Quality Control Board, the proposed project is located in an area that contains no **known** subsurface petroleum hydrocarbon contamination. However, the project runs adjacent to known site T0609700734. Should contamination be discovered during construction, the Contractor shall develop a plan for handling and disposing of potentially contaminated soils and groundwater.

In general, the Contractor shall maintain awareness of potential signs of soil and groundwater contamination throughout the project limits and shall notify the City immediately upon discovery of any potential soil or groundwater contamination.

Upon discovery of suspected contaminated materials, the Contractor shall immediately provide 40-hour OSHA-HAZWOPER certified workers in the contaminated area and provide a field Site Safety Officer that is also an 8-hour OSHA-HAZWOPER Supervisor trained to directly oversee the contaminated materials removal and handling operation. All workers in this circumstance must have their initial and annual renewal refresher training, medical clearance and personal protection equipment in accordance with 8CCR Section 5192.

14-12 Biological Resources

14-12.01: Nesting Birds: If ground disturbance or removal of vegetation occurs in the breeding bird season (February 1 through August 31), pre-construction surveys will be performed by the City's Biologist no more than 14 days prior to commencement of such activities to determine the presence and location of nesting bird species. If active nests are present, temporary no-work buffers shall be placed around active nests to prevent adverse impacts to nesting birds. Appropriate buffer distance will be determined by the City's Biologist and is dependent on the specific bird species, surrounding vegetation, and topography. Once active nests become

inactive, such as when young fledge the nest or the nest is subject to predation, work may resume in the buffer area.

The Contractor shall coordinate the scheduling of nesting bird surveys base on their construction schedule. In the event that nesting birds are found, the Contractor may be required to move construction activity to another area of the project site. No additional compensation will be provided for moving construction activity to another area of the project site.

14-12.02: Nesting Bats: Prior to construction activities, the City's Biologist will conduct a roost assessment survey of trees located within the project area. The survey will assess use of the trees and cavities for roosting as well as potential presence of bats.

If the City's Biologist finds no evidence of, or potential to support bat roosting, no further measures will be needed.

If evidence of bat roosting is present, additional measures described below shall be implemented:

1. If evidence of bat roosting is discovered during the pre-construction roost assessment and tree removal is planned August 1 through February 28 (outside the bat maternity roosting season), a qualified biologist shall implement passive exclusion measures to prevent bats from re-entering the tree cavities. After sufficient time to allow bats to escape and a follow-up survey to determine if bats have vacated the roost, tree removal may continue and impacts to special-status bat species will be avoided.
2. If a pre-construction roost assessment discovers evidence of bat roosting in the trees during the maternity roosting season (March 1 through July 31), and determines maternity roosting bats are present, removal of maternity roost trees shall be avoided during the maternity roosting season or until a qualified biologist determines the roost has been vacated.

14-12.03: Western Pond Turtle: To avoid entrapment or injury to wester pond turtles, all open trenches shall be covered during non-working hours.

14-13 Cultural Resources

14-13.01: Archaeological Resources: In the event prehistoric-era or historic-era archaeological site indicators are unearthed during the course of grading, excavation and/or trenching, all ground disturbing work in the vicinity of the discovery shall cease and all exposed materials shall be left in place. Prehistoric-era archaeologic site indicators could include chipped chert and obsidian tools and tool manufacture waste flakes, grinding implements such as mortars and pestles, and locally darkened soil containing the previously mentioned items as well as fire altered stone and dietary debris such as bone and shellfish fragments. Historic-era archaeologic site indicators could include items of ceramic, glass and metal, and features such as structural ruins, wells and pits containing such artifacts. After cessation of excavation, the contractor shall immediately contact the City. The contractor shall not resume construction activities until authorization to proceed is received from the City. In the event archaeological resources are found, the Contractor may be required to move construction activity to another area of the project site. No additional compensation will be provided for moving construction activity to another area of the project site.

14-13.02: Fossils: In the event paleontological site indicators are unearthed during the course of grading, excavation and/or trenching, all ground disturbing work in the vicinity of the discovery shall cease and all exposed materials shall be left in place. After cessation of excavation, the contractor shall immediately contact the City. The contractor shall not resume construction activities until authorization to proceed is received from the City. In the event paleontological site indicators are found, the Contractor may be required to move construction activity to another area of the project site. No additional compensation will be provided for moving construction activity to another area of the project site.

14-13.03: Human Remains: If human remains are encountered during grading, excavation or trenching, all construction activity shall cease and the contractor shall immediately contact the City and the Sonoma County Coroner's Office. If the remains are determined by the Coroner's Office to be of Native American origin, the City will contact the Native American Heritage Commission and the procedures outlined in CEQA §15064.5 (d) and (e) shall be implemented by the City or its designee. In the event human remains are found, the Contractor may be required to move construction activity to another area of the project site. No additional compensation will be provided for moving construction activity to another area of the project site.

14-14 Noise

14-14.01: General Noise Reduction: The Contractor shall comply with the following general noise reduction measures at all times:

1. Equip all internal combustion engine driven equipment with intake and exhaust mufflers which are in good condition and appropriate for the equipment.
2. Unnecessary idling of internal combustion engines shall be strictly prohibited.
3. Staging of construction equipment and all stationary noise-generating construction equipment, such as air compressors and portable power generators, shall be staged as far as practical from existing sensitive noise receptors.
4. Utilize "quiet" air compressors and other stationary noise sources where technology exists.
5. Control noise from construction workers' radios to the point where radio noise is not audible at existing residences bordering the project site. No radios will be permitted during night work.

14-15 Payment: Full compensation for conforming to all requirement of this section shall be considered as included in the prices paid for the various contract items of work and no additional compensation will be allowed.

Any material excavated from trenches in the project area that exhibit signs of contamination (including, but not limited to staining and/or odor) shall be considered property of the City and shall only be disposed of at the direction of the City. Under such conditions, costs beyond normal disposal costs for uncontaminated material will be paid on a force account basis. Prior to disposal of any excess material from the work site, the Contractor shall submit to the Engineer written authorization for such disposal and entry permission signed by the approved disposal site. The Contractor shall comply with all disposal regulations such as City, County, and/or State permits and licenses, as may be required.

SECTION 15 EXISTING FACILITIES

15-1.03A General: Existing facilities disturbed by construction shall conform to the applicable provisions of Section 5-1.36. All existing active utilities found to reside in excavated areas shall be supported in place with service maintained during construction. The Contractor shall be responsible for any damage caused by their operations and any needed repairs shall be completed to the Engineer's satisfaction.

Existing storm drains found to reside in excavated areas shall be supported, removed, or replaced at the Contractor's option and at no additional cost to the City. The Contractor shall be responsible for maintaining the existing line and grade of the storm drains. If the Contractor elects to remove and replace, it shall be done per applicable City Standards and Specifications.

Existing utility trenches and/or structures that are in close proximity to proposed trenches shall be safeguarded in an appropriate manner from damage. See Section 106 for additional information.

15-1.04 Payment: Full compensation for supporting, removal and disposal of existing utilities and their appurtenances is considered as included in the contract prices paid for **various contract items** of work and no additional allowance will be made therefor.

15-2.02C Traffic Stripes and Pavement Markings: All traffic stripes, pavement markings or any other traffic markings shall be removed by the Contractor to the satisfaction of the Engineer and in accordance with Sections 84 of the Standards, and the Plans.

15-2.02D Pavement Markers: All raised pavement markers shall be removed by the Contractor to the satisfaction of the Engineer and in accordance with Sections 85 of the Standard Specifications, City Standards, and the Plans.

15-2.02N Asbestos Cement Pipe: The Contractor is advised that asbestos cement pipe (ACP) may be encountered on the project and must be cut, handled, and disposed of according to the Contractor's State Licensing Law and all other applicable laws and regulations.

15-2.02O Payment: Full compensation for the cutting, removal and disposal of asbestos cement pipe shall be considered as included in the prices paid for various contract items of work and no additional allowance will be made therefor.

15-2.10B Adjust Frames, Covers, Grates, and Manholes: Existing manhole frames and covers, valve boxes, mainline cleanouts and monuments that must be lowered below finish grade as part of this Project shall be adjusted after paving to conform to new finish grade.

The Contractor shall accurately locate and record the location of existing and new manholes, valve boxes, mainline cleanouts, and monuments to be adjusted to grade and shall furnish the Engineer a copy of said record prior to starting construction.

All facilities on active systems shall be accessible at all times to City personnel unless otherwise stated in these Special Provisions or approved by the Engineer.

After placement of the finish course of asphalt concrete the Contractor shall mark all overlaid manholes, valve boxes, mainline cleanouts and monuments, whether new or existing, with white paint by the end of that working day.

All new and existing manholes, valve boxes, mainline cleanouts and monuments shall be adjusted to grade within 48 hours after placement of the finish course of asphalt concrete.

Final grade adjustments and installation of concrete collars shall be done on the same working day. Final paving around manholes, valve boxes, mainline cleanouts and monuments shall be completed the following working day.

All silt and debris shall be removed from finished structures. This shall include all existing silt and debris plus material caused by the Contractor's operation.

If new or existing water valve riser pipe needs to be extended after paving to conform to City STD-877, the Contractor shall use either a slip x slip glued PVC coupling or a transition coupling with sheer bands as directed by the Engineer. Upsizing the existing riser pipe to 8-inch will not be required unless otherwise directed by the Engineer. Any added extension must be a minimum of 12 inches. The lower section of riser pipe shall be adjusted to accommodate this requirement.

In the event that the Contractor encounters water valve boxes with round lids or sanitary sewer frame and covers with open pick holes which must be adjusted to grade, the Contractor is to provide a count to the Engineer a minimum of two days prior to paving to obtain replacements that complies with current City Standards. The City will provide replacements provided the Contractor is not required to replace them as part of the contract or due to damage by the Contractor's operations. Valve boxes and frames and covers on facilities to be abandoned shall not be included in the count provided to the Engineer.

Prior to removal of an existing manhole frame, a platform shall be constructed in the manhole above the top of the sewer to prevent any dirt or debris from falling into the sewer. The platform shall remain in place until all work on the manhole has been completed and the asphalt concrete has been placed around the manhole. Prior to the removal of the platform from the manhole, all dirt and debris shall be removed.

All grade rings shall be set in cement mortar the same day they are placed. All joints shall be smoothly plastered inside and out.

Existing grade rings removed in the adjustment of manhole frames shall become the property of the Contractor and if undamaged and thoroughly cleaned of mortar may be reused in the work. If not so used, they shall be disposed of away from the site of work at the expense of the Contractor.

Manhole frames shall be reinstalled to align directly over the grade rings. Any frames misaligned by more than ½ inch shall be removed and reinstalled.

New and existing Monuments adjusted shall conform to City Standards.

15-2.13 Payment: Adjust Existing Valve Boxes and Monuments to Grade shall be paid for at the contract unit price **each**, which price shall include full compensation for furnishing all labor, materials, tools and equipment, and doing all the work involved in adjust existing valve boxes and monuments to grade, including but not limited to, required excavation and backfill, coordination for replacement boxes, and removing silt and debris, as specified herein, and no additional allowance will be made therefor.

Adjust Existing Manholes to Grade shall be paid for at the contract unit price **each**, which price shall include full compensation for furnishing all labor, materials, tools and equipment and doing all the work involved in adjusting manholes to grade, including but not limited to: required excavation and backfill; additional grade rings *if required*; furnishing location of manholes to be adjusted to grade; removing and delivering silent night frames and covers to the City MSC; and transporting new frames and covers to job site, as specified herein, and no additional allowance will be made therefor.

15-3.03 Concrete Construction: All removed concrete shall become the property of the Contractor and shall be immediately off-hauled. None of the removed concrete shall be dumped or stockpiled on the work site. The Contractor shall dispose of all removed concrete at a recycler for this material. Burying of broken concrete within the limits of the project will not be allowed.

All concrete which is to be removed from sidewalk, curb, gutter and driveway areas shall be removed to the nearest score mark or construction joint as directed by the Engineer unless otherwise noted on Project Plans. The edge of existing concrete to remain shall be neat and free of defects. Saw cutting may be required to achieve this.

Reinforcing steel may be encountered in portions of concrete to be removed and no additional allowance will be made for the removal of such steel.

Irrigation facilities may be encountered during concrete removal and replacement. The Contractor shall exercise care in this area and repair any damage done by their operations at no additional cost to the City.

Landscaping and other surfaces or structures shall be restored to original condition at no additional cost to the City.

15-3.04 Payment: Payment for saw cutting, removal and disposal of concrete sidewalk, curb and gutter, driveway areas, and existing City monuments shall be included in the contract prices paid for **various contract items** of work and no additional allowance will be made therefor.

Full compensation for repair of existing irrigation facilities damaged during any phase of the work shall be included in the prices paid for **various contract items** of work and no additional allowance will be made therefor.

15-7 Utility Clearances: *All items noted in this Section shall take place prior to any other construction activities.*

Pothole information provided on the Project Plans shall be for reference use only and shall not be considered as accurate information for any other areas within the project limits.

Contractor shall investigate, confirm and/or determine the exact locations of existing utilities, and verify clearances between existing and proposed utilities at crossings and/or known potential conflicts. The Contractor shall determine elevations and alignments of existing utilities at connection points.

The Contractor shall determine elevations and alignments of existing sewer laterals, at the back of sidewalk, if a new proposed sewer main is at a higher elevation than the existing sewer main.

The Contractor shall provide all relevant information in writing to the Engineer immediately upon discovery of any conflict. Any delay in notification to the Engineer may delay direction and/or corrective action and a delay claim due to this reason shall not be considered by the City. The Contractor shall not proceed with any work that is in conflict until direction is provided by the Engineer and shall redirect crews to other contract work. All the information required to be obtained per this Section and any other information not noted but relative to the project shall be provided to the Engineer on a set of Plans when the investigative effort is complete.

The Engineer shall provide direction to the Contractor to resolve conflicts. If the resolution of the conflict results in additional work to the Contractor beyond the original scope, then the work shall be by force account.

15-7.01 Payment: Utility Clearances (Potholing) shall be paid for at the contract **lump sum** price, which price shall not exceed 5% of the contract amount and shall include full compensation for furnishing all labor, materials, tools and equipment, and doing all the work involved in verifying utility clearances, including but not limited to: potholing to verify potential conflicts, grades and alignments of existing facilities to be connected to; excavation; backfill; notification; and coordination and redirection of crews to other contract work *if required*, as specified herein, and no additional allowance will be made therefor.

Utility Conflict Resolution Allowance shall be paid for on a **force account (FA)** basis, and no additional allowance will be made therefor. The estimated cost designated by the City on a Force Account basis is noted in the Bid Schedule as Utility Conflict Resolution Allowance.

15-8 Tree Root Pruning: All tree roots two inches and greater which are encountered during excavation must be pruned by hand. The root shall be cut cleanly with a saw to avoid splits. When digging within the drip line of trees, Contractor shall exercise extreme caution to avoid pulling on roots with excavation equipment. Hand dig around all roots greater than one inch in diameter. The Contractor shall notify the Engineer when encountering roots within the drip line of trees which are greater than one inch. If the Engineer elects to get direction from an arborist the Contractor shall redirect crews to other contract work after safeguarding the area.

15-8.01 Payment: Full compensation for removing and pruning tree roots, hand digging to avoid root damaging roots, and excavating cautiously with respect to tree roots is considered as included in the prices paid for **various contract items** of work and no additional allowance will be made therefor.

(STD2010)

SECTION 16 CLEARING AND GRUBBING

16-1.01 General: Clearing, grubbing, and access shall be confined to the limits shown on the plans and shall not exceed the minimum necessary to complete operations.

The Contractor shall not remove any trees, brush, shrubs, or other natural objects outside the limits of construction as shown on the plans, unless directed by the Engineer.

Any trees, brush, shrubs, or other natural objects not ordered removed by the Engineer which have been removed, altered, or damaged shall be replaced in kind by the Contractor before completion of the project.

All unsuitable material shall be disposed of away from the site by the Contractor. The Contractor shall make all necessary arrangements for disposal of material.

16-1.03 Construction: The area to be cleared and grubbed shall be limited to the area within the right-of-way and the permanent construction easement limits shown on the plans, unless otherwise specified in the Special Provisions. Areas located within tree protection areas shall not be cleared and grubbed.

All stumps, large roots and other objectionable material shall be removed to a depth of three feet below finished grade in the area of construction. The resulting spaces shall be backfilled with material suitable for the planned use. Such suitable material shall be placed and compacted in layers as specified in Section 19-6 "Embankment Construction" of the Standard Specifications.

16-1.06 Payment: **Clearing and Grubbing** shall be paid for at the contract **lump sum** price, which price shall include full compensation for furnishing all labor, materials tools and equipment, and doing all the work involved in clearing and grubbing as specified herein, and no additional allowance will be made therefor.

[Version: 10/21/14CDA STD2010]

SECTION 19

EARTHWORK

19-1 General

19-1.01 General: See section 19-2.03B, Surplus Material, of these Technical Specifications.

19-1.01A Summary: Earthwork shall also include excavation for trenching.

19-1.03B Unsuitable Material: Stabilization of unsuitable material shall comply with the following provisions:

- A. Unsuitable material may be processed in place, may be excavated and placed on the grade or other locations suitable for further processing, or may be partially excavated and partially processed in place.
- B. Processing may consist of drying to provide a stable replacement material, or mixing with lime per Section 24.
- C. Stabilized material shall be placed and compacted in layers as hereinafter specified for constructing embankments.

19-1.03B(1) Subgrade Stabilization/Digout: Any area of the subgrade determined by the Engineer to be unsuitable shall be removed to the limits marked in the field by the Engineer and to a depth below the subgrade plane in accordance with the detail indicated on the Project Plans. Soil stabilization fabric shall be placed and asphalt base shall be placed and compacted to fill the excavation in accordance with the detail indicated on the Project Plans.

The excavation shall be filled with asphalt base as defined in Section 39-1.01, "Asphalt Concrete" of these Special Provisions, and as directed by the Engineer to return the excavation to grade after the material is compacted with a minimum 7-ton vibratory roller or approved equal and has obtained a minimum 93% relative compaction. In the situation where a roller is not able to compact the asphalt base as specified, placement and compaction shall be as directed by the Engineer.

For roadway reconstruction per section 19-2.03A of these Technical Specifications where processing of unsuitable subgrade material is not allowed, the areas to be stabilized will be marked in the field by the Engineer after roadway excavation of the area is complete. Use of a pavement grinder shall be considered an acceptable method of excavation of areas requiring subgrade stabilization.

19-1.03C Grade Tolerance: When aggregate subbase or aggregate base are to be placed on the grading plane, the grading plane shall not vary more than 0.05' above or 0.1' below the grade established by the Engineer.

19-1.04 Payment: **Subgrade Stabilization/Digout** shall be paid for at the contract price per **square yard** as measured in the field. Price shall include full compensation for stabilization fabric, asphalt concrete base, compaction, doing all work involved in stabilizing the subgrade as specified herein including labor, materials, tools and equipment, excavation, and no additional allowance will be made therefor.

In the event of an increase or a decrease in the amount of the engineer's estimated quantity of Subgrade Stabilization, such increase or decrease shall not be considered an alteration in excess of the 25 percent of the contract amount of such items under provisions of Section 4-1.05 of the

Standard Specifications and no adjustment of the contract price for Subgrade Stabilization will be made.

No additional compensation will be made for excavation and stabilization beyond the limits of the areas marked by the Engineer or for excavation and stabilization of locations other than those marked by the Engineer. Any excavation for subgrade stabilization done by the Contractor to accommodate equipment width beyond the limits of the areas marked by the Engineer shall be at the Contractor's expense.

The cost for stabilization fabric and asphalt concrete base shall be included with the contract unit price for subgrade stabilization.

19-2 Roadway Excavation

19-2.03A General: The Engineer shall provide reference points and cut sheets for the excavation of the roadway. The Contractor shall furnish an excavation and paving plan and a qualified grade setter to insure that the subgrade conforms to the lines and grades established by the Engineer.

For roadway reconstruction, Roadway Excavation shall be performed with a pavement grinder. No other construction equipment including rubber-tired equipment shall be allowed on the subgrade.

Roadway excavation and asphalt concrete base paving, including Stabilization Fabric per section 19-8.02, paving shall be completed for half the street width before beginning excavation of the remaining street.

The Contractor shall note that there are street trees near areas intended for roadway excavation. The Contractor's operation, including the size of the grinding equipment, shall be such, so as to insure that existing street trees are not damaged. Where limited clearance under the street trees prevents the use of a grinder, excavation shall be performed by an alternate method as approved by the Engineer. Alternate methods may include jack-hammering and removal of existing pavement and base materials by hand, or by use of smaller grinding equipment.

Where tree roots are encountered during roadway excavation, the Contractor shall cut the roots off six inches below the planned subgrade. Each cut shall be clean with no torn bark or splintered wood remaining on the root and shall be accomplished by use of a saw appropriate for the size of the root to be cut.

19-2.03B Surplus Material: Unless otherwise indicated on the Project Plans or in these Special Provisions, the Contractor shall load, haul from the site of work and properly dispose of all surplus excavated material including, but not limited to, rock, concrete, asphalt, debris and soil. All material excavated from the work sites shall be the property of the Contractor. None of the surplus materials generated from the work sites shall be disposed of on the work sites. Prior to the beginning of any earthwork, the Contractor shall submit to the Engineer written authorization for such disposal and entry permission signed by the approved disposal site. The Contractor shall comply with all disposal regulations such as City, County, and/or State permits and licenses, as may be required.

19-2.04 Payment: **Roadway Excavation** shall be a final pay quantity (F) paid for at the contract price per **cubic yard**, which price shall include full compensation for all work, including grinding and removal of existing bituminous pavement and base materials, as specified herein and no additional allowance will be made therefor.

Removal of existing pavement and base materials associated with utility trenching and permanent trench paving shall be considered as included in the payment for those various utility items of work and additional payment as Roadway Excavation will not be made

19-5 Compaction

19-5.03B Relative Compaction (95 percent): Relative compaction of not less than 95 percent shall be obtained for a minimum depth of 0.5-foot below the grading plane for the full width of the planned pavement structural section, whether in excavation or embankment.

19-8 Subgrade Enhancement Geotextile

19-8.02 Materials: Soil stabilization fabric shall be installed per manufacturer's recommendations and shall meet or exceed the following specifications:

Grab Tensile Strength (ASTM D4632)	290 lb.
Mullin Burst Strength (ASTM D3786)	500 psi
Trapezoid Tearing Strength (ASTM D4533)	113 lb.
Modulus (Load at 10% Elongation) (ASTM D4632)	120 lb.
Apparent Opening Size (ASTM D4751)	40-70 sieve
Permittivity (ASTM D4491)	0.05 sec ⁻¹

Soil stabilization fabric shall be Mirafi 600-X, GeoTex 315ST, Carthage Mills FX-66, TerraTex HD, or approved equivalent.

The soil stabilization fabric shall be held in place with wooden stakes driven through the fabric into the subgrade at the beginning and the end of the fabric and at 50 foot intervals. A minimum of three stakes shall be placed across the width of the fabric roll at each interval. The stakes shall be a minimum length of 8-inches and shall be driven at an angle opposite to the direction of pull exerted on the fabric by the paving machine.

19-8.04 Payment: Full compensation for Stabilization Fabric shall be considered as included in the contract unit price paid for Subgrade Stabilization / Digout, and no additional allowance will be made therefor.

SECTION 21 EROSION CONTROL

21-1.01A Summary: Apply seed, fertilizer, and mulch to all disturbed areas. Apply seed, fertilizer, and install an erosion control blanket to all disturbed areas with a finished slope greater than 3:1 as indicated herein.

21-1.02G Seed: Seed shall be delivered to the project site in unopened separate containers with the seed tag attached. Containers without a seed tag attached will not be accepted.

All seed shall have an 80 percent minimum germination rate.

21-1.02H Fertilizer: Fertilizer shall conform to the provisions in Section 20-2.070(1), "Fertilizer," of the Standard Specifications and shall have a guaranteed chemical analysis of 10 percent nitrogen, 10 percent phosphoric acid and 10 percent water soluble potash.

