INVITATION FOR BIDS

FOR CONSTRUCTING

R7 ROAD ACCESS STABILIZATION REPAIRS

CONTRACT NUMBER
C01801

ISSUED BY

CAPITAL PROJECTS ENGINEERING DIVISION

CITY OF SANTA ROSA, CALIFORNIA

2020

Last Updated: March 1, 2016

A T T E N T I O N
Prebid Conference
See Page 1

City of Santa Rosa

STATE OF CALIFORNIA

INVITATION FOR BIDS

CONTAINING:

NOTICE TO BIDDERS

SPECIAL PROVISIONS

BID FORMS

CONTRACT

FOR

R7 ROAD ACCESS STABILIZATION REPAIRS

Contract No. C01801

R7 ROAD ACCESS STABILIZATION REPAIRS

TABLE OF CONTENTS

BID FORMS

CONTRACT

CITY OF SANTA ROSA
STATE OF CALIFORNIA

NOTICE TO BIDDERS

➢	For technical questions regarding this project, contact Grant Bailey at (707) 543-4508.
➢	For direct access to plans, specifications and planholders' lists, go to **www.srcity.org/bids** and click on Bid/Proposal Opportunities or call (707) 543-3800.
➢	For direct access to bid results, go to **www.srcity.org/bids**. Under Link to Capital Projects, click on Capital Projects Contracts or call (707) 543-3835.

- IMPORTANT -

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., February 13, 2020, for R7 Road Access Stabilization Repairs, Contract No. C01801. (Engineer's Range: $1,500,000.00 - $1,800,000.00.)

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.

Mandatory Pre-Bid Meeting

Prospective bidders are required to attend a pre-bid meeting scheduled to be held at 10:00 a.m., February 5, 2020, at the R7 Water Storage Tank, 5557 Yerba Buena Road, Santa Rosa.

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.

CITY OF SANTA ROSA
C01801 - R7 ROAD ACCESS STABILIZATION REPAIRS
ESTIMATED QUANTITIES

Item No.	Description	Quantity	Units
1	TRAFFIC CONTROL	1	LS
2	WATER POLLUTION CONTROL	1	LS
3	TEMPORARY REINFORCED SILT FENCE	2,545	LF
4	ABANDON OR REMOVE EXISTING CONDUITS AND PULL BOXES	1	LS
5	REMOVE EXISTING ROCK SLOPE PROTECTION (F)	461	CY
6	SALVAGE EXISTING ROCK SLOPE PROTECTION (FACING CLASS)	25	CY
7	REMOVE AND REPLACE EXISTING BARBED WIRE CATTLE FENCE	66	LF
8	ADJUST EXISTING VALVE BOXES, CLEANOUTS TO GRADE	6	EA
9	ADJUST EXISTING MANHOLES TO GRADE	2	EA
10	CONFORM GRIND ASPHALT CONCRETE PAVEMENT	381	SF
11	REMOVE CONCRETE (CURB, CURB AND GUTTER)	158	LF
12	UTILITY CLEARANCES	1	LS
13	UTILITY CONFLICT RESOLUTION	1	FA
14	CLEARING AND GRUBBING	1	LS
15	SUBGRADE STABILIZATION/DIG-OUT	364	SY
16	ROADWAY EXCAVATION (F)	485	CY
17	STRUCTURE EXCAVATION (RETAINING WALL) (F)	2,950	CY
18	VEGETATED DRAINAGE SWALE	590	LF
19	IMPORT BORROW	820	CY
20	LANDSCAPING	1	LS
21	ROLLED EROSION CONTROL PRODUCT	5,609	SY
22	FIBER ROLLS	3,040	LF
23	CLASS 2 AGGREGATE BASE	525	CY
24	SEAL COAT	800	SY
25	HOT MIX ASPHALT (TYPE A)	400	TON
26	A.C. PAVEMENT REPAIR	14	SY
27	HOT MIX ASPHALT DIKE (TYPE A)	57	LF
28	HOT MIX ASPHALT DIKE (TYPE E)	703	LF
29	GRAVITY RETAINING WALL TYPE I (0-4.5' EXPOSED HEIGHT)	420	LF
30	GRAVITY RETAINING WALL TYPE II (>4.5' TO 6.0' EXPOSED HEIGHT)	55	LF
31	GRAVITY RETAINING WALL TYPE III (>6.0' EXPOSED HEIGHT)	280	LF
32	PRECAST CONCRETE DROP INLET	11	EA
33	CATCH BASIN (TYPE II)	3	EA
34	STORM DRAIN GALLERY	2	EA
35	TRENCH DAM	4	EA

CITY OF SANTA ROSA
C01801 - R7 ROAD ACCESS STABILIZATION REPAIRS
ESTIMATED QUANTITIES

Item No.	Description	Quantity	Units
36	ABANDON OR REMOVE EXISTING STORM DRAIN COMPONENTS	1	LS
37	15" HDPE STORM DRAIN PIPE	1,440	LF
38	18" HDPE STORM DRAIN PIPE	142	LF
39	24" HDPE STORM DRAIN PIPE	414	LF
40	TYPE HDPE DRAINAGE INLET	5	EA
41	12" REINFORCED CONCRETE STORM DRAIN PIPE	18	LF
42	48" STORM DRAIN MANHOLE	2	EA
43	60" STORM DRAIN MANHOLE	1	EA
44	TRENCH BRACING AND SHORING-STORM DRAIN	1	LS
45	MEDIAN CURB	62	LF
46	RETAINING WALL GUTTER	750	LF
47	CURB AND GUTTER	140	LF
48	SIDEWALK AND DRIVEWAY	230	SF
49	TEMPORARY CHAIN LINK FENCE	1	LS
50	CITY MONUMENTS	2	EA
51	TELEMETRY CONDUIT	1,306	LF
52	TEMPORARY CONDUIT	1	LS
53	TELEMETRY CABLE	1,910	LF
54	TELEMETRY PULL BOXES	3	EA

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 C01801 R7 Road Access Stabilization Repairs 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.

ERICH RAUBER, P.E.
Supervising Engineer

12/24/19
Date

SPECIAL PROVISIONS

General Specifications

CITY OF SANTA ROSA, CALIFORNIA

R7 ROAD ACCESS STABILIZATION REPAIRS

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 26 sheets entitled R7 Road Access Stabilization Repairs, 2017-0006
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 (if the City determines, in its sole discretion, that the project involves environmental hazards)	$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. 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 26 sheets entitled R7 Road Access Stabilization Repairs, 2017-0006
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.

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.

5-1.26 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.

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:

180 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.

Unless otherwise 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.

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.

City of Santa Rosa

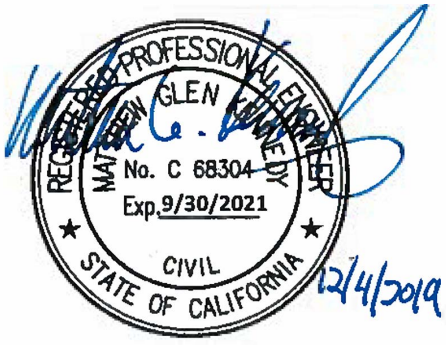
SPECIAL PROVISIONS

FOR

ROAD ACCESS STABILIZATION REPAIRS FOR TANK R7

CONTRACT NUMBER C01801

December 2019



2235 Mercury Way, Suite 150
Santa Rosa, CA 95407
(707) 523-1010

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.

Attention is directed to Section 7-1.03, "Public Convenience", Section 7-1.04, “Public Safety”, and Section A, "Fees and Permits" of these Special Provisions.

Exact locations of Project Identification signs and Advance Notice signs shall be determined in the field 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.

12-3Traffic-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.

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. Demonstrate how two-way traffic will be maintained.

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.

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. **Full access shall be provided to all driveways during non-working hours.**

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 7-1.08, "Maintaining Traffic", to 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.

The Contractor shall maintain vehicle access to 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.

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 where the construction is in progress. The Contractor will be required to maintain vehicle access to homes and other properties within the block where work is in progress.

The Contractor will be allowed to use areas on private property adjacent to the Tank R7 access road shown on the Plans for temporary staging of construction materials and equipment.

Pavement damaged or destroyed by reasons of the Contractor's operations shall be replaced in accordance with City Standards as a minimum and restored to a condition at least as good as when the Contractor entered upon the work, at the Contractor's expense.

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.

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, 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.

[Version: 04/29/15 DCM STD2010]

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 Special Provisions. 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.

13-3 Storm Water Pollution Prevention Plan

13-3.01 General: This project requires coverage under the State Water Resources Control Board Order No. 2009-0009-DWQ, (as amended by 2010-0014DWQ & 2012-0006-DWQ), National Pollutant Discharge Elimination System General Permit No. CAS000002, Waste Discharge Requirements for Discharges of Storm Water Runoff Associated with Construction and Land Disturbance Activities (General Permit).
The above referenced Orders can be found here:
https://www.waterboards.ca.gov/water_issues/programs/stormwater/constpermits.shtml

Section 13-3 includes specifications for developing, implementing and maintaining a Storm Water Pollution Prevention Plan (SWPPP) required by this General Permit.

This project has been determined to be a Risk Level 2 traditional construction project. A Notice of Intent for coverage under the General Permit will be filed and paid for by the City.

It is the Contractor's responsibility to develop and implement the SWPPP. Included in the SWPPP will be a project description, site map, erosion control plan, construction site monitoring program, reporting and inspection forms, contact list, and all other information necessary to comply with the requirements of the General Permit. The work under this section also includes updating the SWPPP.

Information on storm water best management practices (BMPs), preparing storm water pollution prevention plans, forms, reports, and other documents can be found in **CASQA**'s *Storm Water Best Management Practice Handbook Portal: Construction (January 2015)*. A PDF copy of this handbook is available for viewing at the City Public Works Office, 69 Stony Circle and will be made available to the Contractor.

The SWPPP shall reference CASQA BMP fact sheets and follow the format suggested in Appendix B of the CASQA handbook. The Contractor may substitute another format if approved by the Engineer and it complies with all requirements of the General Permit.

All discharges of storm water from the project must comply with the General Permit.

A storm water annual report shall be prepared and submitted by the Contractor. The annual report must cover the preceding period from July 1th to June 30th (or Notice of Completion).

This work includes collecting and submitting all required data to SMARTS to comply with the Annual Report requirements of the General Permit and SMARTS.

Do not start job site activities until:

1. The SWPPP is authorized.
2. The waste discharge identification number (WDID) is issued.
3. SWPPP review requirements have been fulfilled. If the RWQCB requires time for review, allow 30 days for the review.

A current copy of the SWPPP shall be kept on site when the Contractor or its subs are working.

13-3.01A Summary: The Contractor shall be responsible for obtaining the State Water Resources Control Board General NPDES Permit for the Discharge of Storm Water related to Construction Activities (Construction General Permit). Contractor shall prepare, submit and implement a Storm Water Pollution Prevention Plan (SWPPP) in accordance with Section 13-3, Storm Water Pollution Prevention Plan, of the Standard Specifications and the following Mitigation Measure:

Mitigation Measure HWQ-1: Manage Construction Dewatering

If construction dewatering is required, the Contractor shall:

- Reuse the water on-site for dust control, compaction, or irrigation; or
- Discharge (by permit) to a sanitary sewer.

If discharging to the sanitary sewer, the Contractor shall comply with a one-time discharge permit or other type of approval requiring, as necessary, measures for characterizing the discharge, and ensuring filtering methods and monitoring to verify that the discharge is compliant with the City's local wastewater discharge requirements.