21-1.02O(4) Erosion Control Blankets: Cover disturbed areas with a slope greater than 3H:1V with North American Green BioNet SC150BN Extended-Term Biodegradable Double-Net Straw/Coconut Blanket or an approved equal. Apply seed and fertilizer prior to installation of the erosion control blanket. Do not apply mulch to areas receiving an erosion control blanket.

21-1.03 Construction

21-1.03A General: Seed and fertilizer applications shall be broadcasted mechanically or manually at the following application rates:

1. Seed mix:
 - Elymus glaucus (Blue Wildrye) - 12 lbs / acre
 - Hordeum brachyanthyrum (Meadow Barley) -12 lbs / acre
 - Leymus triticoi.des (Creeping Wildrye) – 12 lbs / acre
 - Vulpia microstachys (Three Weeks Fescue) – 10 lbs / acre
2. Fertilizer:
 - 16-20-0 & 15% Sulphur at an application rate of 500 lbs / acre
3. Mulch:
 - Straw at an application rate of 4,000 lbs / acre

Seed mix and fertilizer shall be worked into the soil by rolling or tamping.

21-1.04 Payment: Erosion Control shall be paid for at the contract **lump sum** price which shall include all labor, materials, and equipment necessary to provide all environmental mitigation, cleanup, and erosion control measures, including but not limited to excavation, burlap bags, silt fences, hydroseed, erosion control blankets, construction entrances, compaction, cleanup, and other work incidental thereto complete in accordance with the Project Plans, applicable Federal, State and Local Regulations, and Permits requirements and as specified herein, and no additional allowance will be made therefor.

SECTION 26 AGGREGATE BASE

26-1.01 Aggregate Base: Aggregate base shall be Class 2 conforming to and placed in accordance with the requirements of Section 26 of the City Specifications, with the following modifications and additional requirements.

Rolling shall commence immediately after spreading of the damp material and before the material has dried sufficiently to allow separation between the fine and coarse particles.

26-1.02B Quality Requirements: The minimum sand equivalent shall be 31 for any individual test.

26-1.03D Compacting: The surface of the finished aggregate base shall be firm and unyielding. Any visible movement vertically or horizontally of the aggregate base under the action of construction equipment or other maximum legal axle loads shall be considered as evidence that the aggregate base does not meet this requirement.

26-1.04 Payment: Class 2 Aggregate Base shall be considered as included in the prices paid for the **various contract items** of work and no additional allowance will be made therefor and shall include all compensation for furnishing all labor, materials, tools and equipment and doing all the work involved in furnishing and placing the base material as specified, including furnishing, hauling and applying water as specified and directed by the Engineer.

[Version: 05/03/14 STD2010]

SECTION 37

BITUMINOUS SEALS

37-2.01A Summary: The work conducted under this section shall be done in accordance with Sections 37 & 94 of the Standard Specifications, the seal coat manufacturer's specifications, and any modifications herein.

This work involves the furnishing and application of a pavement seal coat to all new and existing asphalt concrete surface areas shown on the Project Plans and as stated herein.

Seal coat shall be applied as the last order of work, and no earlier than 30 days after all asphalt concrete has been placed to allow for proper cure. Working days will not be counted during the required cure time for asphalt concrete if, in the opinion of the Engineer, no other contract work can be performed.

37-2.01C (2) Asphaltic Emulsion Seal Coat: The Contractor shall provide a submittal for any product proposed to be used to complete this work. If requested by the Engineer, the Contractor shall also provide a one half gallon sample in an appropriate.

37-2.01D Quality Control and Assurance: Section 37-2.01D(3) will not apply on this project.

37-2.02 Materials: Seal coat shall be Reed & Graham OverKote Asphalt Pavement Coating, or an approved equivalent.

Oilsealant shall be Reed & Graham OverKote Oil-Spot Seal, or an approved equivalent.

Crackfiller shall be Reed & Graham OverKote Crack Filler or an approved equivalent.

All materials used as described in this section shall be compatible.

37-2.03D Surface Preparation: Prior to placement of seal coat, the entire surface of the designated areas shall be free of dirt, water and vegetation. Cleaning may be accomplished by air blowing, vacuum, mechanical sweeper, power washing, or other techniques as approved by the Engineer. Edges of concrete surfaces abutting areas to receive a seal coat application shall be power washed to remove moss or other contaminants. If power washing the existing surface is used, the surface shall not have any standing water prior to application of the seal coat. Where there are deposits of grease or oil, these areas shall be cleaned by scraping, burning and/or the use of an approved detergent such as trisodium phosphate (using a stiff brush to scrub the area clean). Where a detergent is used, the pavement shall be thoroughly rinsed with water. All rinsate from pavement cleaning, if any, shall be collected and disposed of in accordance with all applicable laws and regulations. Rinsate disposal shall be the responsibility of the Contractor. No rinsate, or other products from the work, shall be allowed to flow to the storm drain or off site. After cleaning and removing grease and oil deposits, the cleaned area shall be sealed with an approved oilseal, applied per manufacturer's recommendations.

Cracks in excess of 1/4 inch, but less than 1 inch in width shall be sealed prior to application of the seal coat. Cracks shall be cleaned out with a stiff bristle broom and/or compressed air prior to crack sealing with crackfiller. The crackfiller shall be applied per manufacturer's recommendations and must be dry to the touch prior to application of the seal coat. Cracks that contain weeds and other live vegetable matter must be treated with locally approved non-oil based sterilant prior to application of crackfiller.

Cracks wider than 1 inch shall be filled with hot dense graded asphalt concrete conforming to Section 39 of the California Standard Specifications for 3/8" Maximum Asphalt Concrete and compacted level with adjacent surfaces.

All surfaces and facilities other than those shown to be coated shall be fully covered using a heavy mil plastic or oil resistant construction paper secured by tape in such a manner leaving a neat break between the sealed and unsealed surfaces.

37-2.03F (3) Asphaltic Emulsion for Seal Coat: New asphalt concrete pavement (HMA) shall be allowed to cure at least 30 days before seal coat application.

Two separate applications of seal coat shall be applied using a minimum of 30 gallons of undiluted sealer per 1,000 square feet of area. The second application shall be made after the first application is dry to the touch and won't scuff under normal walking. The total area to be covered is approximately 7800 square feet.

The sealer shall be mixed to uniform free flowing consistency. Water shall be added (not to exceed 15% by volume) to obtain a semi-fluid consistency. In exceptionally hot weather, the surface shall be dampened with water prior to the first application of the sealer. Any excess water shall be removed to leave the surface only slightly damp. The sealer shall be applied to the pavement in continuous parallel lines and spread immediately ahead by use of rubber faced squeegees and/or mechanized spreading equipment.

Surface preparation and sealer application shall not be performed if rain is forecast within 48 hours after application. Surface preparation and sealer application shall not be performed during or just prior to freezing weather conditions. Surface temperature shall be at least 55° F and rising during application.

It shall be the responsibility of the Contractor to protect the seal coat during drying. After application of the sealer is complete, traffic shall be excluded from the area until the sealer is completely dry and won't scuff under tires. This drying time shall be a minimum of 24 hours.

Any surface or facility damaged by over-spray shall be cleaned or replaced to the satisfaction of the Engineer at the Contractor's expense.

37-2.04 Payment: Seal Coat shall be paid for at the contract price per **square foot** as measured in the field. Price shall include full compensation for all labor, materials, tools, and equipment, and doing all work involved in surface preparation and seal coat application as specified herein, as well as any other incidentals needed to comply with these Special Provisions and the Project Plans, and no additional allowance will be made therefor.

37-5 Crack Treatment: Section 37-2.03D shall be followed in lieu of Section 37-5 for surface preparation. Material used for crackfiller shall receive an application of a compatible detackifier agent prior to opening up the area to traffic and shall be cured per manufacturer's recommendations prior to seal coat application.

37-5.04 Payment: Full compensation for crack treatment shall be considered as included in the contract price paid for **Seal Coat** which price shall include full compensation for all work as specified herein and no additional allowance will be made therefor.

SECTION 39 HOT MIX ASPHALT

39-1.01 General: For these specifications, Hot Mix Asphalt (HMA) and asphalt concrete shall be the same.

39-1.01A Summary: Section 39 includes specific specifications for producing and placing Hot Mix Asphalt (HMA) by mixing aggregate and asphalt binder at a mixing plant and spreading and compacting the HMA mixture.

A minimum of two weeks prior to the placement of any HMA, the Contractor shall notify the Engineer which asphalt plant will be used to supply the mix. For any job, HMA shall be supplied from a single plant.

At the Contractor's option, and at no additional expense to the City, a Warm Mix Asphalt (WMA) technology, approved by the City, may be added to the HMA. However, the asphalt concrete shall be manufactured at HMA temperatures (300F +/- 25F) at a dosage rate approved by the Engineer. All other HMA project specifications shall be adhered to.

Use Section 39-3 Method construction process of these specifications for HMA production and construction.

Asphalt concrete in areas of subgrade stabilization, roadway excavation and pavement grind areas shall be placed in a manner that does not cause deformation to the ground surface or the adjacent pavement. The Contractor shall place asphalt concrete on existing finished grade the same day that an area is ground unless previously approved by the Engineer. Traffic shall not be allowed on subgrade roadway surfaces prior to placement of asphalt.

39-1.01C Description: Asphalt concrete surface shall be placed in separate lifts with a paving machine as shown on the Project Plans.

All longitudinal paving joints in the asphalt concrete surface lifts shall fall on a lane line, as shown on the Project Plans, or as approved by the Engineer.

The final lift of asphalt concrete surface shall be placed for the full road width of the street each day. No longitudinal cold joints shall be left overnight except as approved by the Engineer.

The Contractor shall furnish an excavation and paving plan which shall include the following:

1. Requested location for survey staking of reference points
2. Asphalt plant supplying mix including aggregate source
3. Disposal site for spoils
4. Type of trucks and equipment to be used
5. Haul routes through adjacent residential streets
6. Staging locations
7. Sequencing
8. Taper grind locations

The HMA base and HMA surface courses shall be allowed to cool to 160° F at mid-depth before the roadway is opened to traffic each day.

At the end of each working day the Contractor shall place retroreflectorized signs and delineators, as required for night time use in accordance with the Standard Specifications and Section 12 of these Special Provisions to warn the public of the existing conditions.

At the end of each work day during paving operations the location of all valves, manholes, monuments and any other facility overlaid with asphalt concrete and required to be raised to grade shall be marked in white paint.

Edge Grind: Edge Grind shall be in accordance with City STD-209. Longitudinal edge grinds shall be 6' in width or as directed by the Engineer and shall be 0.20' deep at the lip of gutter.

Conform Grind: Conform Grind shall be in accordance with City STD-208. The width of conform grinds shall be 10' and shall be 0.20' deep at the conform location.

All ground edges adjacent to curb ramps and driveways shall have temporary HMA ramps (tapers) installed if the HMA surfacing cannot be placed back the same day the existing pavement is removed. Kraft paper or other bond breaker shall be placed under the conform ramps to facilitate removal when paving operations restart.

39-1.02 Materials:

39-1.02B Tack Coat: Tack coat shall be applied to all existing HMA surfaces to receive an HMA overlay. Tack coats shall be non-tracking asphalt tack coat.

Non-Tracking Tack Coat Shall Meet or Exceed the Following:

Test	Test Method	Specification
Viscosity, @25 DC, SFS	ASTM D244	20-100
Residue, wt%	ASTM D244	60 Min.
Settlement, % Max. Diff	ASTM D244	5.0 Max.
Sieve, wt%	ASTM D244	0.1 Max.
Storage Stability, 24 hr, %	ASTM D244	0.1 Max.
*Demulsibility, %	AASHTO T59	80 Min.
Test on Residue		
Penetration @ 25° C, 100g, 5 sec	AASHTO T49	10 Min – 30 Max
Solubility, %W	AASHTO T44	97.5 Min.
Ductility @ 25°C, 5 cm/min, cm	AASHTO T51	40 cm/Min
Specific Gravity @ 15.5° C	AASHTO T295	Report
Softening Point, ° C	AASHTO T53	52 Min.

Tack coat shall be applied to all HMA and concrete surfaces and allowed to break immediately in advance of placing Pavement Reinforcing Grid and prior to all lifts of HMA. Tack coat shall also be applied to all vertical mating surfaces and conforms to existing pavement, curbs, gutters, and construction joints, and allowed to break immediately in advance of placing all lifts of HMA. The tack coat shall be reapplied 1) where it becomes contaminated, 2) where it is significantly tracked (removed) from the surface, and/or 3) as otherwise directed by the Engineer.

39-1.02C Asphalt Binder: Asphalt binder in HMA must comply with the specifications for asphalts.

Asphalt binder to be mixed with aggregate for HMA surface, leveling and base shall be PG64-16 grade paving asphalt.

The amount of asphalt binder to be mixed with the aggregate shall be specified by the Engineer at the time of paving. Different asphalt binder content may be specified for each lift and each location.

Liquid anti-stripping agent (LAS) shall be added to the asphalt binder at a rate of 0.5% to 1.0% by weight of asphalt binder. The LAS shall be AD-here LOF 65-00 or equivalent, and shall be stored, measured, and blended with the asphalt binder in accordance with the anti-stripping agent manufacture's recommended practice. The LAS can be added at the asphalt plant or at the refinery. When added at the asphalt plant, the equipment shall indicate and record the amount of LAS added. If added at the refinery, the shipping ticket from the refinery shall certify the type and amount of LAS added.

Before the addition of asphalt binder and lime treatment, aggregate must have the values for the quality characteristics shown in the following table:

Quality characteristic	Test method	HMA Type A
Percent of crushed particles Coarse aggregate (% min.) One fractured face Two fractured faces	California Test 205	90 75
Fine aggregate (% min) (Passing no. 4 sieve and retained on no. 8 sieve.) One fractured face		70
Los Angeles Rattler (% max.) Loss at 100 rev. Loss at 500 rev.		10 45
Sand Equivalent (min.) ^a	California Test 217	50 ^b
Fine aggregate angularity (% min.)	California Test 234	45
Flat and elongated particles (% max. by weight @ 5:1)	California Test 235	10

^a Reported value must be the average of 3 tests from a single sample.

^b Minimum Sand Equivalent of 45 for asphalt concrete base.

39-1.02F Reclaimed Asphalt Pavement: Reclaimed Asphalt Pavement (RAP) may be used at the Contractor's option. If RAP is used, the Contractor shall provide the proposed mix design and the quality control for all HMA that includes RAP, in accordance with the following requirements:

1. Contractor shall provide City with a mix design per California Test 384 for the proposed RAP HMA.
2. As part of City's evaluation of RAP HMA, Contractor and City shall perform bitumen ratio tests on at least six split samples of Contractor's RAP to establish correlation between respective binder ignition ovens.
3. RAP shall be processed from reclaimed Asphalt Concrete pavement only.
4. RAP pile(s) shall be separate from the stacker pile, not intermingled with other materials, and stored on smooth surfaces free from debris and organic material.
5. The project RAP pile shall be processed and mixed, identified, and of adequate quantity for the proposed project. "Live" piles shall not be permitted.
6. Contractor shall sample the RAP pile and determine the bitumen ratio (using same binder ignition oven used in #2 above) and provide the test results to the City at least one week prior to producing RAP HMA.
7. A minimum of three samples shall be tested for bitumen ratio for RAP pile of 1500 tons, or portion thereof.
8. RAP pile shall be mixed such that individual bitumen ratio test results of RAP pile so not vary more than +/- 0.5%.
9. During RAP HMA production, RAP shall be sampled by the Contractor off of the belt (into the batch plant), per method established by the City, and samples provided to the City.
10. Bitumen ratio of RAP sampled off of the belt shall be 4.0% minimum, as determined by City binder ignition oven. City shall select binder content for RAP HMA mix per Specifications.
11. RAP content shall be no more than 20% by dry aggregate mass in the HMA. If proposing a change in the RAP content, the Contractor shall notify the Engineer. If the content changes more than 5%, the Contractor shall submit a new mix design.
12. Moisture content of RAP pile shall be 4.0% maximum, and shall be tested the day prior to the day of paving and tested/monitored during each day of HMA production.
13. RAP pile(s) shall be protected from exposure to moisture.

14. RAP HMA shall comply with all the specifications for HMA.
15. If batch mixing is used, RAP shall be kept separate from the virgin aggregate until both ingredients enter the weighhopper or pugmill. After introduction to the pugmill and before asphalt binder is added, the mixing time for the virgin aggregate and RAP shall not be less than five seconds. After asphalt binder is added, the mixing time shall not be less than 30 seconds.
16. If continuous mixing is used, the RAP shall be protected from direct contact with the burner flame with a device such as a shield, separator, or second drum.

If any of the above criteria are not satisfied, or if the RAP HMA test result determined by the City are inconsistent, the acceptance of RAP HMA will be revoked.

39-1.03 HOT MIX ASPHALT MIX DESIGN REQUIREMENTS:

39-1.08 Production

39-1.08A General: During production, with approval of the Engineer, you may adjust hot or cold feed proportion controls for virgin aggregate and RAP. HMA shall be placed in lifts as indicated in these Special Provisions and as shown on the Project Plans.

39-1.11 Transporting, Spreading, and Compacting: All existing HMA that overlaps the lip of concrete gutters shall be removed prior to the placement of new HMA surface in a manner satisfactory to the Engineer and that does not damage the gutter.

HMA shall be placed on the same day the area is excavated so that all areas will either have existing asphalt surface or new HMA by the end of each working day. No excavated areas shall be exposed or open to traffic during non-working hours.

The basis for approval shall be the attainment of 97% relative compaction and satisfactory surface condition following final rolling. The number of coverages required shall be the minimum number required to obtain 97% relative compaction.

All longitudinal surface paving joints shall fall on a lane line. Longitudinal subsurface paving joints shall be offset by at least 6 inches.

No longitudinal vertical drop offs will be allowed between the lanes when the roadway is opened to traffic. Where a longitudinal vertical drop off occurs along the roadway crown between the existing street surface and the new asphalt concrete base, the Contractor shall grind a 10:1 taper in the existing surface to make a temporary conform to accommodate traffic. The temporary taper shall be ground after the asphalt concrete base paving has been completed each day.

Where a vertical drop off will occur between the top of the new asphalt concrete base and a valley gutter, driveway, or side street conform, the Contractor shall install a temporary 10:1 asphalt taper.

Where a vertical drop off would occur between the asphalt concrete base and a pedestrian ramp, the Contractor shall install a temporary 12:1 asphalt taper.

Kraft paper or other bond inhibitor shall be placed under the temporary asphalt taper to facilitate removal when paving operations resume.

Temporary asphalt tapers and associated bond breaker material shall be removed prior to placement of the HMA surface lift. Where the bond breaker material adheres to the asphalt concrete base course it shall be fully removed with a method, approved by the Engineer that will in no way degrade the quality of the final product.

Prior to loading HMA, the bed of the haul vehicle shall be clean and free from all soil, sand, gravel and other deleterious substances.

When spraying release or other parting agents in the bed of the haul vehicle, the minimum amount necessary to moisten the surface shall be used. In no instance will the parting agent be allowed to accumulate in the bed of the vehicle.

All haul vehicles shall be equipped with tarps which are in working order. Tarps shall be used on haul vehicles unless prior approval is obtained from the Laboratory.

The HMA shall be deposited from the haul vehicle into the hopper of the paving machine.

The practice of depositing the HMA on the roadbed in a windrow and subsequently using a pick-up machine to deposit the material in the hopper of the asphalt paver shall not be allowed.

39-1.12 Smoothness:

39-1.12A General: Determine HMA smoothness with a straightedge.

The completed surfacing shall be thoroughly compacted, smooth and free from ruts, humps, depressions or irregularities. Any ridges, indentations or other objectionable marks left in the surface of the asphalt concrete by blading or other equipment shall be eliminated by rolling or other means. The use of any equipment that leaves ridges, indentations or other objectionable marks in the asphalt concrete shall be discontinued

39-1.14 Miscellaneous Areas: The aggregate grading for HMA placed on miscellaneous areas shall conform to that specified for the HMA placed on the traveled way, unless otherwise directed by the Engineer.

39-3 Method Construction Process:

39-3.01 General: Section 39-3 includes specifications for HMA produced and constructed under the Method construction process.

39-3.02 Acceptance Criteria:

39-3.02A Testing: The Laboratory acceptance testing requirement for Sand Equivalent shall be 50 (minimum) for asphalt concrete surface and 45 (minimum) for asphalt concrete base.

HMA shall meet the following requirements:

Aggregate Micro-Deval (ASTM D6928-10) ¹	Tensile Strength Ratio, TSR (ASTM D7870) ²
≤16.0%	Not Required
16.1-18.0%	70 (minimum)
18.1-21.0%	80 (minimum)

¹ Asphalt concrete with an aggregate Micro-Deval loss greater than 21.0% shall be removed and replaced at the Contractor's expense. In addition, no single source of asphalt concrete aggregate shall have a Micro-Deval loss greater than 21.0%.

² TSR testing shall be performed on re-compacted asphalt concrete (per ASTM D7870), obtained from field cores, and tested within 30 days of asphalt concrete placement. Specimens tested shall include 1 unconditioned sample, and 2 conditioned samples as follows:

- a) 20.0 hour Adhesion cycle @ 60°C
- b) 3500 cycles @ 40 psi and 60°C

A single TSR test shall not represent more than 750 tons of HMA.

HMA not meeting the above requirements shall be removed and replaced at the Contractor's expense.

39-3.04 Transporting, Spreading, and Compacting: Test sections shall be approved on the basis of the attainment of 93% relative compaction and a satisfactory surface condition following final rolling. The number of coverages required shall be the minimum number required to obtain 93% relative compaction. Relative density shall be the ratio of in-place density (ASTM Test Method D2950) to test maximum density (California Test 309, Method of Test for Determining Theoretical Maximum Specific Gravity and Density of Hot Mix Asphalt) determined during production paving.

The HMA may be cored during paving of the test sections, and the in-place density for each test section shall be the average of three core densities determined per California Test 308.

39-5 Measurement: HMA surface and HMA base will be measured by weight. The quantity to be paid for shall be the combined weight of the mixture.

All weights shall be supported by State Certificates of Weights and Measures furnished by the Contractor.

39-6 Payment: **Asphalt Concrete Surface** shall be paid for at the contract price per **ton**, which price shall include full compensation for furnishing all labor, materials, tools, and equipment and doing all work involved in placing asphalt concrete surface and overlay, including tack coat and overlay conforms, and no additional allowance will be made therefor.

Asphalt Concrete Base shall be paid for at the contract price per **ton**, which price shall include full compensation for furnishing all labor, materials, tools, and equipment and doing all work involved in placing asphalt concrete base, including tack coat and temporary tapers, and no additional allowance will be made therefor.

Edge Grind shall be paid for at the contract price per **linear foot**, which price shall include full compensation for furnishing all labor, materials, tools, and equipment and doing all work involved in edge grinding, including but not limited to drop-offs, tapers, transportation and disposal of grindings as specified herein, and no additional allowance will be made therefor.

Conform Grind shall be paid for at the contract price per **linear foot**, which price shall include full compensation for furnishing all labor, materials, tools, and equipment and doing all work involved in conform grinding, including but not limited to drop-offs, tapers, transportation and disposal of grindings as specified herein, and no additional allowance will be made therefor.

Pavement Mill shall be paid for at the contract price per **square yard**, which price shall include full compensation for furnishing all labor, materials, tools, and equipment and doing all work involved in milling, including but not limited to drop-offs, tapers, transportation and disposal of millings as specified herein, and no additional allowance will be made therefor.

Full compensation for installing and removing temporary asphalt tapers shall be included in the contract price for asphalt concrete surface and no additional allowance will be made therefor.

Full compensation for removing existing asphalt concrete from top of gutters shall be included in the contract price for asphalt concrete surface and no additional allowance will be made therefor.

Full compensation for furnishing weigh master's certificates shall be considered as included in the contract price paid per ton for asphalt concrete and asphalt concrete base and no additional allowance will be made therefore.