13-3.02 SWPPP Preparation and Implementation: The SWPPP shall be written, amended and certified by a Qualified SWPPP Developer (QSD) as defined in the General Permit, Section Vll.B.1.

The Contractor shall provide a Qualified SWPPP Practitioner (QSP), as defined in the General Permit, Section Vll.B.3, to ensure full compliance with the General Permit and implementation of all elements of the SWPPP, including all storm water inspections and visual observations, Rain Event Action Plans, sampling and analysis and record keeping. The QSP shall ensure that all BMPs required by this SWPPP are implemented. The QSP shall notify the QSD of needed revisions to the SWPPP to reflect current conditions and all proposed changes.

This work includes gathering and presenting, in an approved format, all information necessary to produce a SWPPP that complies with the General Permit. The SWPPP shall be developed by a QSD and include, but not limited to: project description, site maps, erosion control plans, construction site monitoring program, contact information, monitoring and reporting forms, project specific BMP fact sheets, schedule, training documentation, designated QSD and QSP qualifications, SWPPP amendment log sheet and all other information necessary to comply with the General Permit and these Special Provisions.

The SWPPP shall be updated to reflect current project conditions, personnel, schedule, alterations to plans, BMP modifications or substitutions, relocation of staging and material stockpiling areas and any other changes that are not reflected in the SWPPP.

The Contractor is directed to Section A Fees and Permits for additional information.

13-3.03 Submittals: Within 20 days of Contract approval:

1. Submit 1 copy of your SWPPP for review. Allow 20 days for the City's review. The Engineer provides comments and specifies the date when the review stopped if revisions are required.
2. Change and resubmit a revised SWPPP within 5 days of receiving the Engineer's comments. The City's review resumes when a complete SWPPP has been resubmitted.
3. When the Engineer authorizes the SWPPP, upload an electronic copy to the State's **Storm Water Multiple Application and Report Tracking System** (SMARTS) and submit 2 printed copies of the authorized SWPPP to the City.
4. If the Engineer requests changes to the SWPPP based on the RWQCB's comments, amend the SWPPP within 5 days.

13-3.04 Training: Employees must receive initial water pollution control training before starting work at the job site.

For project managers, supervisory personnel, subcontractors, and employees involved in water pollution control work:

1. Provide storm water training in the following subjects:
    a. Water pollution control rules and regulations
    b. Implementation and maintenance for:
        i. Temporary soil stabilization
        ii. Temporary sediment control
        iii. Tracking control
        iv. Wind erosion control
        v. Material pollution prevention and control
        vi. Waste management
        vii. Non-storm water management

2. Conduct weekly training meetings covering:
    a. Deficiencies and corrective actions for water pollution control practices
    b. Water pollution control practices required for work activities during the week
    c. Spill prevention and control
    d. Material delivery, storage, usage, and disposal
    e. Waste management
    f. Non- storm water management procedures

Storm Water training shall be documented in the SWPPP.

13-3.05 Construction Site Monitoring Program: The SWPPP includes a Construction Site Monitoring Program containing instructions and forms. Monitoring and inspections will take place during normal working hours

BMP inspection shall be performed by a QSP and documented on an approved form. A copy of the inspections will be kept in the SWPPP on site. An additional copy shall be given to the City. Noted deficiencies shall be brought to the Contractor's attention and Engineer and corrective action taken within 2 working days or before any rain event.

Monitor the National Weather Service's forecast on a daily basis. For the National Weather Service's forecast, go to the Web site for the National Weather Service. Printed copies of the forecast shall be kept in the SWPPP.

The QSP shall prepare all Rain Event Action Plans (REAP) 48 hours in advance of predicted rain event with a 50% or greater probability. The REAP shall be kept on site.

Use the *Storm Water Site Inspection Report* form for documenting site inspections.

1. Inspections of BMPs identified in SWPPP:
   a. On a predetermined schedule of at least once a week;
   b. Before a forecasted storm event;
   c. After a qualifying rain event that produces site runoff;
   d. At 24-hour intervals during extended storm events;

2. Daily inspections of (if applicable):
   a. Storage areas for hazardous materials and waste
   b. Hazardous waste disposal and transporting activities
   c. Hazardous material delivery and storage activities

3. Inspections of:
   a. Vehicle and equipment cleaning facilities:
      i. Daily if vehicle and equipment cleaning occurs daily
      ii. Weekly if vehicle and equipment cleaning does not occur daily
   b. Vehicle and equipment maintenance and fueling areas:
      i. Daily if vehicle and equipment maintenance and fueling occur daily

4. Pre and post rain inspections:
   a. pre-rain event inspection within 48 hours of predicted qualifying storm to verify the site and the BMPs are ready for the predicted rain.
   b. post-rain event inspection within 48 hours after a qualifying storm to observe the discharge locations and the discharge of any stored or contained rainwater; determine if BMPs functioned as designed; and identify if any additional BMPs are required.

This work includes providing a QSP, performing weekly BMP inspections, documentation, coordinating with Contractor and project inspector, providing QSD with SWPPP update information and all other work necessary to comply with the inspection requirements of the SWPPP.

Qualifying Rain Event Inspections, include both pre-rain and post-rain inspection, include providing a QSP, performing pre-rain inspections and post-rain inspections for qualified rain events as required in the SWPPP, documentation, coordinating with Contractor and project inspector and all other work necessary to comply with the qualifying rain event inspection requirements of the SWPPP.

13-3.05a Sampling: The QSP will sample for pH and turbidity during each qualifying rain event at all locations where runoff from the project is discharged offsite. Samples must be representative of the runoff flow and characteristics of the site's discharges. All locations discharging runoff from the site must be sampled Additional samples for nonvisible pollutants may be collected for lab analysis if required.

Three measurements will be taken at each discharge location for each working day of a qualified rain event. Measurements will be taken at the beginning of the work day or discharge, in the middle and one near the end of the discharge or work day. All measurements will be documented on sampling forms with a copy kept in the SWPPP and one given to the City. Discharge locations shall be marked on the site map in the SWPPP.

Measurements will be made using portable field meters. Each meter shall have been calibrated prior to use. A meter calibration log sheet shall be kept in the SWPPP. Measurements will be made during normal working hours.

This work includes collecting samples, measuring pH and turbidity, documentation, maintaining and calibrating pH and turbidity meters, submitting data to SMARTS and all other work necessary to comply with the sampling requirements of the SWPPP and the General Permit.

13-3.06 Construction: The SWPPP shall be updated to reflect current project conditions, personnel, schedule, alterations to plans, BMP modifications or substitutions, relocation of staging and material stockpiling areas and any other changes that are not reflected in the SWPPP or on the plans. A printed copy of the authorized SWPPP shall be at the job site whenever there is project related activity at the site.

The Contractor shall:

1. Install appropriate BMP materials and devices as listed in the SWPPP, before performing work activities.
2. Install soil stabilization materials (BMPs) in all work areas that are inactive or before storm events.
3. Repair or replace water pollution control practices within 48 hours of discovering any damage, unless a longer period is authorized by the Engineer.
4. The City does not pay for the cleanup, repair, removal, disposal, or replacement of BMP devices due to improper installation or Contractor negligence.

The QSP shall report all non-compliance to the City.

13-3.07 Definitions:

Active Area: Area where soil-disturbing work activities have occurred at least once within 15 days.

Construction Phase: Includes (1) highway construction phase for building roads and structures, (2) plant establishment and maintenance phase for placing vegetation for final stabilization, and (3) suspension phase for suspension of work activities or winter

shutdown. The construction phase continues from the start of work activities to Contract acceptance.

Inactive Area: Area where soil-disturbing work activities have not occurred within 15 days.

Normal Working Hours: For purposes of the Water Pollution Control, normal working hours shall be from 7 a.m. to 4 p.m., Monday through Friday, unless otherwise approved by the Engineer.

Qualifying Rain Event: Storm that produces at least 0.5 inch of precipitation with a 48-hour or greater period between rain events.

Storm Event: Storm that produces or is forecasted to produce at least 0.10 inch of precipitation within a 24-hour period.

13-3.10 Payment: Full compensation for conforming to the requirements of this Section shall be considered as paid for at the contract **lump sum** price for **Water Pollution Control**, which price shall include full compensation for all material, equipment, labor and work required as specified herein, including preparing and revising the SWPPP and no additional allowance will be made therefor. All SWPPP permits are at the Contractor's expense.

14 ENVIRONMENTAL STEWARDSHIP

14-2.02 Cultural Resources: Contractor's attention is directed to the National Historic Preservation Act of 1966 (16 U.S.C. 470 and 36 CFR 800) which provides for the preservation of potential historical architectural, archaeological, or cultural resources (hereinafter called "cultural resources").

Contractor shall conform to the requirements of the National Historic Preservation Act of 1966 as it relates to the preservation of cultural resources.

In the event potential cultural resources are discovered during subsurface excavations at the site of construction, the following procedures shall be instituted:

1. The Engineer will issue a Field Order directing the Contractor to cease construction operations at the location of such potential cultural resources find.
2. The City will retain an archaeologist to perform a site assessment.
3. The Contractor shall direct their forces to other items of work while the City and archaeologist assesses the cultural resources.
4. Such Field Order shall be effective until such time as a qualified archaeologist can assess the value of such potential cultural resources and make a recommendation to the State Water Resources Control Board Cultural Resources Officer.

If the archaeologist determines that the potential find is a bona fide cultural resource, at the direction of the State Water Resources Control Board Cultural Resources Officer, the Contractor shall suspend work at the location of the find, direct their forces to other items of work, and the following Cultural Resources (CR) Mitigation Measures (MM) shall be taken:

Mitigation Measure CR-1: Identify and Avoid or Minimize Impacts to Unknown Historical and/or Archaeological Resources

If subsurface historical/archaeological materials are encountered during construction activities, the piece of equipment that encounters the materials shall be stopped, and the find inspected by a qualified historian/archaeologist. Project personnel shall not collect historical/archaeological materials. If the historian/archaeologist determines that the find qualifies as a unique historical/archaeological resource for purposes of CEQA (CEQA Guidelines Section 15064.5(c)(3)), all work must be stopped in the immediate vicinity to allow the archaeologist to evaluate any materials and recommend appropriate treatment. Such treatment and resolution shall include either modifying the project to allow the materials to be left in place or undertaking data recovery of the materials in accordance with standard archaeological methods. Contractor shall coordinate with the City to ensure the resource is protected and preserved, and Contractor shall direct their forces to other items of work outside the immediate vicinity of the historical/archaeological materials.

Mitigation Measure CR-2: Avoid or Document Unknown Paleontological Resources

If a paleontological resource is discovered during construction, all ground disturbing activities within 50 feet of the find shall be temporarily halted but may be diverted to areas beyond 50 feet from the discovery to continue working. Contractor shall inform the City of the paleontological resource discovery, and an appointed representative of the City shall notify a qualified paleontologist, who will document the discovery as needed, evaluate the potential resource, and assess the nature and significance of the find. Based on the scientific value or uniqueness of the find, the paleontologist may record the find and allow work to continue,

or recommend salvage and recovery of the material, if the City determines that the find cannot be avoided. The paleontologist shall make recommendations for any necessary treatment that is consistent with currently accepted scientific practices.

Mitigation Measure CR-3: Procedures for Encountering Human Remains

California Health and Safety Code Section 7050.5 states that it is a misdemeanor to knowingly disturb a human grave. If human graves are encountered, the Contractor shall halt work in the vicinity, notify the City and County Coroner, and direct their forces to other items of work outside the vicinity of the human graves. At the same time, the City shall contact a qualified archaeologist to evaluate the situation. If human remains are of Native American origin, the Sonoma County Coroner shall notify the Native American Heritage Commission within 24 hours of identification, pursuant to Public Resources Code 5097.98.