39-13 Geosynthetic Pavement Interlayer

39-13.01 Description: Geosynthetic Pavement Interlayer shall meet or exceed the physical properties listed below:

Specification	Requirement
Weight, oz/sy, min	16.0
Tensile Strength, lbs/in (width & length)	560
Elongation at Break, % Max	<3
Melting Point, ° F	>425

Geosynthetic Pavement Interlayer shall be GlasGrid 8511 or approved equivalent.

Geosynthetic Pavement Interlayer shall be placed at locations shown in these special provisions. Transverse and longitudinal joint overlap shall be in accordance with the manufacturer's recommendations. The grid shall be laid by mechanical means or by hand with sufficient tension to eliminate wrinkles and as recommended by the manufacturer's recommendation. A manufacturer's representative shall be present during placement of the grid and until all paving operations related to the grid are completed.

In advance of placing the interlayer, cracks shall be cleaned and surface preparation measures shall be performed as per manufacturer's recommendations. Surface preparation shall provide a clean, smooth, dry surface which shall be free of but not limited to, foreign matter and surface contaminants, including but not limited to pavement markers and striping, paint, oil, rubber, vegetation, and loose pavement.

A minimum 0.08 gal/ square yard non-tracking asphalt tack coat (see 39-1.02B) shall be applied prior to placement of the Geosynthetic Pavement Interlayer. Turning of the paving machine or other vehicles should be gradual and shall be kept to a minimum to avoid damage to the membrane. Should equipment tires tend to stick to the material during pavement operations, small quantities of asphalt concrete shall be broadcast ahead of the paving operation to prevent sticking.

When Geosynthetic Pavement Interlayer is placed on pavement, which has been subject to traffic, pavement shall be swept or vacuumed cleaned by a mechanical device by sweeping or vacuuming, and as directed by the Engineer.

At each utility cover that will be covered with Geosynthetic Pavement Interlayer, the interlayer shall be neatly cut around the cover to allow for raising the cover to grade without disturbing the grid.

The interlayer shall be paved with the specified thickness of asphalt concrete as per these special provisions the same day the grid is installed.

Emergency traffic may run on the grid after being placed. The Contractor shall ensure that damage is not caused by this traffic. Any damaged areas or areas where adhesion is not apparent on the grid shall be repaired at the Contractor's expense.

39-13.02 Measurement: Geosynthetic Pavement Interlayer shall be computed on the basis of the exact amount of road surface area covered in the field.

39-13.03 Payment: **Geosynthetic Pavement Interlayer (Pavement Grid)** shall be paid for at the contract price per **square yard**, which price shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals of doing all work involved in placing pavement

grid, including, sweeping, surface preparation, furnishing and placing pavement grid, supplying and applying trackless asphalt tack coat, cutting around utility covers, removing raised air pockets, as shown on the plans, as specified in these special provisions and as directed by the Engineer, and no additional allowance will be made therefor.

39-14 Speed Bump

39-14.01 Description: Speed Bumps shall be constructed at the locations and per the details indicated on the Project Plans following final paving and as directed by the Engineer.

39-13.03 Payment: **Speed Bump** shall be paid for at the contract **lump sum** price, which price shall include full compensation for furnishing all labor, materials, tools, and equipment and doing all work involved in constructing an asphalt concrete speed bump, including prime coat and painting, as shown on the plans, and as directed by the Engineer, and no additional allowance will be made therefor.

SECTION 39A

HOT MIX ASPHALT CONCRETE TRENCH PAVING

39A-1.01 Description: Hot mix asphalt concrete surfacing and asphalt concrete base and the placing thereof shall conform to the requirements of the Standard Specifications, Section 39 of the City Specifications and these Technical Specifications.

39A-2.01 Asphalts: Temporary paving on all utility trenches and any other excavated areas shall be ½-inch maximum, medium grade aggregate hot mix asphalt concrete installed a minimum of two inches thick **placed each day** over the work.

Temporary paving around edges of steel plates shall be a hot mix ½-inch maximum, medium graded aggregate and SC 3000 asphalt binder for use the same day or SC 250 asphalt binder for use over a one week period.

The amount of asphalt binder to be mixed with the aggregate will be specified by the Engineer at the time of paving. Different asphalt binder content may be specified for each lift and each location. Asphalt concrete trench paving shall be per Section 39-1.02E for surface and base requirements.

Cutback shall not be stockpiled or used anywhere on the job site.

39A-5.01 Spreading Equipment: When trench width is three feet or less, the asphalt concrete used for trench paving may be deposited directly from the haul vehicle into the trench. The asphalt shall then be raked smooth prior to compaction.

39A-6.01 General Requirements: Areas outside of reconstruction or overlay limits shall receive permanent trench paving per City STD-215, the modified detail on the Plans or as specified herein. The Engineer may require additional paving beyond the minimum dimensions shown in STD-215.

Areas requiring permanent trench paving per City STD-215 shall have a minimum A.C. thickness of 0.20 feet, and will use the 6-inch thick AC alternative in Note 1 of STD-215.

The Contractor shall provide compaction of backfill and base material as the job progresses. Temporary paving, as specified in Section 39A-2.01, shall be placed over the work each day, leaving not more than 25 feet unpaved. This temporary paving shall be removed for final street reconstruction and/or trench paving. The 25 feet of unpaved trench shall be covered with skid resistant steel plates (with a coefficient of friction of 0.35 or greater per CTM342), capable of sustaining normal (H2O) traffic loads without shifting or bouncing and shall be secured per Caltrans requirements. Plates that have areas where the skid resistant material is missing shall not be used and must be removed from the job site. Hot mix asphalt concrete shall be placed and compacted around all edges of steel plates with a sufficient width and gradual slope in order to provide a smooth transition to existing pavement. The Contractor shall only be allowed to plate one lateral trench at a time.

Temporary and permanent asphalt trench paving shall be even and smooth riding.

The Contractor shall monitor and maintain all temporary paving to the satisfaction of the Engineer.

Asphalt concrete used for temporary trench paving shall be removed and disposed of in accordance with with these Technical Specifications Section 124 "Materials Recycling" of these Technical Specifications.

Any existing manholes or valves that are encountered within the trench paving limits must be adjusted to grade per the requirements of Section 15 of these Special Provisions. The Contractor is responsible for all coordination with the various utility company owners and their representatives, as well as the cost to adjust the various utilities to grade.

39A-6.03 Compacting: Compaction shall be in accordance with Section 39-6.03 of the City Specifications, except as modified below.

The basis for approval shall be the attainment of 93% relative compaction and satisfactory surface condition following final rolling. The number of coverages required shall be the minimum number required to obtain 93% relative compaction in accordance with Section 39-3.04 of these Technical Specifications.

39A-8.02 Payment: Full compensation for furnishing and installing temporary trench paving asphalt shall be considered as included in the prices paid for the **various contract items** of work and no additional allowance will be made therefor.

Permanent Trench Paving shall be paid for at the contract price per **ton**, which price shall include full compensation for furnishing all labor, materials, tools, equipment and doing all work involved in placing permanent trench paving, including but not limited to: saw cutting, tack coat, compaction and any other work required for permanent trench paving not specifically enumerated in the City Standards, these Special Provisions or on the Project Plans and no additional allowance will be made therefor.

The estimated quantity of Permanent Trench Paving is for bidding purposes only. This quantity may be increased, decreased or eliminated in its entirety based on field condition evaluation by the Engineer and no adjustment in the contract bid price or other contract items shall be made therefor. The provisions in Section 9-1.06(B)(C) of the Standard Specifications shall not apply.

[Revised: 8/28/13 STD2010]

SECTION 40 CONCRETE PAVEMENT

40-1.01 Description: Portland cement concrete (P.C.C.) pavement shall be constructed in accordance with Section 40 of the Standard Specifications, the details shown on the plans, these Special Provisions, and as directed by the Engineer.

All concrete pavement shall be constructed of 6.5 sack "Type II Modified" concrete, containing not less than 611 pounds of Portland cement per cubic yard, and conforming to the provisions in Section 90 of the Standard Specifications. Traffic shall not be allowed on new P.C.C. streets until the P.C.C. has attained a minimum compressive strength of 3,500 pounds per square inch (psi). Track-mounted construction equipment will not be allowed on the new P.C.C areas at any time.

All concrete to be removed shall be disposed of by the Contractor away from the site of work. All concrete shall become the property of the Contractor and shall be immediately off-hauled. None of the removed concrete shall be dumped or stockpiled on the work site. The Contractor shall dispose of all removed concrete at a recycler for this material. The Contractor's attention is directed to Section 124, Material Recycling, of these Special Provisions.

40-1.01 A Concrete Mix: At least one week prior to the placement of the concrete, the Contractor shall submit for review and approval, a calibration chart for the mix design strength versus concrete temperature and a copy of the mix design proportions and proposed admixture(s) together with all supporting technical data. Submittal must be reviewed and approved by the City of Santa Rosa Material Lab before concrete can be poured.

40-4.01B Textured Concrete and Colored Concrete Median Island and Crosswalk Paving Submittals: Colored pigment and stamps for concrete crosswalks and median island paving shall be selected and submitted by the Contractor for review and approval by the Engineering. Test samples of each proposed color and stamp combination shall be submitted by the Contractor. Samples shall be made from "ready mix" concrete from the same supplier and batch plant that will be used to supply concrete for concrete median island and crosswalk paving.

Stamp(s) for median island paving and concrete crosswalks shall be selected by the Contractor to match existing. A sample shall be submitted by the Contractor for review and approval by the Engineering.

40-4.03 Textured Concrete and Colored Concrete Median Island and Crosswalk Paving Construction: Stamped Colored Concrete Median Island and Crosswalk Paving shall be constructed in accordance with the structural sections and details shown on the Project Plans.

40-1.03A Test Panels: Two weeks prior to the start of work the Contractor shall submit a color chart, or sample chip set, to the Engineer for determining the pigment color(s) to be used for the test panels. Within two weeks of start of work, and a minimum of three months prior to the start of P.C.C. construction, the Contractor shall pour the test panels using the pigment color(s) chosen from the submittals. The first test panel set shall consist of four (4) separate minimum size 2.5x2.5 foot panels with a minimum thickness of three inches.

The test panels shall be poured adjacent to one another at a location on the project chosen by the Engineer. The concrete mix used for the test panels shall be "ready mix" concrete from the same supplier and batch plant that will be used to supply concrete for P.C.C. curb, gutter, sidewalk and P.C.C. pavement. Concrete from other suppliers or field mixed concrete will not be allowed for pouring test panels. The submitted pigment color shall be added to the concrete mix by the supplier at the batch plant for each test panel. The pigment dosage rate for each test panel shall

be determined by the Engineer. The test panels shall have a medium broom finish and be cured with Davis Color Seal in a matching color. Do not cure with plastic sheeting, membrane paper, or intermittent wetting and drying.

The test panels shall be used to find a color for the finished concrete that matches the color of the existing concrete pavement. The test panels shall be allowed to cure for up to 5 days before PCC paving will start before the determination of a color match is made. After a test panel is determined to be acceptable by the Engineer, the pigment color, dosage rate and curing method used for that test panel shall be applied to all concrete mix for P.C.C.

40-1.04 Grade Tolerance: The aggregate base to receive P.C.C., immediately prior to placing, shall conform to the compaction and elevation tolerances specified, and shall be free of loose or extraneous material. Aggregate base shall be uniformly moist, and any excess water standing in pools or flowing on the surface shall be removed prior to placing concrete.

40-1.07 Spreading, Compacting and Shaping: Transverse straightedge, longitudinal straightedge, and Profile Index requirements specified in Section 40-1.10 will not apply to the pavement surface unless otherwise specified. When a straightedge 12-feet-long is laid on the finished surface and parallel with the centerline, the concrete surface shall not vary more than 0.01-foot from the lower edge of the straightedge. The transverse slope of the finished surface shall be uniform to a degree such that no depressions greater than 0.02-foot are present when tested with a straightedge 12-feet-long laid in a direction transverse to the centerline and extending from edge to edge of a 12-foot lane. Spreading, compacting and shaping shall also conform to the provisions in Section 40- 1.07 A of the Standard Specifications, except that a truss screed capable of spreading, screening, shaping and consolidating only one-half of the planned street width in a workday, shall be used. The remaining one-half of the street shall not be demolished until the new P.C.C. has attained a minimum compressive strength of 3,500 psi for related construction equipment traffic. Track-mounted construction equipment will not be allowed on the new P.C.C streets at any time.

Immediately in advance of placing concrete, and after all aggregate base operations are completed, side forms shall be trued and maintained to the required line and grade for a distance sufficient to prevent delay in placing concrete. However, the grade adjacent to the existing (or replaced) curb and gutter should not extend more than approximately 1/4-inch above the gutter lip after final finishing.

40-1.08 Joints: Joints shall be constructed in accordance with the details shown on the Project Plans.

40-1.10 Final Finishing: Concrete paving final finishing shall conform to the plans, these Special Provisions and Section 40-1.10 "Final Finishing" of the Standard Specifications as modified herein.

The Engineer will not utilize a Profilograph in accordance with California Test Method 526. However, the finished surface shall be within the tolerance specified when a 12-foot straight edge is utilized, as specified in Section 40-1.07 of these Special Provisions.

In advance of curing operations, the pavement surface shall be finished to grade and cross section with a float and troweled smooth. Concrete adjacent to the joints and lip of gutter shall be finished with and edger tool.

Surfaces shall be broom finished transversely to the line of traffic. If water is necessary, the water shall be applied immediately in advance of brooming. Fixed forms shall not be removed in less than 12 hours after the finishing has been completed.

40-1.11 Methods of Curing: The P.C.C. shall be cured using the same methods used during implementation of Section 40-1.03A, "Test Panels" of these Special Provisions.

The Contractor shall use a pre-approved concrete admixture to obtain the necessary strength within the specified timeframe.

Concrete that is uncured at the end of the workday shall be protected in a manner approved by the Engineer, this may require trench plates.

40-1.12 Operational Constraint: The Contractor shall complete each concrete installation location such that the concrete reaches 3,500 psi within 3 days (72 hours).

If the repair is not progressing at a rate that will permit the restoration of traffic within the specified time period, the Contractor shall take appropriate temporary measures, acceptable to the Engineer, to open the road to traffic. These temporary measures shall be at the Contractor's expense.

40-1.13 Measurement: Quantities of P.C.C. Pavement to be paid for will be the area of the completed work in place, measured by the square foot.

40-1.14 Payment: Concrete Pavement shall be paid for at the contract price for various thicknesses paid per **square foot** which price shall include full compensation for furnishing all labor, materials, including Class 2 Base, tools and equipment, and doing all the work involved in Concrete Pavement, as specified herein, including removing and disposing of existing concrete, compacting subgrade, placing and compacting Class 2 aggregate base, formwork, adding color pigment to the concrete, applying curing materials, and any other item necessary for Concrete Pavement not specifically enumerated in the plans or these specifications, and no additional allowances will be made therefor.

Stamped Colored Concrete Crosswalk Paving shall be paid for at the contract price per **square foot**, which price shall include full compensation for furnishing and applying curing materials, removing discoloring, colored pigment, stamping, reinforcement, Class 2 Aggregate Base, furnishing all labor, materials, tools and equipment and doing all the work involved in constructing stamped colored concrete crosswalk paving complete in place as specified, including formwork, furnishing and placing expansion joint filler, constructing weakened plane joints, excavating, and backfilling.

Stamped Colored Concrete Median Island Paving shall be considered as included in the contract prices paid for Center Median Replacement, which price shall include full compensation for furnishing and applying curing materials, removing discoloring, colored pigment, stamping, sand, furnishing all labor, materials, tools and equipment and doing all the work involved in constructing stamped colored concrete median island paving complete in place as specified, including furnishing and placing expansion joint filler, constructing weakened plane joints, excavating, and backfilling.

Full compensation for furnishing and pouring colored concrete test panels complete in place, shall be considered as included in the contract prices paid for the various items of work and no additional allowance will be made therefor.

SECTION 43 CRUSHED STONE (SHALE) SURFACING

43-1.01 Description: Utility Access Road construction shall consist of grading, compaction, materials quality requirements, placement of shale surfacing within specified tolerances and slopes in the site to the lines, transitions, and grades indicated on the Project Plans. Perform necessary grading to achieve final elevations closely approximating those shown on the Project Plans

43-1.02 Crushed Shale: The percentage composition by weight of the shale shall conform to the following gradation as determined by California Test Method No. 202:

Sieve Size	Percent Passing
1½ inch	90-100
No. 4	25-40
No. 200	2-9

The minimum sand equivalent value shall be 20 as determined by California Test Method No. 217. No single aggregate grading or Sand Equivalent test shall represent more than 500 cubic yards or one day's production, whichever is smaller.

Shale shall meet the following quality requirements:

1. Shale shall be free from organic matter and other deleterious substances
2. Shale shall be of such nature that it can be compacted readily under watering and rolling to form a firm stable surface.
3. Shale aggregate may include material processed from reclaimed portland cement concrete, lean concrete base, cement treated base or a combination of any of these materials. The amount of reclaimed material shall not exceed 50 percent of the total volume of the aggregate used.
4. The shale aggregate shall have a minimum durability index of 35 and a minimum resistance (R-value) of at least 78.
5. The shale shall not be treated with lime, cement or other chemical material before the Durability Index test is performed.

Submit test data and gradation information to confirm compliance with the above requirements.

43-1.03 Placing: Place and compact shale surfacing to a relative compaction of not less than ninety five percent (95%) per ASTM 1557 Test Procedure to a compacted depth of not less than 6-inches, unless shown otherwise on Project Plans.

The Contractor shall grade and blend the transitions between new and old shale surfacing as required to promote a smooth transition that prevents the puddling of water.

43-1.04 Measurement: Utility Access Road construction will be measured by the square yard, complete in place. Surfacing placed in excess of what is shown on the project plans will not be paid for unless specifically directed and agreed to by the Engineer.

43-1.05 Payment: Utility Access Road shall be paid for at the contract **square yard** price which shall include all labor, materials, and equipment necessary to construct the compacted crushed stone access roadway using aggregate to the thicknesses indicated on the Project Plans including but not limited to excavation, importing, placing, fine grading, compaction, materials testing, redwood headerboards, stabilization fabric, and other work incidental thereto, complete in accordance with the Project Plans and as specified herein, and no additional allowance will be made therefor.

SECTION 44 BIKE PATH TRAIL RECONSTRUCTION

44-1.01 Description: Bike Path Trail Reconstruction shall consist of removal of existing bike path trail, grading, compaction, placement of stabilization fabric and geogrid, materials quality requirements, placement of placement of aggregate base and asphalt concrete surface materials within specified tolerances and slopes in the site to the lines, transitions, and existing grades indicated on the Project Plans. Perform necessary grading to achieve final elevations, slopes, and cross slopes closely approximating those of the existing Bike Path Trail and as indicated on the Project Plans.

44-1.01A Grades: Longitudinal grades along the trail shall not exceed 5% maximum, and cross slopes shall not exceed 2% maximum.

44-1.02 Materials: Aggregate base shall meet the requirements of Section 26.

Soil stabilization fabric shall be Mirafi 600-X, GeoTex 315ST, Carthage Mills FX-66, TerraTex HD, or approved equivalent.

Geogrid shall be an integrally formed, polypropylene, bi-axial geogrid with a positive mechanical interlock load transfer mechanism. Geogrid shall be Tensar BX1200, Tenax MS330 or approved equivalent.

44-1.03 Construction: Geosynthetics shall be installed in full-length sections with 3-foot overlapping seams per the manufacture's written installation guide.

Staking or other appropriate measures shall be taken to prevent movement or shifting of the geosynthetics during installation and subsequent fill placement. Fill placed on geosynthetics shall be done in a manner that does not disrupt the placement of the geosynthetics or the basement soil.

Place and compact class 2 aggregate base to a relative compaction of not less than ninety five percent (95%) per ASTM 1557 Test Procedure to the compacted depths indicated on Project Plans.

The Contractor shall grade and blend the transitions between new and old shale surfacing as required to promote a smooth transition that prevents the puddling of water.

44-1.04 Measurement: Bike Path Trail Reconstruction will be measured by the square yard, complete in place. Surfacing placed in excess of what is shown on the project plans will not be paid for unless specifically directed and agreed to by the Engineer.

44-1.05 Payment: Bike Path Trail Reconstruction shall be paid for at the contract **square yard** price which shall include all labor, materials, and equipment necessary to remove the existing trail down to the subgrade and reconstruct the trail using stabilization fabric, geogrid, and aggregate to the thicknesses indicated on the Project Plans, including but not limited to excavation, importing, placing, fine grading, compaction, materials testing, and other work incidental thereto, complete in accordance with the Project Plans and as specified herein, and no additional allowance will be made therefor.

Payment for removal of the existing bike path trail shall be included in the contract price paid for Roadway Excavation, and no additional allowance will be made therefor.

Payment for asphalt concrete surface shall be included in the contract price paid for Asphalt Concrete Surface, and no additional allowance will be made therefor.

SECTION 56 SIGNS

56-2.01 Description: The work shall consist of removal and reinstallation of existing roadside and informational signs as shown on the Project Plans, and where directed by the Engineer, and shall conform to Section 56 of the Standard Specifications, the current edition of the California Manual on Uniform Traffic Control Devices (CAMUTCD), and applicable City of Santa Rosa requirements.

Where existing signs are shown on the plans in areas of sidewalk replacement, the signs shall be protected from damage during construction. Signs which the Engineer determines have been damaged during construction shall be replaced in their entirety including all labor, materials, tools and equipment including threaded 2-inch pole and extensions, mounting hardware, foundation and doing all work involved in providing and installing street signs, complete as specified herein, and no additional allowance will be made therefore.

56-2.02A Informational Sign: The existing informational sign shall be removed and protected from damage during construction. All wood used for reinstallation of the informational sign shall be construction heart S4S grade redwood unless otherwise noted. All hardware shall be galvanized or otherwise protected for corrosion resistance.

56-3.01 Payment: Full compensation for conforming to the provisions of this section shall be considered as included in the prices paid for the **various contract items** of work involved and no additional compensation will be allowed therefor.

SECTION 64 PLASTIC STORM DRAIN PIPE

64-1.01 Description: All plastic storm drain pipes and associated appurtenances shall be constructed in accordance with the City Standards.

64-1.02 Materials: Plastic pipe for use in public storm drain systems shall be 18 inches through 36 inches in diameter, Type S, smooth interior wall, corrugated exterior wall, high density polyethylene pipe (HDPE) as specified in AASHTO designation M294. Where the storm drain pipe is greater than 36 inches, or when the cover is less than 12" to subgrade, reinforced concrete pipe shall be used.

The use of plastic storm drain pipe shall not be permitted in unpaved areas.

64-1.02E Joints: Joints shall be in accordance with Section 64-1.05 Couplings and Fittings of the City Standards. Pipe and fittings shall be joined with a bell-and-spigot joint meeting AASHTO M252, AASHTO M294, or MP7. The joint shall be silt tight with o-ring gaskets made of polyisoprene meeting the requirements of ASTM F477. Gaskets shall be installed by the pipe manufacturer and covered with a removable wrap to ensure the gasket is free from debris. A joint lubricant supplied by the manufacturer shall be used on gasket and bell during assembly. The spigot shall be pushed into the bell to the "home line" on the pipe.

64-1.03 Excavation and Backfill: Excavation and backfill shall be in accordance with Section 64-1.05 of the City Standards. All trench excavation material from trenches, including any removed portions of the existing storm drain pipe, shall be the property of the Contractor. Excavated material shall not be disposed of on the work site. Prior to disposal of any material, the Contractor shall submit to the Engineer written authorization for such disposal of material and entry permission signed by the owners of the disposal site, and shall comply with any other requirements of disposal, such as City and County permits, as may be required.

Excavation and backfill shall be as shown on Standard 215 Standard Trench Detail of the City of Santa Rosa Standard Plans and the following provisions.

Minimum trench width shall be as follows:

<u>Pipe Size, Inside Diameter</u>	<u>Trench Width (inches)*</u>
15	30
18	36
24	48
30	54
36	60

* If this is not sufficiently wide for the materials and methods proposed, a wider trench allowing for proper installation should be constructed.

Pipe bedding will be placed in 6-inch (maximum) lifts to six inches above the top of pipe with each lift hand or mechanically tamped. The final lift can be compacted with a plate type vibrating compactor.

64-1.03C Laying Pipe Placement: Laying Pipe shall be in accordance with Section 64-1.07 of the City Standards. Plastic storm drain pipe shall be installed in accordance with the Standard

Specifications, generally accepted practice and on the alignment and grade as shown on the plans. When long radius curves are permitted, adjustments in horizontal alignment will be achieved through adjustments at each coupling, within manufacture's specification, and not by bending of the pipe.

Unless otherwise specifically permitted by the Engineer, all pipe shall be laid upgrade.

Where ground water or surface drainage occurs, pumping shall continue until backfilling has progressed to a sufficient height to prevent floatation of the pipe.

64-1.03D Television Inspection of Plastic Storm Drain Pipe: Closed Circuit Television Inspection shall be conducted in accordance with City of Santa Rosa Design and Construction Standards Section 79 with the following exception that the video files shall be on non-rewritable DVD disc(s) or flash drive(s) instead of disk or tape.

64-1.04 Payment: Full compensation for removing and disposing of existing storm drain pipes encountered during trenching shall be considered as included in the price paid for Storm Drain Pipe and no additional compensation shall be made therefor.

18" HDPE Storm Drain Pipe – Type A Trench shall be paid for at the contract price per **linear foot**, which price shall include full compensation for furnishing all labor, tools, materials, and equipment, including all couplings and fittings, and for doing all the work involved in constructing plastic storm drains including excavation, bedding, backfill, asphalt concrete base, compaction, removal, disposal, and abandonment of existing storm drain pipes, and televising storm drain pipes, complete in place and as shown on the plans and as specified in these specifications, the Special Provisions and as directed by the Engineer.

18" HDPE Storm Drain Pipe – Type B Trench shall be paid for at the contract price per **linear foot**, which price shall include full compensation for furnishing all labor, tools, materials, and equipment, including all couplings and fittings, and for doing all the work involved in constructing plastic storm drains including excavation, bedding, backfill, aggregate base, compaction, removal, disposal, and abandonment of existing storm drain pipes, and televising storm drain pipes, complete in place and as shown on the plans and as specified in these specifications, the Special Provisions and as directed by the Engineer.

Television Inspection of Plastic Storm Drain Pipe shall be considered as included in the prices paid for Storm Drain Pipe, which price shall include production and delivery of DVD disc(s) or flash drive(s) delivered to the Engineer and no additional compensation will be made therefor.

64-1.05 Trench Shoring and Bracing - Storm Drain: All bracing and shoring shall conform to Section 106 of these Special Provisions.

SECTION 65 REINFORCED CONCRETE PIPE

65-1.01 General: All miscellaneous storm drain pipes and associated appurtenances shall be constructed in accordance with applicable County of Sonoma and City of Santa Rosa Standards, as specified on the Project Plans, and as indicated herein.

65-1.02 Materials: Storm Drain Pipe shall be Reinforced Concrete Pipe (RCP) unless shown otherwise on the Project Plans. Class V RCP shall be installed on the alignment and grade as shown on the Project Plans, in accordance with the details shown on the Project Plans, the applicable provisions of Section 65 of the City of Santa Rosa Construction Specifications and these Special Provisions and as directed by the Engineer. Excavation and backfill for RCP shall conform to the details shown otherwise on the Project Plans.

Concrete cap shall be constructed of 6.5 sack "Type II Modified" concrete, containing not less than 611 pounds of Portland cement per cubic yard, and conforming to the provisions in Section 90 of the Standard Specifications.

65-1.03A Excavation and Backfill: Excavation and backfill shall be as shown on Standard 215 Standard Trench Detail of the City of Santa Rosa Standard Plans unless shown otherwise on the Project Plans and in conformance with the following provisions.

Pipe bedding below the pipe shall be placed in a maximum 6-inch thick lift and mechanically compacted to the minimum relative compaction indicated on the Project Plans. The final lift can be compacted with a plate type vibrating compactor.

Traffic shall not be allowed on new concrete cap until it has attained a minimum compressive strength of 3,500 pounds per square inch (psi). Track-mounted construction equipment will not be allowed on the new concrete cap at any time.

65-1.03B Laying Pipe: Laying Pipe shall be in accordance with Section 65-1.07 of the City Standards.

65-1.04 Video Inspection: Closed Circuit Television Inspection shall be conducted in accordance with City of Santa Rosa Design and Construction Standards Section 79 with the following exception that the video files shall be on non-rewritable DVD disc(s) or flash drive(s) instead of disk or tape.

65-1.05 Payment: Full compensation for removing and disposing of existing storm drain pipes encountered during trenching shall be considered as included in the price paid for Storm Drain Pipe and no additional compensation shall be made therefor.

12" RCP Storm Drain Pipe with Concrete Cap shall be paid for at the contract price per **linear foot**, which shall include full compensation for furnishing all labor, tools, materials, and equipment, including all couplings and fittings, and for doing all the work involved in constructing storm drain culvert with concrete cap including excavation, bedding, compaction, forming, reinforcement, concrete, and finishing, complete and in place as specified, television inspection, and as directed by the Engineer, and no additional compensation will be made therefor.

SECTION 71 EXISTING DRAINAGE FACILITIES

71-4.01A General: Section 71-4 includes specifications for partially removing, adjusting, and adding to drainage facilities.

The bases of manholes, catch basins or drainage facilities to be modified.

71-4.03A Existing Storm Drain Structures: When a new storm drain pipe is connected to an existing storm drain structure, the structure shall be modified to accept the new size of pipe and grouted smooth. The wall of the existing structure shall be breached by core drilling, sawing, or other approved method that does not disturb the structure. The Contractor shall seal the penetration with StopAQ™ or SealGuard II, or an approved equivalent water stop, and shall grout the sealed penetration with a rapid set, high strength, non-shrink cementitious mortar to protect the sealer. The Contractor shall backfill the exterior of the storm drain structure around the pipe penetration with concrete to stabilize the connection. The contractor shall use a bonding agent such as Sakrete Concrete Bonder and Fortifier, or an approved equivalent, to adhere modification material to the existing structure.

Existing storm drain structures shall be modified by pouring a false bottom when a new storm drain pipe connection to an existing structures raises the elevation of the outlet pipe more than 6". A bonding agent such as Sakrete Concrete Bonder and Fortifier, or an approved equivalent shall be applied to the interior of the existing structure and a false bottom shall be poured using "Class A" concrete per Section 90 of the City Standards.

71-4.01D Payment: **Modify Existing Storm Drain Structure** shall be paid for at the contract unit price **each**, which price shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all work involved in removing and/or abandoning existing storm drain connections to existing storm drain structures and connection of new storm drain pipe(s) to existing storm drain structures including saw cutting, hammering, grouting, concrete, pouring false bases, complete in place as shown on the plans and as specified in these specifications, and as directed by the Engineer, and no additional compensation will be made therefor.

SECTION 73

CONCRETE CURBS AND SIDEWALKS

73-1.01A Summary: This work shall consist of curbs, gutters, sidewalks, driveway aprons, curb ramps, valley gutters, and gutter depressions, shall be constructed in accordance with the details and at the location shown on the plans and in conformance to the requirements of Section 73 of the City Specifications, and Standard Specifications.

Concrete driveway paving, stamped colored concrete crosswalk paving, and stamped colored concrete median island paving shall be constructed in accordance with Section 40 of these Special Provisions and the details shown on the Project Plans.

73-1.01E Color: A colored pigment designed for the integral coloring of concrete shall be added to the concrete mix to match existing or as indicated herein. The pigment shall contain pure concentrated mineral pigments specifically processed for mixing into concrete and complying with ASTM C979.

The colored pigment for curbs, gutters, sidewalks, driveway aprons, curb ramps, valley gutters, and gutter depressions shall be Davis Colors color #860, applied in a dosage of 0.33 pound per 94 pound sack of cement (approximately 2 pounds per cubic yard of concrete for a 6 sack mix), or L. M. Scofield color #SG860 applied in a dosage to produce an equivalent color, or an approved equal.

73-2.03 Construction: Curb construction shall be in accordance with Section 73-1.05 of the City Standards and City Std.235. Curb construction shall be in conformance to the details and at the locations shown on the plans and in accordance with City Specifications.

Curb and gutter shall be constructed in conformance to City STD-241, the details and locations shown on the plans and in accordance with the City Specifications.

Curb openings for driveway aprons, shall be constructed at existing driveways, and at locations indicated on the plans or directed by the Engineer.

All concrete which is to be removed from curb, gutter, and driveway areas shall be removed to the nearest construction joint or as directed by the Engineer.

Median curb per City STD-242 shall be constructed in conformance to the details and at the locations shown on the plans and in accordance with the City Specifications.

Curb and gutter and median curb shall be cured in accordance with the requirements of Section 90-7 of the Standard Specifications except that the Contractor may substitute other than a pigmented sealer upon the approval in writing of such substituted sealer by the Engineer.

All oil, paint, tire marks, and other discoloring shall be removed from the curb and gutter by sandblasting prior to acceptance by the Engineer. Cement mortar will not be an acceptable substitute for sandblasting. Vandalism to uncured concrete surface shall be removed. If it cannot be removed from the surface, then the vandalized concrete shall be removed and replaced to the nearest scoremark.

Curb Ramp shall be constructed in accordance with the details and at the locations shown on the plans per Caltrans Standard plan A88A except the thickness shall be 4" minimum. For purposes of payment, curb ramp will be measured between the outside border of the ramp and landing and

exclude the curb and gutter. The area of concrete beneath the detectable warning surface shall be paid for at the contract price per square foot of curb ramp.

No deduction in measured length of curb and gutter to be paid for will be made for curb openings for driveways or curb ramps.

73-3.03 Sidewalk, Driveway Apron, Curb Ramp, Valley Gutter, and Gutter Depression

Construction: Sidewalk, driveway apron, curb ramp, valley gutter, and gutter depression shall be constructed in accordance with the details and at the location shown on the plans and in conformance to the requirements of Section 73 of the City Specifications and City Std. 235 with the following modifications and additional requirements.

All concrete which is to be removed from concrete areas shall be removed to the nearest transverse score mark across the full width of the concrete or construction joint as directed by the Engineer.

Soft or spongy material shall be removed and replaced with suitable material as required by the Engineer.

Concrete shall be cured in accordance with the requirements of Section 90-7 of the Standard Specifications except that the Contractor may substitute other than pigmented sealer upon approval in writing of such substituted sealer by the Engineer.

All oil, paint, tire marks, and other discoloring shall be removed from the sidewalk, driveway apron, curb ramp, valley gutter, and gutter depression by sandblasting prior to acceptance by the Engineer. Cement mortar will not be an acceptable substitute for sandblasting. Vandalism to uncured concrete surface shall be removed. If it cannot be removed from the surface, then the vandalized concrete shall be removed and replaced to the nearest scoremark.

Curb Ramp shall be constructed in accordance with the details and at the locations shown on the plans per Caltrans Revised Standard Plan A88A.

Gutter Depression shall be constructed in accordance with the details and at the location shown on the plans and in conformance to the requirements of City STD-243 Standard Valley Gutter.

Concrete Driveway Aprons, including adjacent sidewalks shall be constructed in accordance with City STD-250A, 250B, 251, and 237.

73-3.04 Payment: Curb and Gutter shall be paid for at the contract price per **linear foot**, which price shall include full compensation for furnishing and applying curing materials, forming and constructing curb openings for driveways, removing discoloring, Class 2 Aggregate Base, furnishing all labor, materials, tools and equipment and doing all the work involved in constructing curb and gutter complete in place as specified, including furnishing and placing expansion joint filler, constructing weakened plane joints, excavating, and backfilling.

Center Median Replacement shall be paid for at the contract price per **linear foot**, which price shall include full compensation for stamped colored concrete median island paving, median curbs, furnishing and applying curing materials, forming, removing discoloring, Class 2 Aggregate Base, furnishing all labor, materials, tools and equipment and doing all the work involved in constructing center median complete in place as specified, including furnishing and placing expansion joint filler, constructing weakened plane joints, excavating, and backfilling.

Curb Ramp shall be paid for at the contract price per **square foot**, which price shall include full compensation for furnishing and applying curing materials, removing discoloring, sand, furnishing all labor, materials, tools and equipment and doing all the work involved in constructing curb ramp complete in place as specified, including furnishing and placing expansion joint filler, constructing weakened plane joints, excavating, and backfilling.

Sidewalk shall be paid for at the contract price per **square foot**, which price shall include full compensation for furnishing and applying curing materials, removing discoloring, furnishing all labor, materials, tools and equipment and doing all the work involved in constructing sidewalk complete in place as specified, including furnishing and placing expansion joint filler, constructing weakened plane joints, excavating, and backfilling.

Driveway Apron shall be paid for at the contract price **square foot**, which price shall include full compensation for furnishing and applying curing materials, removing discoloring, furnishing all labor, materials, tools and equipment and doing all the work involved in constructing driveway apron complete in place as specified, including furnishing and placing expansion joint filler, constructing weakened plane joints, excavating, and backfilling.

Valley Gutter shall be paid for at the contract price per **square foot**, which price shall include full compensation for furnishing and applying curing materials, removing discoloring, Class 2 Aggregate Base, furnishing all labor, materials, tools and equipment and doing all the work involved in constructing valley gutter complete in place as specified, including furnishing and placing expansion joint filler, constructing weakened plane joints, excavating, and backfilling.

SECTION 80 FENCES AND GATES

80-1.01 General: All fence shall be constructed in accordance with Section 80 of the Standard Specifications, the details as shown on the plans, these Special Provisions, and as directed by the Engineer.

Where removal of existing fencing is required, temporary fencing shall be put in place to maintain site security and prevent pedestrian access and/or agricultural activities through the Project site. Upon completion of work the temporary fencing shall be removed and the fence shall be restored to its original condition. Removal and installation of fence shall take place in the same day.

80-1.03 Connections: Existing fences shall be connected to the new fences. Corner posts with braces for every direction of strain shall be placed at the junction with existing cross fences. A new post shall be placed at the intersection between new and existing fences.

80-1.08 Materials: Fencing materials shall conform to applicable type of fence described in Section 80 of the Standard Specifications, the details as shown on the plans, or as required to match existing adjacent fencing.

80-1.09 Construction: Fence construction shall be in accordance with Section 80 of the Standard Specifications, the details as shown on the plans, these Special Provisions, and as directed by the Engineer.

80-1.10 Payment: Replace Existing Fence and Gates shall be paid for at the contract price per **linear foot**, which price shall include full compensation for furnishing all labor, materials, tools and equipment, and doing all work involved in reconstructing existing chain link, wood, and barbed wire fencing and gates to match existing adjacent fencing as indicated on the Project Plans, including furnishing and installing posts, post assemblies, clearing the line of the fence and disposing of the resulting material, excavating high points in the existing ground, excavating and backfilling holes, disposing of surplus excavated material, and furnishing and placing concrete footings and deadmen, and connecting new fences to existing fences, and no additional allowance will be made therefor.

80-10.01 Gates: Gates shall be installed at the locations indicated on the Project Plans, as directed by the Engineer in the field, and in accordance with these Special Provisions.

Gates shown to be placed on wood and chain-link fences shall be chain link per the details as shown on the plans. Gates placed on wooden fences shall have privacy slats to match the existing adjacent wooden fencing.

Gates on existing barbed wire and farm fencing shall be ranch style gates as shown on the project plans.

All gates shall be equipped with a multiple lock assembly as indicated on the project plans. All gates shall be supplied with stops capable of holding the gates in a fully open position.

80-10.02 Ranch Gates: Ranch style gates shall be engineered and designed specifically for a 12-foot opening. Ranch style gates shall have a brace assembly section installed adjacent to the hinge side of the gate as indicated on the Project Plans.

80-10.04 Payment: Ranch Gate shall be paid for at the contract unit price **each**, which price shall include full compensation for furnishing all labor, materials, tools and equipment, and doing all work involved in constructing the gates in place complete as shown on the plans and as specified herein.

SECTION 81 MONUMENTS

81-1.01 Description: All City monuments shown on the plans shall be placed in accordance with the requirements of Section 81 of the City Specifications and these Special Provisions.

The exact location of the monuments will be established by the Engineer and upon completion, the monuments will be checked and the center point stamped by the Engineer.

81-1.04 Payment: **City Monument** shall be paid for at the contract unit price **each**, which price shall include full compensation for furnishing all labor, materials, tools and equipment, and doing all the work involved in constructing monuments complete in place, including removal of existing monuments disturbed during construction which shall be replaced with new monuments, and no additional allowance will be made therefor.

SECTION 83 RAILINGS AND BARRIERS

83-2.01 General: All street barricades shown on the plans shall be removed and replaced in accordance with the requirements of Section 83-2 of the Standard Specifications, these Special Provisions, and the details shown on the Project Plans.

83-2.01C Street Barricades: Street barricades shall be constructed in accordance with City STD-211 and these special provisions.

Metal rail elements and wood posts shall comply with Section 83-2.02B of the Standard Specifications.

83-2.02D Payment: Remove and Replace Street Barricade shall be paid for at the contract unit price per **linear foot**, which price shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for performing all work involved in constructing metal beam street barricades complete in place as indicated on the project plans, including but not limited to, removal of existing street barricades, excavation, backfill, wood posts, rail elements, hardware, and miscellaneous metal, complete as specified in these Special Provisions, and as directed by the Engineer in the field, and no additional allowance will be made therefor.

83-5 Bollards

83-5.01 General: Bollards shall be constructed in accordance with these Special Provisions, and the details shown on the Project Plans. All bollards shown on the plans to be removed and disposed of in their entirety, including all concrete foundations.

83-5.02 Materials: Concrete used in bollard footing construction shall be "Class A" concrete per Section 90 of the City Standards.

Bollards shall be shop manufactured of standard weight steel pipe which is galvanized, and powder coated following fabrication.

83-5.03 Construction: Bollard layout and installation shall be coordinated with sidewalk installation. Footing sleeves should be installed with the top of the sleeve set flush with the adjacent finished grade surface. The bollard elements shall be flush with the surrounding grade when the bollard and sleeve is removed.

Install bollards in accordance with the manufacturer's written instructions.

83-5.04 Payment: Bollards shall be paid for at the contract unit price **each**, which price shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for performing all work involved in constructing removeable and permanent bollards complete in place as detailed on the project plans and including, but not limited to, removal of existing bollards, excavation, backfill, concrete, miscellaneous metal, painting and coatings, pipe, and cleanup, complete as shown on the project plans, as specified in these Special Provisions, and as directed by the Engineer in the field, and no additional allowance will be made therefor.

SECTION 84

TRAFFIC STRIPES AND PAVEMENT MARKINGS

84-1.01 General: Attention is directed to Section 12 “Temporary Traffic Control” and Section 15 “Existing Facilities” of these Special Provisions. Traffic stripes and pavement markings shall conform to the applicable provisions of Section 84 of the Standard Specifications, The City Traffic Standards, and these Special Provisions and shall be placed at the locations shown on the Plans.

The Contractor shall provide and install temporary retro-reflective pavement markings on the same day as the existing permanent markings are removed or destroyed, or as directed by the Engineer, and maintain them until the new permanent markings are in place.

Temporary striping on all ground surfaces shall be paint (white and/or yellow) with retro-reflective glass beads or an approved equivalent and shall be installed the same day as the existing permanent striping is removed, or as directed by the Engineer. Temporary striping shall be maintained until new permanent striping is in place.

Existing pavement markings, including crosswalks, disturbed by construction activities shall be replaced in their entirety.

All striping to be replaced shall match existing sections in kind unless approved by the Engineer.

The Contractor shall remove all existing traffic striping and pavement marking in conflict with proposed improvements, as shown on the Plans, and as directed by the Engineer, and shall be responsible for the proper disposal of their grindings away from site work.

Permanent traffic stripes and pavement markings shall be installed after all iron has been raised for that particular street section, but no more than five days after final paving for that section of roadway.

Existing stripes and pavement markings to remain, which are damaged by the work shall be replaced at the Contractor’s expense. This includes areas outside the immediate project limits.

Painted curbs which are damaged or replaced as part of the work shall be repainted to match existing conditions.

84-1.04 Payment: Traffic Stripes and Pavement Markings shall be paid for at the contract **lump sum** price, which price shall include furnishing all paint and glass beads, thermoplastic pavement marking material weather white or yellow, tape, and furnishing all equipment, tools, and labor, and doing all the work involved as herein specified, including but not limited to, eradication of existing traffic stripes and pavement markings, surface preparation, replacement of damaged stripes, temporary traffic stripes and pavement markings, all temporary traffic measures, and any other work required to install traffic stripes and pavement markings not specifically enumerated in the City Standards, these Special Provisions or on the Project Plans, and as directed by the Engineer in the field, and no additional allowance will be made therefor.

SECTION 85

PAVEMENT MARKERS

85-1.01 General: Raised pavement markers shall be placed at the locations shown on the Plans and in accordance with the applicable provisions of Section 85 of the 2010 Standard Specifications, these Special Provisions, and the City of Santa Rosa Traffic Standards. Attention is directed to Section 15 “Existing Facilities” of these Special Provisions.

85-1.02 Materials: All raised pavement markers (RPMs) shall conform to the 2010 version of the State Standard Specifications.

85-1.02B Nonreflective Pavement Markers: All nonreflective pavement markers shall be ceramic.

85-1.02C Retroreflective Pavement Markers: Blue reflective raised pavement markers are to be placed per City STD-857 for each fire hydrant within the construction limits of the project. Where a hydrant, whether existing or new, is located at the corner of two streets, a blue RPM shall be placed in each street.

85-1.02D Median Island End Treatment: Median island end treatment shall conform to City STD-721. Object markers shall be installed on median islands per to CAMUTCD Type Q.

85-1.03 Construction: Existing raised pavement markers to remain, which are damaged by the Contractor, shall be replaced as determined by the Engineer, at the Contractor’s expense. This includes areas outside the immediate project limits.

The exact locations and limits of raised pavement markers will be determined in the field by the Engineer.

The Contractor shall provide, install and maintain temporary markers on the same day that the existing permanent markers are removed, or as directed by the Engineer, and maintain this delineation until new permanent markers are in place. Temporary markers on non ground surfaces shall be plastic adhesive retroreflective delineators.

Existing raised pavement markers conflicting with the proposed striping shall be removed immediately prior to placement of new markers.

Holes left in the pavement due to the removal of raised pavement markers shall be filled with enough adhesive to replace any asphalt which comes off with the removal of the pavement marker, leaving a level driving surface.

Permanent raised pavement markers shall be installed within 5 days following final pavement operations. Temporary markings shall be in place the same day of pavement operations.

85-1.04 Payment: The cost of retroreflective and nonreflective pavement markers, shall be included in the prices paid for the **various contract items** of work which price shall include full compensation for furnishing all labor, materials, tools and equipment, and doing all work involved in placing raised pavement markers, complete in place, including adhesives, removing existing pavement markers, and no additional allowance will be made therefor.

The cost of median island end treatment, shall be included in the prices paid for the various contract items of work which price shall include full compensation for furnishing all labor, materials, tools and equipment, and doing all work involved in painting curbs, placing object and raised pavement markers, complete in place, including adhesives, removing existing pavement markers, and no additional allowance will be made therefor.

SECTION 90 CONCRETE

90-1.01C(6) Mix Design: The proportions of the water, sand and aggregate shall be regulated so as to produce a plastic, workable and cohesive mixture.

90-1.01D(2) Cementitious Material Content: Concrete shall contain a minimum of 564 pounds of cementitious material per cubic yard. The amount of cement by weight of the specified cementitious material shall be 75 to 85 percent.

90-1.01D(5) Compressive Strength: The 28 day compressive strength of concrete shall be 4000 pounds per square inch (psi) or greater.

90-1.01D(6) Curing Compound: Concrete shall be cured per Section 90-1.03B of the Standard Specifications. Pigmented curing compound or any other material that will leave a noticeable residue shall not be allowed.