The treatment of any human remains and associated or unassociated funerary objects discovered during soil-disturbing activities shall comply with applicable State laws. Such treatment shall include immediate notification of the Sonoma County Coroner and, in the event of the coroner's determination that the human remains are Native American, notification of the Native American Heritage Commission, which would appoint a Most Likely Descendant (MLD) (PRC Section 5097.98). A qualified archaeologist, the City, and the MLD shall make all reasonable efforts to develop an agreement for the treatment, with appropriate dignity, of any human remains and associated or unassociated funerary objects (CEQA Guidelines Section 15064.5[d]). The agreement would take into consideration the appropriate excavation, removal, recordation, analysis, custodianship, and final disposition of the human remains and associated or unassociated funerary objects. The Public Resources Code allows 48 hours to reach agreement on these matters. If the MLD and the other parties could not agree on the reburial method, the City shall follow Section 5097.98(b) of the Public Resources Code, which states that "the landowner or his or her authorized representative shall reinter the human remains and items associated with Native American burials with appropriate dignity on the property in a location not subject to further subsurface disturbance."

Mitigation Measure CR-4: Minimize Impacts to Unknown Tribal Cultural Resources

If potential tribal cultural resources are uncovered during construction, the City shall halt work, and workers shall avoid altering the materials and their context. Contractor shall direct their forces to other items of work outside the area where tribal cultural resources are found. Project personnel shall not collect cultural materials. The City shall notify the Lytton Band of Pomo Indians and the Federated Indians of Graton Rancheria. The City, in coordination with interested tribes, shall determine if the resource qualifies as a tribal cultural resource under CEQA. If it does, then all work must remain stopped in the immediate vicinity to allow evaluation of any materials. The City shall ensure that qualified resources are avoided or protected in place, in accordance with the requests of the interested tribes, to the extent feasible. Work may proceed on other parts of the Project while mitigation for tribal cultural resources is being carried out.

14-2.02D Payment: Full compensation for conforming to 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.

14-6 Biological Resources

Prior to the Contractor mobilizing at the site, the City shall perform a bird and bat survey to identify any known nesting sites. If nesting sites are found, the City will delineate the area of protection, and Contractor shall adhere to the following Biological Mitigation Measure:

Environmental Protection Action 3 – Bird and Bat Surveys

The Contractor shall adhere to the following measures to avoid significant impacts to birds and bats:

- Grading or removal of any vegetation shall be conducted outside the nesting season, which occurs between approximately February 1 and August 31, if feasible. (No survey is required during this period).
- If grading or vegetation removal between August 31 and February 1 is infeasible and work must occur within the breeding season, the Contractor shall inform the City and the City shall retain a qualified biologist to perform a pre-construction nesting bird (both passerine and raptor) survey of the project areas and nearby trees within 7 days of ground breaking. If no nesting birds are observed, no further action is required, and work shall occur within one week of the survey to prevent "take" of individual birds that could begin nesting after the survey.
- If bird nests (either passerine and/or raptor) are observed during the pre-construction survey, a disturbance-free buffer zone shall be established around the nest tree(s) until the young have fledged, as determined by a qualified biologist.
- The radius of the required buffer zone can vary depending on the species, (i.e., 75 to 100 feet for passerines and 200 to 300 feet for raptors), with the dimensions of any required buffer zones to be determined by a qualified biologist in consultation with CDFW.
- To delineate the buffer zone around a nesting tree, the City shall install temporary orange construction fencing at the specified radius from the base of the tree within which no machinery or workers shall intrude.
- After the fencing is in place there will be no restrictions on grading or construction activities outside the prescribed buffer zones.

The following measures will be required to avoid impacts to roosting bats.

(a) Preconstruction Surveys:

- All trees and structures suitable for use by bats would be surveyed by the City's biologist for signs of bats prior to project activities.

(b) Avoidance Measures:

- If bats are discovered during the surveys, then a buffer of 100 to 150 feet would be maintained and the City will inform Contractor of the buffer zone.
- The optimal time to remove trees is September 15 through October 15, when young would be capable of flying, and between February 15 to April 1 to avoid hibernating bats and prior to formation of maternity sites.
- If flushing of bats is necessary, it will be done by a biologist during the non-breeding season from October 1 to March 31. When flushing bats, structures and/or trees will be removed carefully to avoid harming individuals, and torpid bats given time to completely arouse and fly away.
- During the maternity season from April 1 to September 30, prior to construction, a qualified biologist will determine if a bat nursery is present at any sites identified as potentially housing bats.
- If an active nursery is present, the City and biologist will delineate the area and Contractor shall not disturb the active nursery of the bats until the biologist determines that breeding is complete and young are reared.

14-6A Payment: Full compensation for conforming to 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.

14-8 Noise and Vibration

Contractor shall adhere to the following Noise (NOI) Mitigation Measures:

Mitigation Measure NOI-1: Noise Reduction Measures during Construction
The City or its contractor shall do the following during construction:

- Construction equipment shall be properly muffled and maintained with noise reduction devices to minimize construction-generated noise.
- Prohibit unnecessary idling of internal combustion engines.
- The contractor shall locate stationary noise sources away from residents and require the use of acoustic shielding with such equipment when feasible and appropriate.
- Notify residents within 500 feet of the construction site of the construction scheduling in writing.
- The construction contractor shall designate a "noise disturbance coordinator" for construction activities. The coordinator would be responsible for responding to any local complaints regarding construction noise. The coordinator would determine the cause of the noise complaint (i.e., starting too early, bad muffler, no shielding), and would require that reasonable measures warranted to correct the problem would be implemented. Conspicuously post a telephone number for the coordinator at the construction site and include it in the notice sent to neighbors and businesses regarding the construction schedule.