90-1.02E(2) Chemical Admixtures: An admixture shall not be used to reduce the amount of cementitious material content.

SECTION 101 TRASH ENCLOSURE

101-1.01 General: Section contains requirements for removal and replacement of existing CMU trash enclosure walls, concrete slabs, and doors.

Remove and replace existing CMU trash enclosure in kind as necessary to construct proposed utility improvements. Contractor shall salvage, protect, and reinstall existing trash enclosure doors.

101-1.02 Materials: CMU materials and construction shall comply with Section 58-2 of the Standard Specifications, the details of Caltrans Standard Plan B15-1, these Special Provisions, and as directed by the Engineer.

All hardware required for re-installation of trash enclosure doors shall be hot dip galvanized.

Concrete trash enclosure slab shall be constructed of 6.5 sack "Type II Modified" concrete, containing not less than 611 pounds of Portland cement per cubic yard, and conforming to the provisions in Section 90 of the Standard Specifications.

101-1.03 Construction: Concrete trash enclosure slab shall be a minimum 6" thick with #4 rebar at 12" on center each way centered in slab.

Trash enclosure CMU and footing dimensions and reinforcement shall comply with Case 1 Spread Footing per Caltrans Standard Plan B15-1.

Dowel existing and new CMU walls, footings, and slabs with #4 x 18" long rebar dowels spaced at 18" on center max. Interface between existing and new CMU blocks shall be staggered to provide a clean transition between existing and new. Existing CMU blocks shall not be cut without prior approval from the Engineer.

Top of CMU walls shall have a rounded concrete cap to match existing.

101-1.04 Construction: **Remove and Replace CMU Trash Enclosure** shall be paid for at the contract **lump sum** price, which price shall include furnishing all labor, material and equipment required to remove the existing and reconstruct the trash enclosure including, but not limited to excavation, concrete, reinforcement, formwork, reinforcement, surface finishing, curing, CMU wall, wall reinforcing, grout, installation of double panel trash enclosure doors, cleanup, and any other work required to replace the CMU trash enclosure to its original condition or better in accordance with these Special Provisions, the Standard Specifications, the Standard Plans, and as directed by the Engineer in the field, and no additional allowance will be made therefor.

SECTION 106 TRENCH BRACING AND SHORING

106-1.01 General: All bracing and shoring shall conform to Section 7-1.02K(6)(b) and Section 7-1.02K(6)(b)(1) of these Special Provisions, Section 7-1.02K(6)(a and b) of the Standard Specifications, and the Division of Industrial Safety Construction Safety Orders which are currently in use.

The Contractor shall provide adequate sheeting, shoring and bracing of trenches and other excavations, and/or equipment method, for the protection of life or limb as required by the State of California Construction Safety Orders, the Safety Regulations of the Federal Occupational Safety and Health Administration and by these Special Provisions.

All safety orders, rules and regulations of Cal/OSHA and/or the Federal OSHA applicable to the work to be done under this Contract shall be obeyed and enforced by the Contractor.

The Contractor shall obtain a permit from Cal/OSHA before starting work.

The Contractor shall ensure that employees entering excavations are protected from cave-ins, failure of protective systems, hazardous atmospheres, vehicular traffic, falling loads, and any other hazardous conditions.

The Contractor shall provide a **positive pressure shoring system** where adjacent structures, roadways, concrete, pavements, utilities, trees, or private property improvements to remain are located within a 1.5(H):1(V) projection from the planned bottom of an excavation. If sheeting is used, it shall be installed with the use of vibratory type pile drivers as opposed to impact type. The width of sheeted trenches as measured between the faces of the sheeting in contact with the trench walls shall not exceed the maximum trench width indicated by City Standard 215 unless approved by the Engineer. The installation of walers, struts, and other shoring support structures shall be designed and installed to present no obstructions to proper placement of the pipe, structure, bedding, backfill, or proposed improvements.

The Contractor shall have a competent person on-site who will make daily inspections of excavations, adjacent areas, and protective systems. The competent person will be responsible for ensuring that the protective system is based upon soil classifications, and that it provides the required protection in accordance with CCT, Title 8, and Section 1541.1.

106-1.02 Submittals: At least 15 working days before beginning excavation on a trench 5 feet or more in depth, the Contractor shall submit to the Engineer a detailed plan showing the design of shoring, bracing, sloping or other provisions to be made for worker, adjacent structure, and adjacent utility protection from caving ground hazards.

The plan(s) shall be prepared and signed by a registered Professional Civil or Structural Engineer.

The excavation and shoring analysis for positive shoring systems and design shall be fully coordinated with the dewatering plan.

106-1.03 Execution: Shoring shall be removed in such a manner as to prevent caving at the walls of excavations or damage to piping or other structures. Positive shoring systems shall be incrementally removed as the trench is backfilled. No backfill shall be installed against the shoring system before it is removed.

Excavations shall be so braced and supported that they will be safe, and the ground alongside the excavation will not slide or settle, and all existing improvements of any kind, either on public or private property will be fully protected from damage. If any damage does result to such improvements, the Contractor shall make the necessary repairs or reconstruction at his own expense and as directed by the Engineer.

All excavations shall have barricading, fall protection handrails, and access ladders in accordance with Cal/OSHA requirements.

106-1.04 Payment: Trench Bracing and Shoring shall be paid for at the contract **lump sum** price, which price shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and doing all the work involved to furnish and install sheeting, shoring and bracing for the protection of adjacent existing improvements, and the protection of life and limb conforming to applicable safety orders, including but not limited to a bracing and shoring plan, securing Cal/OSHA permits, and in accordance with the Project Plans, applicable Federal, State and Local Regulations, permits, and as specified herein, and no additional compensation will be made therefor.

[Version: 4/14/09]

SECTION 112 TREE PROTECTION

112-1.01 General: The following requirements shall apply to any contractor who works on any property upon which a protected tree is located.

Protected tree means any tree, including a Heritage tree, designated to be preserved on the plans, or as directed by the Engineer. Heritage tree is any of the trees listed under Section 17-24.010 of the City of Santa Rosa Tree Ordinance.

All pruning shall be done according to International Society of Arboriculture (ISA) or National Arborists Association (NAA) standards, by qualified personnel. Pruning shall be done by ISA certified tree workers or certified arborists, or under the direct supervision of a certified arborist.

112-1.02 Scope: Before the start of any clearing, excavation, construction or other work on the site, every protected tree shall be securely fenced off at the protected perimeter. Protected perimeter shall be either the root zone or other limit as directed by the Engineer. Such fences shall remain continuously in place for the duration of all work undertaken in connection with this project. The area so fenced off shall not be used as a storage area, altered, or disturbed except as may be permitted under this section.

If any of the site work encroaches upon the protected perimeter of a protected tree, special measures shall be utilized as approved by the Engineer to ensure that the roots obtain oxygen, water, and nutrients as needed. Any excavation, cutting, filling, or compaction of the existing ground surface within the protected perimeter, if authorized by the Engineer, shall be minimized and subject to such conditions as may be imposed by the Engineer. No significant change in existing ground level shall be made within the drip line of the protected tree except as directed by the Engineer and as shown on the plans. No burning or use of equipment with an open flame shall occur near or within the protected perimeter. All brush, earth, and other debris shall be removed in a manner which prevents injury to the protected tree.

No oil, gas, chemicals, or other substances that may be harmful to trees shall be stored or dumped within the protected perimeter or any other location on the site from which such substances might enter the protected perimeter.

Underground trenching for utilities shall avoid major support and absorbing tree roots of protected trees. If avoidance is impracticable, tunnels shall be made below the roots. Trenches shall be consolidated to serve as many units as possible. Trench within the drip line of the tree shall be avoided and only be done at the approval and direction of the Engineer.

No concrete or asphalt paving shall be placed over the root zones of protected trees. No artificial irrigation shall occur within the root zone of oaks.

No compaction of the soil within the root zones of protected trees shall occur.

Tree protection fencing shall meet the requirements indicated on the Project Plans and submitted for review and approval by the Engineer.

Tree removal shall be confined to the limits shown on the plans and not exceed the minimum necessary to complete operations. The Contractor shall not remove any trees, brush, shrubs, or other natural objects outside the limits of construction as shown on the plans, unless directed by the Engineer.

Any trees, brush, shrubs, or other natural objects not ordered removed by the Engineer which have been removed, altered, or damaged shall be replaced in kind by the Contractor before completion of the project.

112-1.03 Tree Planting: Tree planting shall not commence until completion of all construction work, grading, and soil preparation. The location of trees to be supplied and planted are not shown on the plans and will be determined and directed in the field by the Engineer.

Tree installation shall conform to the City Standards and Specifications for Planting Parkway Trees and City Standard 101-A unless otherwise specified herein.

New trees shall be Live Oaks (*Quercus Agrifolia*) in a minimum fifteen (15) gallon container size.

112-1.04 Payment: Tree Protection Fencing shall be paid for at the contract unit price per **linear foot**, which price shall include full compensation for all labor, materials, tools, equipment, and incidentals, and for performing all work involved in furnishing and placing tree protection fencing as shown on the plans at all locations where work is to be performed within the root zone of existing trees and as directed for installation by the Engineer and/or Arborist, and no additional allowance will be made therefor.

Tree and Stump Removal shall be paid for at the contract unit price **each**, which price shall include full compensation for furnishing all labor, hauling, materials, tools, and equipment, and doing all work involved in tree and stump removal as specified herein, and no additional allowance will be made therefor.

Supply and Plant Tree shall be paid for at the contract unit price **each**, which price shall include full compensation for furnishing all labor, hauling, materials, tools, and equipment, and doing all work to obtain and plant a tree as specified herein, and no additional allowance will be made therefor.

Full compensation for pruning tree roots under an ISA certified tree workers or certified arborists, or under the direct supervision of a certified arborist shall be considered as included in the prices paid for various contract items of work and no additional allowance will be made therefor.

SECTION 121 NOTIFICATION

121-1.01: The Contractor shall notify the Engineer of any work to be performed on any given work day either on the afternoon of the prior working day or before 8:30 a.m. on the given working day. Any work completed for which the Engineer has not received prior notification of its scheduling MAY NOT BE ACCEPTED FOR PAYMENT.

The Contractor shall provide a written notice of pending construction and attempt to make personal contact with all residents and businesses in the vicinity of construction activity 5 working days prior to the start of said activity. The notice shall inform the resident or business of the type of work, the scheduled date(s) and time of the work and the potential impacts to their property.

If loading or unloading of equipment and/or materials has the possibility to impact access to private property, the Contractor shall notify the Engineer and affected residents 1 working day prior to the operation. All written notices to residents or businesses shall be submitted to the Engineer for approval prior to distribution. The Engineer shall be allowed two working days to review notices.

If unanticipated work requires the Contractor to access private property the Contractor shall notify and coordinate this access through the Engineer.

121-3.01 Payment: Full compensation for conforming to the provisions of this section shall be considered as included in the prices paid for the various contract items of work involved and no additional compensation will be allowed therefor.

SECTION 124

MATERIAL RECYCLING

124-1.01 Description: The Contractor shall dispose of all portland cement concrete and asphalt concrete, generated from removal or demolition activities on the project, at a recycler for these materials. The Contractor shall provide receipts verifying delivery and approximate quantity (in tons) of the material delivered to a material recycler.

All other excess materials from the project shall become the property of the Contractor and shall be disposed of by him, at his expense.

124-1.02 Payment: Full compensation for material recycling as specified herein shall be considered as included in the contract prices paid for various items of work, and no additional compensation will be allowed therefor.

SECTION 130

SANITARY SEWER SYSTEM

130-1 General: Sanitary Sewer System and related appurtenances shall conform to the requirements as specified in the City of Santa Rosa Sanitary Sewer System Design and Construction Standards and Specifications Section 130, other sections of the City Standards as they apply, and any modifications herein and/or on the Project Plans.

130-1.02 Materials: Sewer pipe 18" in diameter and larger shall be PC235 DR18 PVC meeting AWWA C900 and shall conform to the provisions of Section 132-1.02B of the City Standard Specifications and these Special Provisions. SDR 26 PVC pipe and fittings shall be used on mains 18" in diameter and larger only where specifically indicated on the Project Plans.

Sewer pipe smaller than 18" in diameter shall comply with the City of Santa Rosa Sanitary Sewer System Design and Construction Standards and Specifications.

Couplings used to join plain end pieces of C900 PVC, C900 PVC with SDR 26 PVC, or C900 PVC with RCP shall be shielded sewer repair couplings consisting of stainless steel worm drive clamps, stainless steel nut & bolt clamps, and a heavy duty stainless steel shield over a molded one-piece elastomeric sealing gasket. Couplings shall be Flex-Seal ARC Couplings as manufactured by Mission Rubber Company LLC or approved equal.

Precast manhole components including risers, cones, grade rings and manhole base sections shall be constructed of polymer concrete as described herein. Polymer concrete manhole components shall be manufactured by Armorock LLC or an approved equivalent.

130-1.05A Abandon or Remove Existing Sewer System Components: Abandonment of existing sewer components shall conform to applicable City Standards, specifically Standards 507 & 508, any modifications specified herein and according to the details shown on the Project Plans.

Cellular-concrete shall be used to abandon the existing trunk sewer pipes and manhole bases in place of flowable fill. Pipes abandoned with cellular concrete do not need to be broken into every 50' as indicated by City Standard 507. Abandonment with cellular-concrete shall occur prior to removal of manhole frames, covers, and concrete collars per City Standard 508.

Cellular-concrete should be a high slump, non-segregating, self-consolidating, low shrink slurry which includes a mixture of water, portland cement, and a foaming agent. The average compressive strength of the cellular-concrete mix shall be between 50 and 150 psi at 28 days.

An abandonment plan and mix design shall be supplied by the Contractor for review by the Engineer. The Engineer shall approve the abandonment plan before commencing any abandonment work.

At locations where existing sewer system components are shown to remain or be removed, the adjoining sewer main to be abandoned shall be excavated and plugged with concrete per City Standard 507. Vent pipes may be needed at these locations to verify complete abandonment of the trunk sewer with cellular-concrete.

Existing sewer system components shall be removed where shown on the Project Plans or to facilitate the progress of work. The Contractor must receive written Engineer approval prior to removing or abandoning any component, fully or in part, that is active during construction.

The ground surface around manholes to be removed or abandoned shall be restored to match existing adjacent ground conditions or as indicated on the Project Plans.

130-1.05B Removal of Existing Private Septic System Components: Removal of an on-site septic system shall comply with the requirements of the County of Sonoma Permit and Resource Management Department (PRMD) on-site wastewater treatment system abandonment requirements.

The tank shall be pumped of all contents by a licensed septic tank pumper.

The septic tank shall be removed and disposed of at a sanitary landfill.

130-1.06A Sewer Laterals and Side Sewers: Sewer lateral and side sewer connections to the new trunk sewer shall be made once the new trunk sewer mainline is completed downstream. See Conceptual Bypass Pumping Plan for additional information.

Lateral connections to the new trunk sewer are prohibited unless shown otherwise on the Project Plans. In general, lateral connections to the trunk sewer shall be made at a manhole by constructing an inside drop per City Standard 503.

130-1.07 Sewer Structures: Precast manholes shall be manufactured of polymer concrete but otherwise conforming with City Standard 500. No internal coating of polymer concrete manholes will be required.

Polymer concrete manhole sections, monolithic base sections and related components shall conform to ASTM C 478 except that compositional and dimensional differences required for a polymer concrete product will be allowed.

Riser sections shall be joined with bell and spigot / ship-lap design seamed with butyl mastic or rubber gaskets (ASTM C 990) so that on assembly, manhole base, riser, and top section make a continuous and uniform manhole structure. Joint sealing surfaces shall be free of dents, gouges and other surface irregularities that would affect joint integrity

Riser sections for polymer concrete manholes shall be constructed from standard polymer concrete manhole sections of the diameter indicated on drawings. Use various lengths of polymer concrete manhole sections in combination to provide correct height with the fewest joints possible.

Manhole components shall be designed to withstand AASHTO HS-20 loading conditions and full submergence. Manholes shall be designed against flotation assuming the water table is at the top of the structure. Design wall sections for depth and loading conditions with wall thickness as designed by polymer concrete manufacturer.

Polymer concrete manhole risers, cones, grade rings and manhole base sections shall be designed by the manufacturer to meet the loading requirements and intent of ASTM C 478, ASTM C 857 and ACI 350-06 as modified for polymer concrete manhole design as follows:

1. Polymer Concrete Mix Design shall consist of thermosetting resin, sand, and aggregate. No Portland cement shall be allowed as part of the mix design matrix. All sand and aggregate shall be inert in an acidic environment.
2. Reinforcement shall use acid resistant Fiber-Reinforced Polymer (FRP Bar) in accordance with ACI 440.1R-06 as applicable for polymer concrete design.
3. Thermosetting Resin shall have a minimum deflection temperature of 158° F when tested at 264 psi (1.820 mPa) following Test Method D 648. The resin content shall not be less

than 7% of the weight of the sample as determined by test method D 2584. Resin selection shall be suitable for applications in the corrosive conditions to which the polymer concrete manhole structures will be exposed.

4. Construct invert channels to provide smooth flow transition with minimal disruption of flow at pipe-manhole connections. Invert slope through manhole is as indicated on Project Plans. All precast base sections to be cast monolithically. Polymer bench and channel are to be constructed with all polymer concrete material.
5. Provide resilient connectors conforming to requirements of ASTM C 923. All connectors are to be water tight. Install approved resilient connectors at each pipe entering and exiting manholes in accordance with manufacturer's instructions.

Polymer concrete shall contain no cementitious materials and be cast in a polymer only facility that does not produce cementitious precast products.

Poured-in-place manhole bases shall be installed only where specifically indicated on the Project Plans or where a precast base cannot be used and is approved by the Engineer.

All materials needed for grouting and patching polymer concrete manholes shall be provided by the manhole manufacturer or an approved equal approved for use by both the Engineer and the polymer concrete manhole manufacturer. Grout shall be a two component, high strength, 100% solids thermosetting poly-matrix-oligomeric, vinyl ester compound similar to that used in the construction of the precast polymer concrete manholes, risers, and grade rings. Grout shall be stored, applied, and mixed in accordance with the manufacturers written instructions. Grout shall be ArmorRock Grout as manufactured by manufactured by Armorrock LLC or an approved equivalent.

Polymer concrete manhole data and details shall be submitted for review by the Engineer prior to fabrication:

1. Shop drawings of manhole sections, base units, construction details, jointing methods, materials, and dimensions. Base units shall be detailed with information regarding all proposed pipe connections, channel geometry and slopes, manhole shelf height and slopes, channel geometry for drop inlet construction, and temporary connections.
2. Summary of criteria used in manhole design including, as minimum, material properties, loading criteria, and dimensions assumed. Include certification from manufacturer that polymer concrete manhole design meets or exceeds the load and strength requirements of ASTM C 478 and ASTM C 857, reinforced in accordance with ACI 440.1r-15.
3. Materials to be used in fabricating pipe drop connections.
4. Materials to be used for pipe connections.
5. Materials to be used for stubs and stub plugs.

Temporary connections at new polymer concrete manholes shall be abandoned in accordance with the detail indicated on the Project Plans.

130-1.10 Bypass Pumping and/or Diversion System: See Section 131 Bypass Pumping and Conceptual Bypass Pumping Plan for additional information regarding trunk sewer Bypass Pumping and/or Diversion Systems.

130-1.12 Payment: Sewer Main shall be paid for at the contract price per **linear foot** for the specified sizes and trench types given in the bid schedule, which price shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and doing all the work involved for sewer main installation, including but not limited to: potholing other than as specified in Section 15 to facilitate the progress of work; excavation and disposal of excavated materials; hand digging *if needed*; root pruning; contamination awareness; fittings/couplings; felt expansion joint material *if required*; temporary connections; modifications to existing manholes to accept new mains; connections to new or existing manholes or mains, including sealing of penetrations water tight; supporting or removal and disposal of existing utilities in the same trench *if required*; placing, moisture conditioning, and compacting all required bedding and backfill including suitable native material, control density fill, class 2 aggregate base, and/or asphalt concrete base *if required*; additional excavation, restoration of additional surfacing, and additional aggregate base and/or trench backfill where trench is laid back as *needed*; trench plates as *needed*; temporary trench paving; removal of concrete, sidewalk, valley gutter, median curb, curb and gutter, concrete crosswalk, driveway apron, and median island as *needed*; cleaning and flushing; testing; video inspection; as specified herein, and no additional allowance will be made therefor.

The actual quantity of sewer main to be paid for will be the length measured from center of manhole to center of manhole/mainline cleanout along the finished grade to the nearest foot, excluding the sweep and the portion of pipe used for constructing the mainline cleanout. Pipe purchased by the Contractor in excess of the measured amount will not be paid for by the City.

Sewer Lateral shall be paid for at the contract unit price **each** for the various sizes, which price shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and doing all the work involved for sewer lateral installation, including but not limited to: potholing other than as specified in Section 15 to facilitate the progress of work; investigation for existing cleanout within three feet of back of walk; excavation and disposal of excavated materials; hand digging *if needed*; root pruning; fittings/couplings; temporary connections; connection to main and existing lateral; manhole connection with inside drop *if required*; supporting or removal and disposal of existing utilities in the same trench, *if required*; tracer wire *if required*; placing and compacting all required bedding and backfill including control density fill *if required*; trench plates as *needed*; temporary trench paving; removal and replacement of curb, gutter, sidewalk and driveways *if needed*; setting cleanout to grade and installing concrete collars as *required*; restoration of irrigation and landscaping; cleaning and flushing; testing; video inspection; as specified herein, and no additional allowance will be made therefor.

Polymer Concrete Sewer Manholes shall be paid for at the contract unit price **each** for the various sizes, which price shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and doing all the work involved for the installation of polymer concrete sewer manholes, including but not limited to: potholing other than as specified in Section 15 to facilitate the progress of work; excavation and disposal of excavated materials; hand digging *if needed*; contamination awareness; couplings and pipe if connecting to existing mains; inside drop *if required*; water tight sealing of penetrations; abandonment of temporary connections *if required*; coating *if required*; patching and polymer concrete grouting; supporting or removal and disposal of existing utilities in the same trench, *if required*; placing and compacting all required bedding and backfill including control density fill *if required*; additional excavation, restoration of additional surfacing, and additional aggregate base and/or trench backfill where excavation is laid back as *needed*; trench plates as *needed*; temporary trench paving; concrete collar; installing and adjusting the cast iron frame and cover to grade after final paving is complete; testing; as specified herein, and no additional allowance will be made therefor.

Abandon Existing Sewer Main shall be paid for at the contract price per **linear foot**, which price shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and doing all the work involved to abandon existing sewer main, included but not limited to:

excavation and disposal of excavated materials; hand digging *if needed*; contamination awareness; supporting or removal and disposal of existing utilities in the same trench, *if required*; abandonment of existing sewer main; concrete plugs; cellular-concrete; placing and compacting all required bedding and backfill including control density fill *if required*; trench plates *as needed*; temporary trench paving; removal and replacement of concrete curb, gutter and sidewalk *as needed*; as specified herein, and no additional allowance will be made therefor.

Abandon Existing Sewer Manhole shall be paid for at the contract unit price **each**, which price shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and doing all the work involved to abandon existing sewer manholes, included but not limited to: excavation and disposal of excavated materials; hand digging *if needed*; contamination awareness; supporting existing adjacent structures, *if required*; abandonment of existing sewer manhole; concrete plugs; cellular-concrete; placing and compacting all required bedding and backfill including control density fill *if required*; trench plates *as needed*; temporary trench paving; removal and replacement of concrete curb, gutter and sidewalk *as needed*; as specified herein, and no additional allowance will be made therefor.

Remove Existing Sewer System Components shall be paid for at the contract **lump sum** price, which price shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and doing all the work involved to remove existing sewer system components, included but not limited to: excavation and disposal of excavated materials; hand digging *if needed*; contamination awareness; supporting existing adjacent utilities and structures, *if required*; removal of existing sewer manholes and mains; placing and compacting all required bedding and backfill including control density fill *if required*; trench plates *as needed*; temporary trench paving; removal and replacement of concrete curb, gutter and sidewalk *as needed*; as specified herein, and no additional allowance will be made therefor.

Remove Existing Private Septic Tank shall be paid for at the contract unit price **each**, which price shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and doing all the work involved to remove existing private septic system components, included but not limited to: excavation and disposal of excavated materials; hand digging *if needed*; contamination awareness; supporting existing adjacent utilities and structures, *if required*; removal of existing septic tank; removal of adjacent sewer mains, laterals, and cleanouts; coordination for connection to new sewer lateral; placing and compacting all required bedding and backfill including control density fill and concrete *if required*; trench plates *as needed*; temporary trench paving; removal and replacement of concrete curb, gutter and sidewalk *as needed*; as specified herein, and no additional allowance will be made therefor.

Full compensation for Trench Bracing and Shoring - Sewer shall be considered as included in the prices paid for Trench Bracing and Shoring as indicated in Section 106 of these Special Provisions and shoring and no additional allowance will be made therefor.

Full compensation for trunk sewer bypass pumping shall be considered as included in the prices paid for Sewer Bypass Pumping as indicated in Section 131 of these Special Provisions and no additional allowance will be made therefor.

Full compensation for dewatering and disposal of trench groundwater shall be considered as included in the prices paid for Groundwater Management Allowance as indicated in Section 13 of these Special Provisions and no additional allowance will be made therefor.

Full compensation for television inspection shall be considered as included in the prices paid for the various contract items of work involved and no additional allowance will be made therefor.

SECTION 131

SEWER BYPASS PUMPING

131-1.01 General: The Contractor shall provide a bypass pumping and/or diversion system(s), when required, for installation of the sewer system. Bypass pumping shall consist of designing, (including submittals), furnishing, installing, and maintaining all equipment, tools, power, piping and incidentals required to maintain existing sewer flows and services without interruption.

Anticipated trunk sewer peak dry weather flows (PDWF) are 1.5 MGD. PDWF for collector and side sewer mains are anticipated to be approximately 0.2 MGD. Bypassing of collector and side sewer mains shall not be scheduled for times of inclement weather

The Contractor shall size the sewer bypass pumping systems to handle PDWF.

Wet weather flows are defined as those occurring from October 15th to April 15th. The Contractor shall be responsible for accommodating all increased flows with the bypass system during wet weather periods. Peak wet weather flows could be up to 4 times the PDWF. The Contractor shall monitor the local NOAA weather forecasts prior to implementation of bypass pumping operations and shall schedule bypass pumping operations for forecasted periods with a 5% chance of precipitation or less. Augmentation of the bypass pumping plan to accommodate flows in excess of those specified above due to unanticipated rain during forecasted dry weather periods will be paid for as extra work.

Suggested trunk sewer bypass pumping routes and temporary diversions shown on Project Plans are for bidding purposes only. The Contractor shall provide and operate all temporary facilities to intercept the sewage flow and maintain traffic control in the work areas.

The Contractor shall be liable for all cleanup, damages and resultant fines in the event of a spill.

131-1.02 Bypass Pumping Plan Submittals: The Contractor shall submit a Trunk Sewer Bypass Pumping and/or Diversion Plan for each planned bypass pumping and/or diversion operation for review by the Engineer at least 10 working days prior to commencement. The Engineer shall approve the bypass pumping plan before commencing any bypass pumping work. The Contractor shall notify the Engineer 2 working days prior to commencing with the bypass pumping operation.

Trunk Sewer Bypass Pumping and/or Diversion Plans shall be designed by a California registered professional engineer.

The plans shall include an emergency discharge response plan to be followed in the event of a failure of the bypass pumping and/or diversion system.

The Contractor shall provide a sewer spill prevention plan for disassembling, handling and removal of bypass pumping system which shall include flushing prior to disassembling.

Each Trunk Sewer Bypass Pumping and/or Diversion Plan shall include the following:

1. Staging areas for pumps;
2. Number, size, location, manufacturer, type, and method of installation and removal of sewer plugs;
3. Number, size, material, location and method of installation of suction pipes;

4. Number, size, material, method of installation and location of installation of discharge pipes;
5. Assumed design flows;
6. Bypass pump sizes, manufacturer, age, capacity, power requirements, and number of each size to be on site;
7. Calculations of static lift, friction losses, and flow velocity (pump curves showing pump operating range shall be submitted);
8. Standby power generator size, location;
9. Downstream discharge plan;
10. Method of protecting discharge manholes or structures from erosion and damage;
11. Sections showing suction and discharge pipe depth, embedment, select fill and special backfill;
12. Method of noise control for each pump and/or generator;
13. Any temporary pipe supports, thrust bocks, and/or anchoring required;
14. Design plans and computation for access to bypass pumping locations indicated on the project plans;
15. Location of existing lateral cleanouts and side sewers, and how they will be monitored or bypassed;
16. Address of all parcels along with name and operating hours of all businesses located upstream of blockage to the next upstream manhole.
17. Air release valves, their locations and spill containment device for same.

The Contractor shall also provide name and cell phone number of the employee(s) that will have the sole duty of monitoring all active blockages. If multiple lines are simultaneously blocked, the Contractor's submittal must show how each blockage is to be continuously monitored. For multiple blockages, the Engineer may also require devices for each blockage to give audible and/or visual alarm of a pending overflow at the Contractor's expense.

The City will contract with a third-party California registered professional engineer to review the bypass pumping plan.

131-1.03 Bypass Pumping System Description: Bypass pumping shall consist of furnishing, installing, and maintaining all power, plugs, primary and standby pumps, appurtenances and bypass piping required to maintain maximum anticipated flows and services.

The allowable velocity in bypass pumping discharge piping shall not exceed 5 ft / sec without prior approval of the Engineer.

Bypass pumping shall be done in such a manner as not to damage private or public property or create a nuisance or public menace. The pumped sewage shall be in an enclosed hose or pipe system that is adequately protected from traffic and shall be redirected into the sewer system.

100% redundancy is required for all pumps and power sources.

100% redundancy is required for all temporary pneumatic plug applications. Plugs shall be pressure rated to withstand the pressure head in the system. Plugs shall be provided with a retrieval tag line. When plugging or blocking is no longer needed for performance and acceptance of work, it is to be removed in a manner that permits the sewage flow to slowly return to normal without surge, to prevent surcharging or causing other major disturbances downstream.

Surcharging of the existing sewer pipes shall not exceed three feet above the crown of the existing pipe at the proposed intake manholes. The Contractor shall provide a mark on the inside of the manhole visible from the surface for monitoring the surcharge level.

Any proposed flow diversion plan that includes a temporary connection to existing sewer components shall also comply with Section 130-1.05 of these Special Provisions.

The Contractor shall supply traffic control in accordance with Section 12 of these Special Provisions. A minimum of one way traffic or appropriate detours shall be maintained along all roadways during bypass pumping operations. At no point along the bypass pumping operation shall sidewalks along both sides of the road be closed at the same time. Maintain driveway access for each property in the vicinity of the bypass area.

Where undergrounding is required, bypass pipe shall be installed to withstand compaction and traffic loading. Asphalt concrete pavement shall be removed and replaced with permanent trench paving per all applicable City Standards and Section 39A of these Special Provisions.

All pumps shall be set into or surrounded by spill containment devices. Existing drain inlets adjacent to the proposed bypass pumping route shall be protected by sandbags to prevent flow into the storm drain system.

All components of the bypass pumping system including standby pumps, shall be sound-attenuated and shall produce noise emissions less than 60 decibels as measured 50-feet away. All other provisions of the City's noise ordinance shall apply.

The Contractor shall take all necessary precautions including 24 hour manned constant monitoring of the bypass pumping to ensure that no private residences or properties are subjected to sewage backup or spills. Monitoring personnel shall be qualified with a minimum 3 years of experience in the specified bypass pumping operations. The Contractor shall immediately notify the City should a sanitary sewer overflow (SSO) occur. The Contractor shall be liable for all cleanup, damages, and resultant fines in the event of a spill.

The Contractor shall perform leakage and pressure tests of the bypass pumping discharge piping using clean water prior to the actual operation. The pressure and leakage test shall be conducted at one-and-a-half times the maximum pressure the system will experience based on the approved Bypass Pumping Plan for a period of two hours. No leakage is permitted during this test.

The Contractor shall flush bypass pumping system prior to disassembling bypass pumping system.

Subsequent to removal of bypass pumping and/or diversion system, the Contractor shall verify existing sewer flows are restored to pre-existing condition.

The Contractor shall remove manhole sections only as may be required to provide adequate suction conduits.

131-2.02 Materials: Bypass pumping materials shall generally conform to the following requirements:

1. Discharge and suction pipes shall be sized according to flow calculations, system operation, pump size and manhole depths following manufacturer's specifications and recommendations.
2. Bypass pipe and fittings shall be HDPE (ASTM F714), high density solid wall, homogenous throughout, free of visible cracks, discoloration, pitting, varying wall thickness, holes, foreign material, blisters, or other deleterious faults. DR rating of the pipe and fittings shall be sufficient to withstand the external and internal loads anticipated, including pressure tests.
3. HDPE fittings shall be fully pressure rated to match the pipe DR pressure rating.
4. Flexible hoses, couplings and connectors, shall be abrasion resistant and rated for external and internal loads anticipated, including pressure tests.
5. Plugs shall be selected and installed according to size of line to be plugged, pipe and manhole configurations. Additional plugs shall be available on site in the event a plug fails.
6. Pumps shall be fully automatic self-priming units that do not require the use of foot-valves or vacuum pumps in priming system.
7. Provide necessary start/stop controls for each pump. Pumps shall be able to allow dry running for long periods of time to accommodate cyclical nature of effluent flows.

131-3.01 Payment: Sewer Bypass Pumping shall be paid for at the contract **lump sum** price, which price shall include full compensation for furnishing all labor, materials, tools and equipment, and doing all the work involved in planning, designing, (including submittals), installing, dismantling, and operating bypass pumping and/or flow diversion as described herein, including but not limited to; notification, coordination, installation, operation and removal of all bypass pumping equipment and appurtenances as described herein *including standby equipment*, temporary ramps for driveway and sidewalk/path crossings, obtainment, usage and disposal of construction water, below ground discharge installations, temporary sanitary sewer connections, installation and removal of plugs, sound attenuation, excavation, backfill and compaction, temporary and permanent surfacing, replacement of disturbed traffic markings, spoils disposal, steel plating *if required*, removal of manhole sections *if required*, constant continued manned monitoring during bypass pumping operations, and all efforts required to return surface conditions to pre-project condition, and any other items necessary for trunk sewer bypass pumping not specifically enumerated in these specifications, and no additional allowance will be made therefor.

Full compensation for bypass pumping and/or diversion systems to maintain sewer service for side sewers, laterals, and other incoming sewer shall be considered as included in the prices paid for the various contract items of work, and no additional allowance will be made therefor.

SECTION 132

WATER DISTRIBUTION SYSTEM

132-1.01 Description: Water Distribution System and related appurtenances shall conform to the requirements as specified in the City of Santa Rosa Water Distribution System Design and Construction Standards and Specifications Section 132, other sections of the City Standards as they apply, and any modifications herein and/or on the Project Plans.

132-1.12 Laying and Handling Pipe Materials: If the Contractor installs a highpoint in the water system not shown on the Project Plans the Engineer may require the installation of a new combination air and vacuum valve, per City Standards, at no additional cost to the City.

132-1.23 Steel Water Main Casing: Steel water main casing shall be constructed in accordance with City STD-872, the Project Plans, as specified in these Technical Specifications and in accordance with the Caltrans Encroachment Permit requirements.

Steel casing shall be standard weight galvanized carbon steel pipe comply with ASTM A53, Grade B with a minimum yield strength of 35,000 psi. The minimum casing inside diameter shall be 2-inches larger than the outside diameter of the water main to be installed within it. Galvanizing shall comply with Section 75-1.05 of the Caltrans Standards.

Field joints of the casing shall be welded with a continuous circumferential weld in accordance with AWWA C206. Welding shall be performed by a certified welder with at least three years' experience in performing continuous circumferential welds.

Casing spacers shall be provided and installed in accordance with City STD-872 and the manufacturers recommendations.

Casing end seals shall be standard wrap around end seals, Model "W" as manufactured by Calpico or approved equal. End seals shall be installed in accordance with City STD-872 and the manufacturers recommendations.

132-1.24 Abandonment of Existing Private Water Well: Abandonment of the existing private water well at 4920 Highway 12 (APN 031-240-068) shall be performed by a licensed C-57 well drilling contractor in accordance with the requirements of Section 25B-7 of the Sonoma County Code. The contractor shall obtain a Well Abandonment permit from the County of Sonoma Permit and Resource Management Department (PRMD) prior to beginning the work.

The existing well house building, foundation, and appurtenances shall be completely removed and disposed from the site.

The existing electrical feed to the well house shall be completely remove. All work performed at the existing panelboard serving the well shall be performed by a licensed C-10 contractor.

Prior to commencing abandonment of the existing private water well, the Contractor shall perform all work necessary to establish City water service to all existing fixtures currently served by the existing private water well. The Contractor shall provide written verification to the Engineer and Private Property Owner that all work required to serve each parcel with a dedicated City supplied water meter has been completed.

132-3.01 Payment: Water Main shall be paid for at the contract price per **linear foot** for the specific sizes and trench types given in the bid schedule, (as determined by measuring the total horizontal length of pipe installed and including tie-ins), which price shall include full compensation for furnishing all labor, materials, tools, equipment, incidentals, and doing all the work involved in water main installation, including but not limited to: potholing other than as specified in Section 15 to facilitate the progress of work; excavation and disposal of excavated materials; hand digging *if needed*; root pruning; dewatering and disposal of trench groundwater; contamination awareness; supporting or removal and disposal of existing utilities in the same trench *if required*; water main and fittings *as required*; restrained joints, thrust blocking and harnesses *as required*; placing and compacting all required bedding and backfill including control density fill *if required*; insertion into a steel water main casing *if required*; trench plates *as needed*; temporary trench paving; removal of valley gutter, median curb and island *as needed*; construction water and all work involved in its obtainment, development and distribution; testing and chlorination of the new water system and appurtenances; purging lines prior to bacteria sampling; disposal of all chlorinated water by the contractor; cleaning, swabbing and flushing of water main and appurtenances; as specified herein, and no additional allowance will be made therefor.

Steel Water Main Casing shall be paid for at the contract price per **linear foot**, which price shall include full compensation for furnishing all labor, materials, tools, equipment, incidentals, and doing all the work involved in water main casing installation, including but not limited to: potholing other than as specified in Section 15 to facilitate the progress of work; excavation and disposal of excavated materials; hand digging *if needed*; root pruning; dewatering and disposal of trench groundwater; contamination awareness; supporting or removal and disposal of existing utilities in the same trench *if required*; steel casing; welding; casing spacers; testing; end seals; placing and compacting all required bedding and backfill including control density fill *if required*; trench plates *as needed*; temporary trench paving; removal of median curb and island, curb, gutter, sidewalk, and driveways *as needed*; as specified herein, and no additional allowance will be made therefor.

Water main to be installed in a steel casing will be paid for separately at the contract price per linear foot for the specific size and trench type given in the bid schedule.

4-inch Ductile Iron Manifold Service shall be paid for at the contract price **each**, which price shall include full compensation for furnishing all labor, materials, tools, equipment, incidentals, and doing all work involved in ductile iron manifold service installation, including but not limited to: excavation and disposal of excavated materials; dewatering and disposal of trench groundwater; contamination awareness; pipe; water service tubing and fittings *as required*; restrained joints, thrust blocking and harnesses *as required*; tee; reducer; gate valve; proper size service penetrations; service saddles and corporation stops; traffic rated meter boxes and lids to grade; meter shut off valves; meter spacer pipe assemblies; placing and compacting all required bedding and backfill including control density fill *if required*; trench plates *as needed*; testing and chlorination; temporary trench paving; removal of median curb and island, curb, gutter, sidewalk, and driveways *as needed*; restoration/reconstruction of landscaping/irrigation *as needed*; as specified herein, and no additional allowance will be made therefor.

Backflow Device Installation shall be paid for at the contract price **each** for the specified types and sizes, which price shall include full compensation for furnishing all labor, materials, tools, equipment, incidentals, and doing all work involved in backflow device installation, including but not limited to: excavation and disposal of excavated material; dewatering and disposal of trench groundwater; contamination awareness; removing and replacing concrete *as required*; backflow device; fittings *as required*; traffic rated meter box; placing and compacting all required bedding and backfill; testing and chlorination; temporary trench paving; removal of median curb and island, curb, gutter, sidewalk, and driveways *as needed*; restoration/ reconstruction of landscaping/irrigation *as needed*; as specified herein, and no additional allowance will be made therefor.

Private Water System Improvements shall be paid for at the contract **lump sum** price, which price shall include full compensation for furnishing all labor, materials, tools, equipment, incidentals, and doing all work involved in abandoning an existing private water well and private water system improvements to establish public water service to APN 031-240-069 and APN 031-240-068, including but not limited to: excavation and disposal of excavated materials; dewatering and disposal of trench groundwater; contamination awareness; valves; water service tubing and fittings *as required*; tie-in at existing buildings; verification of water service to all existing fixtures; placing and compacting all required bedding and backfill; trench plates *as needed*; testing and chlorination; temporary trench paving; removal and replacement of median curb and island, curb, gutter, sidewalk, and driveways *as needed*; restoration/reconstruction of landscaping/ irrigation *as needed*; as specified herein, and no additional allowance will be made therefor.

Remove and Replace Private Fire Hydrant and Lateral Assembly shall be paid for at the contract price **each**, which price shall include full compensation for furnishing all labor, materials, tools, equipment, incidentals, and doing all work involved to remove and replace fire hydrant and lateral assemblies, including but not limited to: potholing other than as specified in Section 15 to facilitate the progress of work; excavation and disposal of excavated materials; dewatering and disposal of trench groundwater; contamination awareness; tapping saddle or tee; valve; fire hydrant and lateral assembly; fittings *as required*; restrained joints, thrust blocking and harnesses *as required*; hot tap preparation if needed (City to perform actual hot tap), connection to saddle or tee; valve box to grade; removal, salvage and abandonment of old hydrant and lateral assembly (including as required on live main; full circle clamp, removal of old valve and tee, installation of pipe and couplers); placing and compacting all required bedding and backfill including control density fill *if required*; trench plates *as needed*; testing and chlorination; temporary trench paving; removal of median curb and island, curb, gutter, and sidewalk *as needed*; restoration/reconstruction of landscaping/irrigation and fencing *as needed*; as specified herein, and no additional allowance will be made therefor.

Fire Hydrant and Lateral Assembly shall be paid for at the contract price **each**, which price shall include full compensation for furnishing all labor, materials, tools, equipment, incidentals, and doing all work involved to install fire hydrant and lateral assemblies, including but not limited to: excavation and disposal of excavated materials; dewatering and disposal of trench groundwater; contamination awareness; tapping saddle or tee; valve; fire hydrant and lateral assembly; fittings *as required*; restrained joints, thrust blocking and harnesses *as required*; hot tap preparation if needed (City to perform actual hot tap); connection to saddle or tee; valve box to grade; placing and compacting all required bedding and backfill including control density fill *if required*; trench plates *as needed*; testing and chlorination; temporary trench paving; removal of median curb and island, curb, gutter, sidewalk, and driveways *as needed*; restoration/reconstruction of landscaping/irrigation and fencing *as needed*; as specified herein, and no additional allowance will be made therefor.

14" Direct Insert Valve on an existing main shall be paid for at the contract price **each**, which price shall include full compensation for furnishing all labor, materials, tools, equipment, incidentals, and doing all work involved in installing a direct insert valve without shutdown of the existing water system, including but not limited to: potholing other than as specified in Section 15 to facilitate the progress of work; excavation and disposal of excavated materials; dewatering and disposal of trench groundwater; contamination awareness; hot tap; direct insert valve; fittings *as required*; valve box and riser set to grade; concrete collar; valve stem riser *if required*; placing and compacting all required bedding and backfill including control density fill *if required*; trench plates *as needed*; testing and chlorination temporary; trench paving; removal of median curb and island, curb, gutter, sidewalk, and driveways *as needed*; restoration/reconstruction of landscaping/irrigation and fencing *as needed*; as specified herein, and no additional allowance will be made therefor.

14"x 8" Cut-in Tee Assembly shall be paid for at the contract unit price **each**, which price shall include full compensation for furnishing all labor, materials, tools, equipment, incidentals, and doing all work involved in cut-in-tee with valve installation, including but not limited to: potholing other than as specified in Section 15 to facilitate the progress of work; excavation and disposal of excavated materials; dewatering and disposal of trench groundwater; contamination awareness; removing section of existing main; tee; gate valve; fittings *as required*; restrained joints, thrust blocking and harnesses *as required*; pier blocks; placing and compacting all required bedding and backfill including control density fill *if required*; trench plates *as needed*; testing and chlorination temporary trench paving; removal of median curb and island, curb, gutter, sidewalk, and driveways *as needed*; restoration/reconstruction of landscaping/irrigation and fencing *as needed*; as specified herein, and no additional allowance will be made therefor.

Abandon or Remove Water System Components shall be paid for at the contract **lump sum** price, including furnishing all labor, materials, tools and equipment, incidentals, and doing all work involved in abandoning and/or removal of water system components, including but not limited to: potholing other than as specified in Section 15 to facilitate the progress of work; excavation and disposal of excavated materials; dewatering and disposal of trench groundwater; contamination awareness; abandonment and/or removal and disposal of old sections of main and fittings; abandonment of pipe ends 2-inch and larger; removal and/or abandonment of valves; removal of old tees and installing like size ductile iron pipe with couplers when water main is to remain active; removal of valve boxes and risers; removal of thrust blocks; removal and disposal of abandoned blow offs and appurtenances; abandoning unused or replaced water services on existing main; removing and disposing of meter boxes and lids, valves, saddles, curb stops and installing a full circle clamp; installing blind flanges *if required*; placing and compacting all required bedding and backfill including control density fill *if required*; trench plates *as needed*; temporary trench paving; removal and replacement of sidewalk and driveways *as needed*; restoration/reconstruction of landscaping/irrigation and fencing *as needed*; as specified herein, and no additional allowance will be made therefor.

Temporary Blow-off shall be paid for at the contract price **each**, which price shall include full compensation for furnishing all labor, materials, tools, equipment, incidentals, and doing all work involved in temporary blow installation, including but not limited to: potholing other than as specified in Section 15 to facilitate the progress of work; excavation and disposal of excavated materials; dewatering and disposal of trench groundwater; contamination awareness; pipe; fittings *as required*; valve box; trench plates *as needed*; temporary trench paving; as specified herein, and no additional allowance will be made therefor.

Water Main Tie-in shall be paid for at the contract price **each**, which price shall include full compensation for furnishing all labor, materials, tools, equipment, incidentals, and doing all the work involved in water main tie-in installation, including but not limited to: scheduling and notifications; excavation and disposal of excavated materials; hand digging *if needed*; root pruning; dewatering and disposal of trench groundwater; contamination awareness; supporting or removal and disposal of existing utilities in the same trench *if required*; water main and fittings *as required*; removal of temporary blow-offs; temporary restrained caps or plugs required to facilitate tie-in operations; partial water main lowerings at tie-in locations; restrained joints, thrust blocking and harnesses *as required*; placing and compacting all required bedding and backfill including control density fill *if required*; trench plates *as needed*; pressure testing large scope tie ins *if required*; temporary trench paving; as specified herein, and no additional allowance will be made therefor.

Work under water main tie-ins excludes that portion of pipe paid for as under the Water Main pay item.

Full compensation for Trench Bracing and Shoring-Water shall be considered as included in the prices paid for Trench Bracing and Shoring as indicated in Section 106 of these Special Provisions and no additional allowance will be made therefor.