14-8A Payment: Full compensation for conforming to 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.

14-9.03 Dust Control

14-9.03A General: Sweeping per section 14-9.03C shall also be performed to prevent and alleviate dust.

Sweeping, covering stockpiles, applying water, and/or dust palliative, to control dust caused by public traffic is not change order work.

The following Mitigation Measure shall be taken:

Environmental Protection Action 1 – BAAQMD Basic Construction Measures
To limit dust, criteria pollutants, and precursor emissions associated with the construction activity, the Contractor shall implement the following Bay Area Air Quality Management District (BAAQMD) recommended Basic Construction Measures:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas and unpaved access roads) shall be watered two times per day;
- All haul trucks transporting soil, sand, or other loose material off-site shall be covered;
- All visible mud or dirt tracked-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping shall be prohibited;
- All vehicle speeds on unpaved areas shall be limited to 15 mph;
- All paving shall be completed as soon as possible after trenching work is finished;

- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations). Clear signage shall be provided for construction workers at all access points;
- 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;
- A publicly visible sign shall be posted 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 Air District's phone number shall also be visible to ensure compliance with applicable regulations.

14-9.03C Construction: All dust-producing work and unpaved construction sites shall require a minimum watering in the middle and ending of each workday. The frequency of watering shall increase if dust is airborne. Watering shall not produce runoff.

Contractor shall maintain dust control to the satisfaction of the Engineer, 7 days a week, 24 hours per day.

At the end of each work day the Contractor shall thoroughly sweep all streets in the work zone to minimize airborne dust.

At the end of each work week the Contractor shall sweep all streets in the work zone with a commercial street sweeping truck equipped with a rear pick up broom.

At the Engineer's discretion additional sweeping or watering may be required, including the use of a commercial street sweeping truck equipped with a rear pick up broom, at any time or place.

14-9.03D Payment: Full compensation for conforming to 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.

14-10.01 General: 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.

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.

14-10.02D 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.

14-11 Hazardous Waste and Contamination

14-11.01A Hazardous Waste Transport and Disposal: The bidder's attention is directed to the fact that there is **no known** subsurface petroleum hydrocarbon contamination at the project site.

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. Conditions indicative of contamination may be either visual (staining in soil, sheen on water surface) or olfactory (petroleum hydrocarbon odors.)

Upon the discovery of suspected contaminated materials, the Contractor shall immediately provide 40-hour OSHA-HAZWOPER certified workers in the contaminated area. The Contractor shall also 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.

14-11.02A Discovery of Asbestos Cement Pipe: The Contractor is advised that asbestos cement pipe (ACP) will likely 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.

14-11.06: Department Generated Soil: None of the excavated material shall be disposed of on the work site. All material excavated from trenches in the project area shall be the property of the Contractor. 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 disclose in landfill applications the existing conditions and the written disposal and entry permission shall include acknowledgement of such disclosure. Contractor shall comply with all disposal regulations such as City, County, and/or State permits and licenses, as may be required.

The Contractor shall be responsible for separating asphalt, concrete, base rock, asbestos cement pipe, and other non-contaminated debris from the soil prior to loading the soil for transport to disposal sites. Dispose of asphalt, concrete, and base rock at a recycler of these materials as specified in Section 124 of these Special Provisions.

Excess trench spoils which are free of; asphalt concrete; sewer, water or storm drain pipe of any kind or type; concrete; metal; rock greater than 6” in size; vegetation; and other deleterious materials, **may be** deposited at the City’s Municipal Service Yard located at 35 Stony Point Road in the designated area known as Pond 2. **It shall be the Contractor’s responsibility to coordinate any disposal to this site with the Engineer, and to make sure spoils are free of debris.** All debris found will need to be picked up and disposed of properly.

The following Pond 2 soil transport, disposal and placement conditions shall be adhered to:

1. Material must be free of asphalt concrete; asphalt and soil grindings associated with roadway excavation and reconstruction;
2. Soil beneath asphalt that was previously oiled for paving is not allowed;
3. Sewer, water or storm drain pipe of any kind or type are not allowed;
4. Concrete; metal; rock greater than 6" in size; vegetation; and other deleterious materials are not allowed;
5. The quantity of trucks and the volume of soil deposited in Pond 2 from this project will be tracked. Truck drivers will be required to sign a log and be subject to periodic inspections to ensure that only soil from this project is deposited in Pond 2
6. The Contractor shall spread and compact all project soils deposited into Pond 2 to 85% relative compaction and testing will be provided and performed by the City's materials Engineering Laboratory. The cost of compaction testing will be borne by the City.
7. Contractor shall comply with all disposal regulations such as City, County, and/or State permits and licenses, as may be required.
8. Soil disposal shall be limited to Monday through Friday between the hours of 7:00 am and 4:30 pm. Advanced, 48-hour notice is required to the City inspector and Water prior to starting.
9. Pond 2 site access is directly affected by weather conditions. You should anticipate no access during and for some time after rain events, unless wet weather site conditions are met at your expense.
10. The haul route shall be through the City Municipal Service Yard. A 15 MPH speed limit shall be observed at all times with stopping at all crosswalks and stop signs. No trucks shall access the site via any other route.
11. Tracking of material from the disposal location onto any and all paved surfaces near the pond is not allowed. Should tracking become evident sweeping will be required at your cost no later than the end of day. Dust control shall be provided at all times in accordance with Section 10.
12. The Idling limits on In-Use Off-Road Diesel Vehicles in section 2449 (d) (3) in Title 13, article 4.8, chapter 9, California Code of Regulations (CCR) shall be effective and enforceable.

Truck drivers will be required to sign a log and be subject to periodic inspections to ensure that only soil from this project is deposited in Pond 2. Any excess trench spoils or other excess material placed in Pond 2 not associated with this project will be cause for terminating Contractor's option to deposit excess material on City property. The Contractor shall spread and compact all project soils deposited into Pond 2 to 85% relative compaction and testing will be provided and performed by the City's Materials Engineering Laboratory. The cost of compaction testing will be borne by the City. The Contractor shall comply with all disposal regulations such as City, County, and/or State permits and licenses, as may be required.

Should the Contractor elect to dispose of material at the City's Municipal Service Yard in Pond 2, a three (3) working day advanced notice is required. Soil disposal shall be limited to Monday through Friday between the hours of 7:30 a.m. and 4:30 p.m. Disposal site access is directly affected by weather conditions. The Contractor should anticipate no access during and for some time after rain events, unless wet weather site conditions are met at Contractor's expense. Any such improvements shall become the property of the City of Santa Rosa Utilities Department.

The City shall reserve the right to unconditionally suspend or revoke disposal at any time at no cost to the City.

14-11.11 Payment: Full compensation for **Hazardous Waste and Contamination** and disposal of all excavated material, including, but not limited to, transportation costs, soil disposal fees, and providing all necessary equipment and labor shall be considered as included in the prices paid for the various contract items of work, and no additional compensation will be made therefor.

[Revised: 05/18/15-DCM STD2010]

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.

Contractor is advised that the existing roadways used to access the project site are residential in nature. Material deliveries shall not exceed maximum axle loads per California Vehicle Code. Any overweight or oversized loads will require a permit.

Any damage to roadways or private properties caused by vehicles transporting materials to and from the project site, staging or any construction activities shall be repaired at the Contractor's expense to the satisfaction of the Engineer.

Contractor shall adhere to the following Mitigation Measure:

Environmental Protection Action 4 – Offsite Construction Staging Areas

The City shall ensure that off-site construction staging areas meet the following qualifications:

- Staging areas will not occur within 100 feet of sensitive receptors. Sensitive receptors may include residences, overnight health care facilities, and schools.
- Staging will not occur where there are jurisdictional wetlands or habitat for special-status species. Prior to using a staging area, the City will ensure that wetland and habitat surveys are conducted by qualified biologists. Staging areas that are entirely paved, compacted, or maintained landscaped areas are not subject to this measure.
- Staging will protect trees.
- Staging will not occur where known archaeological or historic resources have been previously identified. Prior to using a staging area, the City will conduct an archival records search with the Northwest Information Center to identify known archaeological resources within the vicinity of the project facility. Staging areas that are entirely paved and that would not be excavated are not subject to this measure.
- Staging areas located in a floodplain shall not include fueling areas or storage areas for chemicals or hazardous substances between October 1 and April 30.

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.

15-2.02A General: Remove existing barbed wire cattle fence as necessary to achieve finish grades shown on the plans.

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.

15-2.02K Remove Drainage Facilities: Remove all existing storm drainage facilities in conflict with the work and as indicated on the plans. Abandon storm drain pipes in accordance with City Standard 507 where indicated on the plans.

15-2.02N Asbestos Cement Pipe: The Contractor is advised that asbestos cement pipe (ACP) will likely 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 Conduit and Pull Boxes: Remove all existing conduits, cables and pull boxes in conflict with the work and as indicated on the plans.

15-2.02P Rock Slope Protection: Remove all existing rock slope protection as indicated on the plans

15-2.08A General: Reset existing City facility boxes and lids to grade. The City will furnish at no cost to the Contractor new material to replace existing boxes and lids that do not comply with current City Standards or damaged prior to Contractor's operations.

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.

15-2.13 Payment:

Abandon or Remove Existing Conduits and Pull Boxes 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 abandoning or removing existing telecommunication conduits, cables and pull boxes, including but not limited to excavation, backfill, and compaction, coordination with the City on shut-down and disconnecting cables, as specified herein, and no additional allowance will be made therefor.

Remove Existing Rock Slope Protection shall be a final pay quantity (F) paid for at the contract price per **cubic yard**, which price shall include full compensation for furnishing all labor, materials, tools, and equipment and doing all the work involved in removing existing concrete lined drainage channel and rock slope protection at storm drain outfalls and drainage channels, including but not limited to access, loading, hauling, transport, disposal, slope grading and restoration, keying in new slope, overbuilding of fill slopes,

compaction, and backfilling voids with suitable fill material to achieve finish grades in areas where rock slope protection is removed down slope of the R7 Road Access, as specified herein, and no additional allowance will be made therefor.

Salvage Existing Rock Slope Protection (Facing Class) shall be paid for at the contract **cubic yard** price, which price shall include full compensation for furnishing all labor, materials, tools, and equipment and doing all the work involved in salvaging and installing existing facing class rock slope protection using Placement Method A, as shown on the plans and specified herein, and no additional allowance will be made therefor.

Remove and Replace Existing Barbed Wire Cattle Fence shall be paid for at the contract **linear foot** price, which price shall include full compensation for furnishing all labor, materials, tools, and equipment and doing all the work involved in removing and replacing existing barbed wire fencing as required to construct retaining walls and perform fill and grading, as specified herein, and no additional allowance will be made therefor.

Adjust Existing Valve Boxes, Cleanouts to Grade shall be paid for at the contract unit price per **each**, which price shall include full compensation for furnishing all labor, materials, tools, and equipment and doing all the work involved in adjusting existing valve box frame and covers, mainline cleanouts, and other utility covers and lids to grade 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 per **each**, which price shall include full compensation for furnishing all labor, materials, tools, and equipment and doing all the work involved in adjusting existing manhole frame and covers to grade as specified herein, and no additional allowance will be made therefor.

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.

15-3.03 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 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: Conform Grind Asphalt Concrete Pavement shall be paid for at the contract price per **square foot**, which price shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, including HMA temporary tapers, and doing all work involved in conform grinding asphalt concrete pavement and removal of HMA dikes, as shown on the plans and specified herein, and no additional allowance will be made therefor.