**APPROVED LIST OF BACKFLOW CONTRACTORS
INSTALLATION, TESTING & REPAIR**

<p>ALL OUT PLUMBERS/C. CROSS P.O. BOX 599 CLOVERDALE, CA 95425 PHONE: (707) 894-8434 LICENSE #: 812540</p>	<p>ALL PRO BACKFLOW/J.LOTITO P.O. BOX 2193 FOLSOM, CA 95763 PHONE: (916) 276-7162 LICENSE #: 934557</p>	<p>APB BACKFLOW, INC. 1599 FELTA RIDGE ROAD HEALDSBURG, CA 95448 PHONE: (888) 356-7761 LICENSE: 1032328</p>
<p>BRODERICK GENERAL ENG. 21750 8TH ST., EAST, SUITE B SONOMA, CA 95476 PHONE: (707) 996-7809 LICENSE #: 750809</p>	<p>CAGWIN & DORWARD P.O. BOX 1600 NOVATO, CA 94948-1600 PHONE: (800) 891-7710 LICENSE #: 202399</p>	<p>CHECKRITE BACKFLOW SERV. 3618 CHANATE RD. SANTA ROSA, CA 95404 PHONE: (707) 575-5296 LICENSE #: 836022</p>
<p>DEVOTO PLUMBING* 1345 TRIPLE OAK WAY FULTON, CA 95439 PHONE: (707) 545-0734 LICENSE #: 824608</p>	<p>ECONOMY PLUMBING 1058 N. DUTTON AVE. SANTA ROSA, CA 95401 PHONE: (707) 545-4455 LICENSE #: 748220</p>	<p>GAC COMPANY P.O. BOX 5511 SANTA ROSA, CA 95402 PHONE: (707) 538-8000 LICENSE #: 927846</p>
<p>GROUND HOG CONSTRUCTION 5353 HESSEL RD. SEBASTOPOL, CA 95472 PHONE: (707) 529-2085 LICENSE #: 723766</p>	<p>JV PLUMBING & BACKFLOW* 2911 MONTECITO AVE. SANTA ROSA, CA 95404 PHONE: (707) 799-2692 LICENSE #: 955698</p>	<p>MAPLES PLUMBING & HEATING 280 CASTRO COURT #407 SANTA ROSA, CA 95407 PHONE: (707) 585-9979 LICENSE #: 1048751</p>
<p>NORTHBAY BACKFLOW P.O. BOX 2765 PETALUMA, CA 94953 PHONE: (707) 484-3949 LICENSE #: 878332</p>	<p>NORTHWOOD BACKFLOW 2261 ATHENS AVE. REDDING, CA 96001 PHONE: (800) 750-4547 LICENSE #: 749187</p>	<p>ONGARO AND SONS PLUMBING 2995 DUTTON AVE. SANTA ROSA, CA 95407 PHONE: (707) 579-3511 LICENSE #: 215233</p>
<p>PACIFIC PLUMBING & FIRE PROT 2360 MENDOCINO AVE., A2-289 SANTA ROSA, CA 95403 PHONE: (707) 486-4054 LICENSE #: 1018110</p>	<p>PUMPMAN NORCAL 4000 S. MOORLAND AVE. SANTA ROSA, CA 95407 PHONE: (707) 584-9191 LICENSE: 200068</p>	<p>RH & SONS WATER SERVICES 225 GOLDEN RIDGE AVE. SEBASTOPOL, CA 95472 PHONE: (800) 675-3569 LICENSE #: 698774</p>
<p>ROBERTS MECHANICAL & ELECTRICAL, INC. 39 LARK CENTER DR. SANTA ROSA, CA 95403 PHONE: (707) 584-5880 LICENSE #: 556014</p>	<p>ROBERTSON'S BACKFLOW 3170 DEEP HAVEN RD. POLLACK PINES, CA 95726 PHONE: (530) 306-1056 LICENSE #: 972547</p>	<p>SCOTT CRAMER PLUMBING P.O. BOX 750084 PETALUMA, CA 94975 PHONE: (707) 778-8789 LICENSE #: 889152</p>
<p>STEAD BACKFLOW PREVENTION 2715 W. KETTLEMAN LN., #203-321 LODI, CA 95242 PHONE: (209) 327-3900 LICENSE #: 848490</p>	<p>SUPER SERVICE PLUMBING P.O. BOX 11157 SANTA ROSA, CA 95406 PHONE: (707) 544-6444 LICENSE #: 651401</p>	<p>VALLEY COMFORT HEAT & AIR 1813 FERDINAND COURT SANTA ROSA, CA 95404 PHONE: (707) 523-1244 LICENSE #: 376838</p>
<p>NOTE: These contractors have a C-16 or C-36 State Contractor's License or an A-General Engineering License. They are licensed and certified to test, repair, and install any type of backflow device. They are also licensed to work on fire protection backflow devices or fire protection systems. When installing a backflow device, a City Plumbing Permit is required, and if working in the City right-of-way, an Encroachment Permit is needed. All testers are required to have a City Business License.</p>		
<p><i>*Spanish speaking</i></p>		<p>(Updated List Only:1/9/2023)</p>

SECTION A FEES AND PERMITS

The Contractor shall obtain all necessary and required permits for the project. All permits issued by the City Building Department will be issued at no cost to the Contractor; these fees will be paid by an appropriate City department. All other required permits, including permits from the County of Sonoma and California Department of Transportation (Caltrans), shall be obtained at the Contractor's expense.

The City has obtained a one-time Discharge Permit, which is included as part of these Special Provisions.

The City obtained a Caltrans Encroachment Permit which is included as part of these Special Provisions for bidding purposes. The City's Encroachment Permit included in these Special Provisions expired on September 30, 2022, and the City is in the process of obtaining a new permit. A copy of the City's new Caltrans Encroachment Permit will be provided to the Contractor when available. The Contractor will be required to follow the requirements of the Caltrans Encroachment Permit and obtain their own Caltrans Encroachment Permit (double permit). The Contractor must submit an encroachment permit application along with a permit fee of \$660.00 to Caltrans and obtain an approved permit issued in Contractor's name prior to commencing any work within State right-of-way. The Contractor shall be fully informed of all requirements of the permit including working hours, permit riders and shall conduct its work accordingly.

The contractor shall obtain a Well Abandonment permit from the County of Sonoma Permit and Resource Management Department (PRMD) prior to abandoning the well on APN 031-240-068.

The contractor shall obtain a Septic Tank Abandonment permit from the County of Sonoma Permit and Resource Management Department (PRMD) prior to abandoning the septic tank on APN 031-240-006.

The Contractor shall obtain a permit from the State of California Division of Industrial Safety. Attention is directed to Section 5-1.02A, "Trench Excavation Safety Plans" of these Special Provisions.

Full compensation for securing and complying with all permits shall be considered as included in the contract prices paid for the various items of work and no additional allowance will be made therefor.



**ONE-TIME DISCHARGE PERMIT
SR-1X09675**

Issued To:

**Andrew Wilt
City of Santa Rosa Public Works
69 Stony Circle
Santa Rosa, CA 95401**

Located At:

**Streamside Drive to Elaine Drive
Santa Rosa, CA 95409**

EFFECTIVE DATE: 01/11/2023

EXPIRATION DATE: Notice of Completion Date

CIP Project Name: CIP- Los Alamos Trunk Sewer

The contractor to be awarded the City of Santa Rosa Capital Improvement Project (CIP) project referenced above is authorized to discharge any generated non-contaminated groundwater and/or trench water to the City of Santa Rosa's sewer collection system. This discharge will be in accordance with the City of Santa Rosa's Most Current Sewer Code and/or Ordinance, any applicable provisions of federal or state law or regulation, and in accordance with discharge point(s), effluent limitations, monitoring requirements, and other conditions set forth herein.

PERMITTEE SHALL COMPLY WITH ALL ITEMS BELOW:

1. Sediment must be removed prior to any discharge to the sanitary sewer.
2. The permittee shall be responsible for all liability imposed by law for personal injury or property damage caused by work done by permittee under this permit, including work beyond the scope of this permit. If any claim of such liability is made against the City, its officers or employees, permittee shall defend, indemnify and hold them, and each of them, harmless from such claim and liability insofar as permitted by law.
3. The discharge rate to the sanitary sewer shall be at a discharge rate that will not result in any spillage or surcharging of the sewer system.

Environmental Compliance Supervisor: _____

A handwritten signature in blue ink, appearing to read "Mark St. George", written over a horizontal line.

Date: _____

11/10/2023

**SUBREGIONAL WATER RECLAMATION SYSTEM
Environmental Compliance Section, 4300 Llano Road, Santa Rosa, CA 95407
PH (707) 543-3369 FX (707) 543-3398 email: envcompliance@srcity.org**

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION
ENCROACHMENT PERMIT

TR-0120 (REV 6/2012)

Permit No.

04-21-N-US-3126

In compliance with (Check one):

- Your application of October 18, 2021
- Utility Notice No. _____ of _____
- Agreement No. _____ of _____
- R/W Contract No. _____ of _____

TO:
 City of Santa Rosa
 c/o Brelje & Race Consulting Engineers
 69 Stony Circle
 Santa Rosa, CA 95401

 Email: bryant@brce.com
 Attn: Benjamin Bryant
 Phone: (707) 543-3878

Dist/Co/Rte/PM

04/SON/12/19.473-19.667

DATE

January 20, 2022

Fee Paid \$ Exempted	Deposit \$ Exempted
Performance Bond Amount \$	Payment Bond Amount \$
Bond Company	
Bond Number (1)	Bond Number (2)

, **PERMITTEE**

and subject to the following, **PERMISSION IS HEREBY GRANTED** to:

Perform temporary traffic control, pothole, and install 48 LF of 8" PVC water main in 18" steel casing on State Highway 04-SON-12, Post Mile 19.473 to 19.667, near Middle Rincon Road in the City of Santa Rosa.

A minimum of 7 days prior to the start of work under this encroachment permit, notice must be given to State Representative Reza Shirazi, 600 Lewelling Blvd., San Leandro, CA 94579, at reza.shirazi@dot.ca.gov or (510)715-9573, weekdays between 7:00 a.m. and 3:30 p.m., excluding holidays.

Notwithstanding General Provision 35, lane closures and other activities that may cause a traffic impact requires the permittee to apply for and obtain a closure ID prior to the start of work. Requests must be submitted using the attached "Encroachment Permit Work Scheduling Request Form".

THIS PERMIT IS NOT A PROPERTY RIGHT AND DOES NOT TRANSFER WITH THE PROPERTY TO A NEW OWNER.

The following attachments are also included as part of this permit (*Check applicable*):

- | | | |
|---|--|---|
| <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | General Provisions (TR-0045) |
| <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | Utility Maintenance Provisions (TR-0161) |
| <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | Special Provisions (TR-0408, TR-0163, TR-0157A) |
| <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | A Cal-OSHA permit, if required: Permit No. <u>By Contractor</u> |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | As-Built Plans Submittal Route Slip for Locally Advertised Projects |
| <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | Water Pollution Control Documents (SWPPP/WPCP/TR-0400) |

In addition to fee, the permittee will be billed actual costs for:

- | | | |
|------------------------------|--|------------|
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | Review |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | Inspection |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | Field Work |

(If any Caltrans effort expended)

- Yes No The information in the environmental documentation has been reviewed and considered prior to approval of this permit.

This permit is void unless the work is completed before September 30, 2022

This permit is to be strictly construed and no other work other than specifically mentioned is hereby authorized.
 No project work must commence until all other necessary permits and environmental clearances have been obtained.

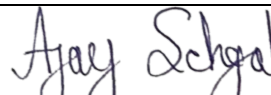
Permit Writer: CL

c: Maintenance: Chad Klein
 Permits Inspector: RShirazi
 TMC: D4 TMC/D04/Caltrans/CAGov
 D4 UtilityEngineering@dot.ca.gov

APPROVED:

AMJAD NASEER, District Permit Engineer

BY:



AJAY SEHGAL, Senior Permit Engineer

ADA Notice

For individuals with sensory disabilities, this document is available in alternate formats. For information call (916) 654-6410 or TDD (916) 654-3880 or write Records and Forms Management, 1120 N Street, MS-89, Sacramento, CA 95814.

In addition to the 2018 Standard Specifications and Standard Plans (available at <https://dot.ca.gov/programs/design/ccs-standard-plans-and-standard-specifications>), the attached “Encroachment Permit General Provisions” (TR-0045) <https://dot.ca.gov/-/media/dot-media/programs/traffic-operations/documents/encroachment-permits/ep-general-provisions-all.pdf>, “Storm Water Special Provisions for Minimal or No Impact (SWSP)” (TR-0400), “Hazardous Materials and Hazardous Waste Management Special Provisions” (TR-0408), Steel Plate Bridging Provisions – For Approach Speed of 45 MPH or More (TR-0157A), “Utility Maintenance provisions” (TR-0160), and “Underground Utility Provisions” (TR-0163) available at <http://dot.ca.gov/programs/traffic-operations/ep/ep-manual/>, all work permitted herein must comply with the following provisions:

A pre-job meeting with the State Representative is required at least 7 days prior to the start of any work under this encroachment permit. Failure to do so may result in permit revocation with no prejudice.

The permittee must provide the stage construction plans, traffic handling plans, work schedule, and a list of all sub-contractors to the State Representative at the time of the pre-job meeting.

Notwithstanding General Provision 4, construction must not begin until the contractor performing the work applies for and obtains a separate encroachment permit (referred to as a Double Permit) for the work authorized herein. An initial fee/deposit of \$660.00 is required at the time of application for permit processing and inspection.

Signs, lights, flags or other protective devices must not obscure the visibility of, nor conflict in intent, meaning, and function of either existing signs, lights and traffic control devices, or any construction area signs.

On conventional highways, permittee's vehicles and equipment not involved in the permitted activities must be legally located off the traveled way and not interfere with free traffic and pedestrian flow.

No vehicle or equipment must be stored overnight within the State highway right-of-way. All vehicles and equipment must be removed immediately at the completion of the day's work. Refueling of vehicle or equipment within the State highway right-of-way is strictly prohibited.

Traffic control must comply with the 2018 Caltrans Standard Plans T9 through T14 (available at <https://dot.ca.gov/programs/design/ccs-standard-plans-and-standard-specifications>), and the California MUTCD, Part 6, "Temporary Traffic Control" (available at <https://dot.ca.gov/programs/traffic-operations/camutcd/>).

All traffic control devices must be installed, maintained, and removed by a qualified traffic control contractor.

Construction activities must not inconvenience the public or abutting property owners. Maintain access to driveways, houses, and buildings.

The State Representative and CHP reserve the right to require reopening the highway at any time as necessary. All cost must be borne by the permittee.

The permittee must coordinate parking restrictions with the local jurisdiction.

The permittee must coordinate bus stop restrictions with the transit agency.

Permittee must place public notification signs at locations designated on the permittee's signing plan a minimum of 7 calendar days before the permitted activity begins. Signs must be constructed and installed to Caltrans specifications and standards.

Permittee must place detour signs prior to the permitted activity in accordance with Caltrans Standard Specifications.

Except for installing, maintaining and removing traffic control devices, any work encroaching within 3 feet of the edge of a travel lane for areas with a posted speed limit below 45mph, or 6 feet of the edge of a travel lane, for areas with a speed limit posted at 45mph or higher, requires closing of that travel lane. Any work encroaching within 6 feet of the edge of the shoulder, requires closing of that shoulder.

Do not reduce an open traffic lane width to less than 11 feet. If traffic cones or delineators are used for temporary edge delineation, the side of the base of the cones or delineators nearest traffic is considered the edge of traveled way.

Traffic control using flagging, must comply with the California MUTCD, Part 6E, "Flagger Control" (available at <https://dot.ca.gov/programs/traffic-operations/camutcd/>), and Cal/OSHA Construction Safety Orders, Section 1599, "Flaggers", (available at <https://www.dir.ca.gov/title8/1599.html>).

Temporary pedestrian facilities must comply with the Caltrans Temporary Pedestrian Facilities Handbook (available at <https://dot.ca.gov/-/media/dot-media/programs/construction/documents/contract-administration/temporary-pedestrian-facilities-handbook-a11y.pdf>) and the California MUTCD Part 6, Chapter 6D – "Pedestrian and Worker Safety" (available at <http://www.dot.ca.gov/programs/traffic-operations/camutcd>)

Notwithstanding General Provision 13, temporary pedestrian access routes must comply with the 2018 Caltrans Standard Plans T30 through T34 (available at <https://dot.ca.gov/programs/design/ccs-standard-plans-and-standard-specifications>)

Temporary pedestrian walkways and canopies must comply with the requirements of the applicable local agency or the latest edition of the International Building Code whichever contains the higher standards.

The permittee must comply with all requirements of the California Public Resource Code Sections 5024.5 and 5097.98, California Health and Safety Code Section 7050.5 (both available at <https://leginfo.legislature.ca.gov/faces/codes.xhtml>), and Volume 2 of the Caltrans Environmental Handbook. (available at <https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser>)

Should ground-disturbing activities take place as part of this project within the State highway right-of-way and there is an inadvertent archaeological or burial discovery, the permittee must cease all construction within 50 feet of the find, notify the County coroner, if necessary, and immediately contact Office of Cultural Resource Studies (OCRS), Caltrans District 4. Upon contact, an OCRS archaeologist will evaluate the find within one business day.

Curbs and sidewalks must be saw cut to the nearest score mark and replaced equal in dimension to that removed with score marks matching existing adjacent curb and sidewalk.

Curbs and adjacent pavement must be saw cut to a neat line prior to excavating and forming. Pavement must be replaced in kind and must conform to lip of new gutter.

Curbs and gutters must conform to the 2018 Caltrans Standard Plan A87A, Type A2-6, (available at <https://dot.ca.gov/programs/design/ccs-standard-plans-and-standard-specifications>) unless necessary to conform to existing adjacent curb and gutter installations.

Curbs and gutters must be placed over 6 inches of Class II Aggregate Base. Sidewalks must be a minimum 4 inches PCC placed over 3 inches of Class II Aggregate Base.

A monolithic pour of curb and sidewalk is not permitted.

Curb ramps and island passageways must conform to the 2018 Caltrans Standard Plans A87A, A88A, A88B, and D78A (available at <https://dot.ca.gov/programs/design/ccs-standard-plans-and-standard-specifications>)

Drainage inlet grates must conform to the 2018 Caltrans Standard Plans D77A and D77B (available at <https://dot.ca.gov/programs/design/ccs-standard-plans-and-standard-specifications>)

Utility pull boxes, manholes, vaults, and other utility facilities must be adjusted to grade.

Do not cut tree roots 3 inches or more in diameter. Material must be removed from around the root system to avoid damage to the roots. Roots must be protected with burlap wrapping while exposed.

Driveways must conform to the Caltrans Highway Design Manual Index 205 and Index 405.1 (available at <https://dot.ca.gov/programs/design/manual-highway-design-manual-hdm>) unless otherwise shown on the project plans.

Portland Cement Concrete (PCC) driveway thickness must be a minimum 4 inches for residential driveways and a minimum 6 inches for commercial driveways. PCC must be placed over 6 inches of Class II aggregate base.

Streets and highways in the San Francisco Bay Area contain a significant number of existing underground utilities. This includes traffic signal conduits that are installed 9 inches or less in depth. The permittee is responsible for necessary site investigations for identification of the location and depth of existing underground facilities prior to excavation (e.g., pothole or hand-dig) to avoid damage or disruption in services.

All pavement must be saw cut prior to removal, or removed by grinding.

Obliterated pavement markings must be replaced in kind.

All signs and markings must comply with the California MUTCD (available at <http://www.dot.ca.gov/programs/traffic-operations/camutcd>)

Where Asphalt Concrete (AC) has been placed, temporary painted traffic striping and pavement markings must be installed within 24 hours. Where shown on the plans, after 30 days curing time, thermoplastic materials must be applied in accordance with the 2018 Caltrans Standard Specifications, Section 84, "Markings" (available at <https://dot.ca.gov/programs/design/ccs-standard-plans-and-standard-specifications>)

Your attention is directed to the 2018 Caltrans Standard Specification, Section 5-1.36, "Property and Facility Preservation" (available at <https://dot.ca.gov/programs/design/ccs-standard-plans-and-standard-specifications>) and Business and Professions Code, Section 8771. Permittee must physically inspect the work site and locate survey monuments before work commencement. Monuments that might be disturbed must be referenced or reset in accordance with Business and Professions Code.

If feasible, monuments should not be set within the traveled way. All monuments that must be set or perpetuated in paved surfaces, must be constructed in accordance with the 2018 Caltrans Standard Specification, Section 78-2, "Survey Monuments" and the 2018 Caltrans Standard Plan A74, Type D, (available at <https://dot.ca.gov/programs/design/ccs-standard-plans-and-standard-specifications>) equal with prior approval of the District Surveys Engineer.

Copies of Corner Records filed or Record of Surveys recorded in compliance with the Business and Professions Code must be forwarded to the District Surveys Engineer.

If existing public or private utilities conflict with the construction project, permittee will make necessary arrangements with the owners of such utilities for their protection, relocation, or removal. Permittee must inspect the protection, relocation, or removal of such facilities. Total costs of such protection, relocation, or removal which State or permittee must legally pay, will be borne by permittee. If any protection, relocation, or removal of utilities is required, including determination of liability for cost, such work must be performed in accordance with State policy and procedure. Permittee must require any utility company performing relocation work in the State highway right-of-way to obtain a State Encroachment Permit before the performance of said relocation work. Any relocated utilities must be correctly located and identified on the As-Built plans.

Trench excavation must comply with the 2018 Caltrans Standard Specifications, Section 19-3, "Structure Excavation and Backfill" (available at <https://dot.ca.gov/programs/design/ccs-standard-plans-and-standard-specifications>

Trench backfill must comply with the attached trench detail and the 2018 Caltrans Standard Specifications, Section 19.3.02E, "Slurry Cement Backfill", and 19-3.02G, "Controlled Low-Strength Material".

Asphalt Concrete (AC) to be removed must be saw cut to the full depth along both sides of the trench. Portland Cement Concrete (PCC) to be removed must be saw cut to a minimum depth of 4 inches along both sides of the trench.

Where the edge of trench is within 2 feet of curb, gutter, or pavement edge, Asphalt Concrete (AC) pavement between the trench and curb, gutter, or pavement edge must be removed and replaced.

Open trenching is authorized one lane at a time with approved traffic control.

No excavation must be left open overnight. Temporary backfilling of excavations in finished surfaces must be capped with a minimum 3 inches Asphalt Concrete (AC).

Permittee must reuse the soil within the work limits in the immediate area from which it was excavated. If any excess soil is generated, it becomes the property of the permittee. Permittee must transport all excess soil outside the State highway right-of-way, and dispose of it in accordance with all applicable environmental laws and regulations.

Changes to the provisions herein require an Encroachment Permit Rider, except for minor changes authorized by the State Representative.

Time extension requests must be made a minimum 2 weeks prior to permit expiration.

The State Representative or CHP may stop work not being performed in compliance with this permit.

Neither materials nor waste must be stockpiled within the State highway right-of-way.

All mud, dirt, and gravel tracked onto the roadway must be immediately removed.

Upon completion of work authorized by this encroachment permit, the permittee must provide the State Representative with three sets of As-Built plans, in accordance with General Provision 22.

Upon completion of work authorized by this encroachment permit, the permittee must provide the State Representative with "Notice of Completion" (TR-0128) (available at <https://dot.ca.gov/-/media/dot-media/programs/traffic-operations/documents/encroachment-permits/tr0128.pdf>)

Conditional Permit Requirements

The application for a double permit must include six copies or a digital copy of the Traffic Control Plans, stamped and signed by a California Licensed Professional Engineer.

The application for a double permit must include six copies or a digital of the Trench Shoring Plans with calculations, stamped and signed by a California Licensed Professional Engineer.

The application for a double permit must include substantiation that the contractor has furnished both a payment and performance bond in the local agency's name in accordance with General Provision 24, Part a.

Additional Enclosures

1. Notice of Completion (TR-0128)
2. Work Authorization Instruction and Request Form
3. Plan Set

SECTION B REPORTS

A report, entitled "Geotechnical Information Report Phase 1 Pipeline Segment," prepared by RGH Consultants, Inc. on November 7, 2017.

An environmental site assessment, entitled "Los Alamos Trunk Sewer Replacement Project, Initial Study," prepared by Brelje & Race Engineers, dated February 28, 2018.

A report, entitled "Tree Survey Report, Los Alamos Trunk Sewer Replacement Phase 1, Santa Rosa, Sonoma County, California," prepared by WRA, Inc., dated September 2017.

A report, entitled "Biological Resource Assessment, Los Alamos Trunk Sewer Replacement Phase 1, Santa Rosa, Sonoma County, California," prepared by WRA, Inc., dated September 2017.

An electronic copy (PDF) of all of these reports may be obtained via Planet Bids and are **not** considered part of the contract documents.

[Version: 2/2/15CDA STD2010]

SECTION C
STORM WATER CORRECTION SITE INSPECTION FORM

- Storm Water Inspection
- Correction Notice
- Notice of Violation
- Warning Notice
- Stop Work Notice

Storm Water Construction Site Inspection



Project Name:		Date of Inspection:	
Permit Number/Contract Number:		Current Weather Conditions:	
Location:		Next Forecasted Rain Event:	
Site Contact:	Inspector:	Contact Info:	
Follow-Up Weather Conditions:		Follow-Up Date of Inspection:	

*Note: All deficiencies must be noted in the "deficiency" section. **Note: Required year round regardless of current or forecasted weather conditions.

		Yes	No*	N/A
1	Are all Best Management Practices (BMPs) in place and functioning?			
a)	Are all areas of disturbed soil protected from erosion through the implementation of acceptable soil stabilization practices? <small>(straw, seed, binders, blanket, plastic, track walking, etc.)</small>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
** b)	Are perimeter controls (wattles, silt fence) in place and properly installed (on contour, dug in, overlapping, no gaps)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c)	Are all materials, stockpiles, dumpsters, and concrete washout areas properly covered or protected?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d)	Is all heavy equipment properly covered or protected?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
** e)	Are all on-site storm drain inlets properly protected?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
** f)	Are all portable toilets secured, located away from drainage, and have secondary containment tray?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g)	Are all access, exit, and egress points protected through the use of a stabilized construction entrance and/or a tire wash?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
** h)	Are all public streets, curbs, and gutters adequately swept of sediment, mud, and debris and all material collected and properly disposed of?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i)	Is all storm water run-on onto the site adequately addressed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
** j)	Are spill kits and/or supplies on site and available to staff?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Yes	No*	N/A
** 2	Are all BMPs properly maintained (accumulated material removed, no tears, continuous, secured, replaced if needed)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	Have all off-site BMPs placed in gutters or at storm drain inlets been removed prior to forecasted rain and any accumulated debris removed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
** 4	Are emergency and after hours contacts, spill procedures, and containment BMPs easily available and on-site at all times?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
** 5	Are all storm drain inlets, drainages, and waterways free of visible impacts and pollutants?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

FOR PROJECTS THAT DISTURB AN ACRE OR MORE OF SOIL

		Yes	No*	N/A
6	Does this project disturb an acre or more of soil? <i>If yes, SWPPP is required.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
** a)	If yes, is contact info provided for: Site Contact, SWPPP Preparer & Inspector, and 24 HR BMP Implementation & Maintenance Contact?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
** b)	If yes, does the SWPPP reflect the current site condition?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
** c)	If yes, does the SWPPP include all inspection documentation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d)	If yes, are all Rain Event Action Plans (REAP) prepared and implemented on site within 48 hours prior to forecasted rain?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Yes	No*	N/A
7	Is runoff leaving the project site? -if yes, the Qualified SWPPP Practitioner (QSP) needs to provide:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
a)	What is the pH of the runoff? _____ Is the pH less than 6.5 or greater than 8.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b)	What is the turbidity of the runoff? _____ Is the turbidity greater than 250 NTU?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Note: If these levels are exceeded, the contractor and QSP are required to implement immediate corrective actions.

THE FOLLOWING DEFICIENCIES AND CORRECTIONS HAVE BEEN IDENTIFIED AND REQUIRE CORRECTIVE ACTION:		
DEFICIENCY / CORRECTION	DATE Required (see note)***	DATE Correction Observed
***ALL DEFICIENCIES MUST BE CORRECTED PRIOR TO NEXT RAIN EVENT OR NO LATER THAN DUE DATE, WHICHEVER IS SOONER.		

VERIFICATION OF RECEIPT

Upon signing this, I acknowledge that I have received a copy of this notice. I certify that I am either the person identified below or am authorized to sign on their behalf. I understand that all work must comply with all applicable conditions, regulations, and requirements whether or not they are listed on this correction notice. Any discharge shall be in accordance with applicable conditions, regulations, and requirements and shall not exceed turbidity greater than or equal to 250 NTU and pH levels between 6.5 – 8.5 as required by the General Construction Permit or other governing requirement, whichever is more stringent.

Contact Name and Company _____	Contact Signature _____	Date _____
Inspector Name _____	Inspector Signature _____	Date _____

<input type="checkbox"/> Permit Holder or Representative Not Present on Site: _____ <small>Correction Notice provided via:</small> <input type="checkbox"/> Email _____ <input type="checkbox"/> Phone Call Phone number: _____ <input type="checkbox"/> Fax _____ <input type="checkbox"/> Mail _____ <input type="checkbox"/> Other _____	Inspection Type (check all that apply): After Start of Work (within 2 weeks) <input type="checkbox"/> Prior to Rainy Season (Sept 1st-Oct 1st) <input type="checkbox"/> Following first 0.25" of rain in a 24 hour period (within 2 business days) <input type="checkbox"/> Monthly (Oct 1st-April 30th) <input type="checkbox"/> Deficiency Re-Inspection <input type="checkbox"/>
--	---

FOR OFFICE USE ONLY <input type="checkbox"/> ALL Deficiencies Addressed / Completed <input type="checkbox"/> STOP WORK Issued for Incomplete Items <input type="checkbox"/> Other: _____	<input type="checkbox"/> Not Corrected - See Other Notes for Enforcement Action	Re-Inspection Summary Date: _____ Total # of Open Correction Notices: _____
---	---	--

L:\WPDES Permit\Construction Inspection\Storm Water Construction Notices

BID FORMS

CITY OF SANTA ROSA

STATE OF CALIFORNIA

LOS ALAMOS TRUNK SEWER REPLACEMENT SEGMENT 1
(STREAMSIDE DR TO ELAINE DR)

The work to be performed and referred to herein is in the City of Santa Rosa, California and consists of improvements to be constructed in accordance with the provisions of the Invitation for Bids, containing the Notice to Bidders, the Special Provisions, the Project Plan(s), the Bid Forms and the Contract, all of which are by reference incorporated herein, and each Addendum, if any is issued, to any of the above which is also incorporated by reference herein.

TO THE AWARD AUTHORITY OF THE CITY OF SANTA ROSA

The undersigned, as bidder, declares that the only person or parties interested in this bid as principals are those named herein; that this bid is made without collusion with any other person, firm, or corporation; that Contractor has carefully examined the Project Plans, Invitation for Bids and conditions therefor, and is familiar with all bid requirements, that Contractor has examined this Contract and the provisions incorporated by reference herein, and Contractor hereby proposes, and agrees that if its bid is accepted by the City, Contractor will provide all necessary machinery, tools, apparatuses, and other means of construction, and to do all the work and furnish all the materials and services required to complete the construction in accordance with the Contract, the Special Provisions, the Project Plan(s), and Addenda to any of the above as incorporated by reference, in the time stated herein, for the unit prices and/or lump sum prices as follows:

NAME OF BIDDER: _____

Contract #: C01903

Project Title: LOS ALAMOS TRUNK REPLACEMENT: STREAMSIDE DR TO ELAINE DR

Line #	Description	Units	Quantity	Unit Price	Total Price
1	TRAFFIC CONTROL	LS	1	\$ _____	\$ _____
2	WATER POLLUTION CONTROL	LS	1	\$ _____	\$ _____
3	GROUNDWATER MANAGEMENT ALLOWANCE	FA	1	\$ <u>30,000.00</u>	\$ <u>30,000.00</u>
4	ADJUST EXISTING VALVE BOXES AND MONUMENTS TO GRADE	EA	33	\$ _____	\$ _____
5	ADJUST EXISTING MANHOLES TO GRADE	EA	7	\$ _____	\$ _____
6	UTILITY CLEARANCES (POTHOLING)	LS	1	\$ _____	\$ _____
7	UTILITY CONFLICT RESOLUTION ALLOWANCE	FA	1	\$ <u>50,000.00</u>	\$ <u>50,000.00</u>
8	CLEARING AND GRUBBING	LS	1	\$ _____	\$ _____
9	SUBGRADE STABILIZATION/DIG-OUT	SY	200	\$ _____	\$ _____
10	ROADWAY EXCAVATION (F)	CY	1,030	\$ _____	\$ _____
11	EROSION CONTROL	LS	1	\$ _____	\$ _____
12	SEAL COAT	SF	5,500	\$ _____	\$ _____
13	ASPHALT CONCRETE SURFACE	TON	1,510	\$ _____	\$ _____
14	ASPHALT CONCRETE BASE	TON	360	\$ _____	\$ _____
15	EDGE GRIND	LF	2,999	\$ _____	\$ _____
16	CONFORM GRIND	LF	224	\$ _____	\$ _____
17	PAVEMENT MILL	SY	1,520	\$ _____	\$ _____
18	GEOSYNTHETIC PAVEMENT INTERLAYER (PAVING GRID)	SY	4,600	\$ _____	\$ _____
19	SPEED BUMP	LS	1	\$ _____	\$ _____
20	PERMANENT TRENCH PAVING	TON	50	\$ _____	\$ _____
21	CONCRETE PAVEMENT	SF	6,030	\$ _____	\$ _____
22	STAMPED COLORED CONCRETE CROSSWALK PAVING	SF	2,230	\$ _____	\$ _____
23	UTILITY ACCESS ROAD	SY	1,770	\$ _____	\$ _____
24	BIKE PATH TRAIL RECONSTRUCTION	SY	950	\$ _____	\$ _____
25	18" HDPE STORM DRAIN PIPE - TYPE A TRENCH	LF	106	\$ _____	\$ _____
26	18" HDPE STORM DRAIN PIPE - TYPE B TRENCH	LF	60	\$ _____	\$ _____
27	12" RCP STORM DRAIN PIPE WITH CONCRETE CAP	LF	84	\$ _____	\$ _____
28	MODIFY EXISTING STORM DRAIN STRUCTURE	EA	5	\$ _____	\$ _____
29	CURB AND GUTTER	LF	1,065	\$ _____	\$ _____
30	CENTER MEDIAN REPLACEMENT	LF	185	\$ _____	\$ _____
31	CURB RAMP	SF	1,100	\$ _____	\$ _____
32	SIDEWALK	SF	3,621	\$ _____	\$ _____
33	DRIVEWAY APRON	SF	475	\$ _____	\$ _____
34	VALLEY GUTTER	SF	735	\$ _____	\$ _____
35	REMOVE AND REPLACE EXISTING FENCE AND GATES	LF	460	\$ _____	\$ _____
36	RANCH GATE	EA	2	\$ _____	\$ _____
37	CITY MONUMENT	EA	13	\$ _____	\$ _____
38	REMOVE AND REPLACE STREET BARRICADE	LF	26	\$ _____	\$ _____
39	BOLLARDS	EA	13	\$ _____	\$ _____
40	TRAFFIC STRIPES AND PAVEMENT MARKINGS	LS	1	\$ _____	\$ _____
41	REMOVE AND REPLACE CMU TRASH ENCLOSURE	LS	1	\$ _____	\$ _____
42	TRENCH BRACING AND SHORING	LS	1	\$ _____	\$ _____
43	TREE PROTECTION FENCING	LF	3,025	\$ _____	\$ _____
44	TREE AND STUMP REMOVAL	EA	26	\$ _____	\$ _____
45	SUPPLY AND PLANT TREE	EA	52	\$ _____	\$ _____
46	6" SEWER MAIN - TYPE A TRENCH	LF	24	\$ _____	\$ _____
47	6" SEWER MAIN - TYPE B TRENCH	LF	155	\$ _____	\$ _____

Line #	Description	Units	Quantity	Unit Price	Total Price
48	8" SEWER MAIN - TYPE A TRENCH	LF	82	\$ _____	\$ _____
49	8" SEWER MAIN - TYPE B TRENCH	LF	90	\$ _____	\$ _____
50	8" SEWER MAIN - TYPE C TRENCH	LF	18	\$ _____	\$ _____
51	24" SEWER MAIN - TYPE A TRENCH	LF	2,762	\$ _____	\$ _____
52	24" SEWER MAIN - TYPE B TRENCH	LF	1,282	\$ _____	\$ _____
53	24" SEWER MAIN - TYPE C TRENCH	LF	1,278	\$ _____	\$ _____
54	4" SEWER LATERAL	EA	12	\$ _____	\$ _____
55	6" SEWER LATERAL	EA	4	\$ _____	\$ _____
56	8" SEWER LATERAL	EA	1	\$ _____	\$ _____
57	60" POLYMER CONCRETE SEWER MANHOLE	EA	27	\$ _____	\$ _____
58	72" POLYMER CONCRETE SEWER MANHOLE	EA	5	\$ _____	\$ _____
59	ABANDON EXISTING SEWER MAIN	LF	4,500	\$ _____	\$ _____
60	ABANDON EXISTING SEWER MANHOLE	EA	17	\$ _____	\$ _____
61	REMOVE EXISTING SEWER SYSTEM COMPONENTS	LS	1	\$ _____	\$ _____
62	REMOVE EXISTING PRIVATE SEPTIC TANK	EA	1	\$ _____	\$ _____
63	SEWER BYPASS PUMPING	LS	1	\$ _____	\$ _____
64	12" PVC WATER MAIN - TYPE A TRENCH	LF	108	\$ _____	\$ _____
65	8" PVC WATER MAIN - CALTRANS TRENCH	LF	48	\$ _____	\$ _____
66	STEEL WATER MAIN CASING	LF	38	\$ _____	\$ _____
67	4" DUCTILE IRON MANIFOLD SERVICE	EA	1	\$ _____	\$ _____
68	BACKFLOW DEVICE INSTALLATION	EA	1	\$ _____	\$ _____
69	PRIVATE WATER SYSTEM IMPROVEMENTS	LS	1	\$ _____	\$ _____
70	REMOVE AND REPLACE PRIVATE FIRE HYDRANT AND LATERAL ASSEMBLY	EA	1	\$ _____	\$ _____
71	FIRE HYDRANT AND LATERAL ASSEMBLY	EA	1	\$ _____	\$ _____
72	14" DIRECT INSERT VALVE	EA	2	\$ _____	\$ _____
73	14" X 8" CUT-IN TEE ASSEMBLY	EA	1	\$ _____	\$ _____
74	ABANDON OR REMOVE EXISTING WATER SYSTEM COMPONENTS	LS	1	\$ _____	\$ _____
75	TEMPORARY BLOW-OFF	EA	3	\$ _____	\$ _____
76	WATER MAIN TIE-IN	EA	3	\$ _____	\$ _____
				Total:	\$ _____

In the case of any discrepancy between the unit price and the total set forth for the item, the unit price shall prevail; provided, however, that if the amount set forth as a unit price is ambiguous, unintelligible or uncertain for any reason, or is omitted, or in the case of lump sum items, is not the same amount as the entry in the "Total" column, then the amount set forth in the "Total" column for the item shall prevail in accordance with the following:

1. As to lump sum items, the amount set forth in the "Total" column shall be the unit price;
2. As to unit basis items, the amount set forth in the "Total" column shall be divided by the estimated quantity for the item and the price thus obtained shall be the unit price.

The Total Base Bid shall be the sum of the "Total" column. In case of discrepancy between the sum of the "Total" column and the amount entered as Total Base Bid, the sum of the "Total" column shall prevail. The bid comparison will be based on the sum of the "Total" column for each bidder.

If this Contract Bid is accepted by the City and the undersigned fails to execute the Contract and to give all the bonds required under the Contract, with a surety satisfactory to the Award Authority of the City of Santa Rosa, within ten calendar days after bidder has received the Notice of Award from the Engineer, then the Award Authority may, at its option, determine that the bidder has abandoned the Contract, and thereupon this bid and the acceptance thereof shall be null and void, and the forfeiture of the security accompanying this bid shall be in accordance with California Public Contract Code section 20172.

The undersigned understands and agrees that the City is not responsible for any error or omissions on the part of the undersigned in making this bid.

The bidder to whom the Contract is awarded agrees to execute the Contract in favor of the City, in the form attached, and to deliver any and all required bond(s) and insurance certificates within ten calendar days from the date of Contractor's receipt of the Notice of Award. Following the award of the Contract, Contractor shall commence work within ten calendar days from the day authorized in the Notice to Proceed and diligently prosecute the same to completion in accordance with Section 8-1.04.

LIST OF SUBCONTRACTORS

NAME OF BIDDER: _____

The following is a list of each subcontractor who will perform work or labor or render services to the undersigned for the construction of the project in an amount in excess of ½ of 1% of the total amount of this bid.

The undersigned agrees that any portion of the work in excess of ½ of 1% of the total amount of this bid and for which no subcontractor is designated herein will be performed by the undersigned.

SUBCONTRACTOR NAME	SUBCONTRACTOR LICENSE NUMBER	SUBCONTRACTOR DIR REGISTRATION NUMBER	SUBCONTRACTOR BUSINESS ADDRESS	DESCRIPTION OF WORK (ITEM NO.)

NONCOLLUSION DECLARATION
TO BE EXECUTED BY BIDDER AND SUBMITTED WITH BID

The undersigned declares:

I am the _____ of _____, 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.

Any person executing this declaration on behalf of a bidder that is a corporation, partnership, joint venture, limited liability company, limited liability partnership, or any other entity, hereby represents that he or she has full power to execute, and does execute, this declaration on behalf of the bidder.

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].

NOTE: The above Noncollusion Declaration is part of the Contract Bid. Signing this Bid on the signature portion thereof shall also constitute signature of this Noncollusion Declaration.

BID BOND AFFIDAVIT AND BIDDER'S SIGNATURE PAGE

Accompanying this bid is a guaranty in the form of (Notice: Insert the words "cash \$," "Cashier's Check," "Certified Check," or "Bidder's Bond" as the case may be):

in an amount equal to at least ten percent of the total of this bid.

The undersigned further agrees that if Contractor does not execute the Contract and deliver the necessary bonds to the City within the period of time specified in this Invitation for Bids, the proceeds of the security accompanying this bid shall become the property of the City of Santa Rosa, California, and this bid and the acceptance thereof may, at the option of the City, be considered null and void.

The undersigned is licensed in accordance with an act providing for the registration of Contractors, License No. _____, Class _____, expiration date _____.

The undersigned in registered with the Department of Industrial Relations, Registration No. _____.

IMPORTANT NOTICE: If bidder or other interested person is a corporation, state legal name of corporation, also names of the president, secretary, treasurer, and manager of the corporation; if a partnership, state true name of partnership, also the names of all partners in the partnership; if the bidder is a sole proprietor, state the business name and the proprietor's name in full.

Secretary of State Business Entity Number: _____.

Business Address

Telephone Number

I declare under penalty of perjury that the foregoing is true and correct.

BIDDER'S SIGNATURE: _____

TITLE: _____

DATE: _____

CONTRACT

CITY OF SANTA ROSA

CALIFORNIA

**CONTRACT NO. C01903
LOS ALAMOS TRUNK SEWER REPLACEMENT SEGMENT 1
(STREAMSIDE DR TO ELAINE DR)**

This Contract is made and entered into as of _____ at Santa Rosa, California, between the City of Santa Rosa ("City") and _____ of _____ ("Contractor").

ARTICLE I - For and in consideration of the payment and agreement hereinafter mentioned, to be made and performed by City, and under the conditions expressed in the required bonds hereunto annexed, Contractor agrees that for the benefit of City, at its own cost and expense, to do all the work and furnish all the materials, except such as are mentioned in the Special Provisions to be furnished by City, necessary to construct and complete the work herein described in a good, workmanlike, and substantial manner. The work embraced herein shall be done in accordance with the Standard Specifications of the State of California Department of Transportation, dated 2010, insofar as the same may apply (Standard Specifications); in accordance with the City of Santa Rosa Construction Specifications for Public Improvements (City Specifications); in accordance with the City of Santa Rosa Design and Construction Standards, (City Standards); in accordance with the State of California Department of Transportation Standard Plans, dated 2010 (Standard Plans), (collectively, "Contract Documents") and in accordance with the Special Provisions hereinabove set forth, all of which are hereby incorporated into and made part of this Contract.

The work to be performed is further shown upon a plan consisting of 33 sheets entitled, Los Alamos Trunk Sewer Replacement Segment 1 (Streamside Dr to Elaine Dr), File Number 2018-0043, approved by the Deputy Director of Transportation and Public Works, hereinafter referred to as the Project Plan(s).

ARTICLE II - Contractor agrees to receive and accept the following prices as full compensation for furnishing all materials and doing all the work contemplated and embraced in this Contract; also for all loss or damages arising out of the nature of the work aforesaid, or from the acts of the elements, or from any unforeseen difficulties or obstructions which may arise or be encountered in the prosecution of the work until its acceptance by City and for all expenses incurred by or in consequence of the suspension or discontinuance of work, and for well and faithfully completing the work, and the whole thereof in the manner and according to the Project Plans and Invitation for Bids therefor, and the requirements of the Engineer under them to wit:

ITEM NUMBER	QUANTITY	DESCRIPTION	UNIT PRICE	TOTAL
			\$ _____	\$ _____
TOTAL BASE BID (SUM OF "TOTAL" COLUMN)			\$ _____	

**BID ITEMS IN THIS SECTION WILL BE INSERTED
UPON AWARD OF THE CONTRACT AND SHALL BE
THE SAME AS THOSE BID UPON.**

ARTICLE III - City and Contractor hereby promise and agree that Contractor shall provide the materials and do the work according to the terms and conditions herein contained and referred to, for the prices aforesaid, and City hereby agrees to pay for the same at the time, in the manner, and upon the conditions set forth; and the parties for themselves, their heirs, executors, administrators, successors, and assigns, do hereby agree to full performance of the covenants herein stated.

ARTICLE IV - By execution of this Contract, Contractor hereby represents and certifies that Contractor is aware of the provisions of Labor Code section 3700 which require every employer to be insured against liability for Workers' Compensation or to undertake self-insurance in accordance with the provisions of that Code, and Contractor hereby agrees to comply with such provisions before commencing the performance of the work of this Contract.

ARTICLE V - It is further expressly agreed by and between the parties hereto that the Invitation for Bids, containing the Notice to Bidders including any required Bonds, the Contract Documents, and any Addenda are all essential parts of this Contract and are specially referred to and by such reference made a part hereof. In the event of any conflict in the provisions thereof, the terms of said documents shall control each over the other, in the following order:

1. Special Provisions
2. Project Plans
3. City Standards
4. City Specifications
5. Standard Specifications
6. Standard Plans

ARTICLE VI - Contractor agrees to commence work pursuant to this Contract within ten calendar days from the date authorized in the Notice to Proceed and to diligently prosecute the same to completion in accordance with Section 8-1.04C of the Special Provisions.

This Contract shall not be transferred or assigned without the prior written consent of City, which may be withheld by City in its sole and absolute discretion.

If Contractor is a corporation, two corporate officers of Contractor, one from each of the following two groups shall execute this Contract: a) the chairman of the board, president or any vice-president; b) the secretary, any assistant secretary, chief financial officer, or any assistant treasurer. The name and title of the corporate officers shall be printed under the signature.

In witness whereof, the parties hereto have executed this Contract as of the date first written above.

City:

City of Santa Rosa,
a Municipal corporation

By: _____

Title: _____

ATTEST:

By: _____

Title: _____

Approved as to form:

By: _____

Office of City Attorney

Contractor:

Name of Contractor,
Type of entity

By: _____

Name: _____

Title: _____

By: _____

Name: _____

Title: _____