Remove Concrete (Curb, Curb and Gutter) 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 the work involved in saw cutting, removal and disposal of concrete median curb and curb and gutter, as shown on the plans and specified herein, and no additional allowance will be made therefor.

Payment for saw cutting, removal and disposal of concrete sidewalk and driveway areas shall be included in the contract 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.*

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 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.

15-7.01 Payment: Utility Clearances 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.

15-7.2 Utility Conflict Resolution: In accordance with Section 19-1.03D, "Buried Man-Made Objects" of the Standard Specifications: Remove, relocate or mitigate utility conflicts, man-made buried objects or other unforeseen items as ordered by the Engineer.

15-7.21 Payment: Utility Conflict Resolution shall be paid for on a **Force Account** basis up to the contract allowance price and shall include full compensation for furnishing all labor, materials, permits, tools and equipment, and for doing all the work involved as required to complete the Work, and as directed by the Engineer, and no additional compensation will be allowed therefor.

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)

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.

All existing vegetation, grasses and shallow roots within grading limits shall be removed to expose firm, undisturbed native soil prior to grading and earthwork activities.

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.

Contractor shall adhere to the following Mitigation Measure prior to earthwork activity and/or vegetation removal:

Mitigation Measure HAZ-1: Reduce Wildland Fire Hazards during Construction
The City or its contractor shall remove and clear away dry, combustible vegetation from the construction site. Grass and other vegetation less than 18 inches in height above the ground shall be maintained where necessary to stabilize the soil and prevent erosion. Vehicles shall not be parked in areas where exhaust systems may contact combustible materials. Fire extinguishers shall be available on the construction site to assist in quickly extinguishing any small fires. The contractor shall have the phone number for the local fire department on site.

16-1.03 Construction: The area to be cleared and grubbed shall be the area within the right-of-way and construction limits as shown on the plans, unless otherwise specified in the Special Provisions.

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 and Section 19 of these Special Provisions.

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

[Version: 10/21/14CDA STD2010]

19 EARTHWORK

19-1 General

19-1.01 General:
Non-contaminated site: See section 19-2.03B, Surplus Material, of these Special Provisions.

Roadway excavation shall include all excavation, embankment construction, disposal of excess material, and other work as specified herein.

Roadway excavation shall consist of excavation of the roadway prism within the limits for road reconstruction, as shown on the Project Plans, and disposal of excess material, as specified herein. Any additional excavation in terms of horizontal and/or vertical extent performed by the Contractor beyond the limits of the road reconstruction shown on the Project Plans shall be filled with asphalt concrete base **at the Contractor's expense** in accordance with Section 39 of these Special Provisions.

19-1.03B(1) Subgrade Stabilization/Dig-Out: Subgrade stabilization shall conform to the details shown on the plans and as specified herein. Subgrade stabilization shall consist of excavation and removal of unstable areas in the subgrade, as determined by the Engineer, and replacement with soil stabilization fabric and asphalt concrete base. The exact locations for subgrade stabilization shall 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. 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 Engineer may request the Contractor, at the Contractor's expense, to dig a test hole to verify that subgrade conditions are sufficiently dry or moist to proceed with 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/Dig-Out shall be paid for at the contract price per **square yard** as measured in the field. Price shall include full compensation for removal of existing unsuitable material, 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.

19-2 Roadway Excavation

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

For the R7 Access Road reconstruction, Roadway Excavation may be performed with a pavement grinder or conventional excavation equipment. Construction equipment including rubber-tired equipment is allowed on the subgrade. Existing aggregate base under the R7 Access Road pavement may be reused as structural backfill.

For all other 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.

Ditch excavation and grading, slope grading, keyway excavation and construction, temporary stockpiling and segregation, placement of backfill, compaction, hauling and disposal of excess material is included in other excavation payment items.

Scarify, moisture condition and compact roadway subgrade.

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 ensure 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: Surplus onsite soils may be reused for structure backfill and fill in other areas. Surplus onsite soils shall be sampled, tested and approved by the City prior to placement. Surplus soil from this project has also been approved for disposal at the City's Pond 2 Decommissioning and Grading Project at 35 Stony Point Road Santa Rosa, CA. See section 14-11.06, Department Generated Soil, of these Special Provisions.

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 furnishing all labor, materials, tools, equipment and incidentals, and for doing all work involved in the

removal, recycling and disposing of excavated materials, including asphalt dikes; subgrade preparation including scarify, moisture condition and compaction under roadway section; and all other work as specified herein and no additional allowance will be made therefor.

Removal of existing bituminous pavement and base materials will be paid for as roadway excavation.

19-3 Structure Excavation and Backfill

19-3.01A General: Structure excavation and backfill includes performing structure excavation and backfill for gravity retaining walls and filling voids from rock slope protection removal. Structure excavation includes excavation and fill of keyways and overbuilding and trimming back of the finish grade surface.

19-3.03A General: Where shown on the plans, remove material below the bottom of retaining wall footings. Replace the material with Class 2 AB and compact it to at least 95 percent relative compaction.

19-3.03E(1) General: Fill shall be placed and compacted in horizontal lifts that are no more than 8 inches in loose thickness. Fill shall be compacted to a minimum of 90 percent relative compaction at a minimum of 2 percent above optimum moisture content. Fill placed within five feet of the retaining wall (measured horizontally) shall be compacted with lightweight hand-operated compaction equipment.

Fill shall be overbuilt beyond the proposed finish grade slope face and trimmed back to expose a compacted surface free of loose material. “Track-walking” of finished slopes is not an acceptable compaction procedure.

19-3.04 Payment:

Structure Excavation (Retaining Wall) shall be a final pay quantity **(F)** paid for at the contract price per **cubic yard**, which price shall include full compensation for all retaining wall foundation excavation, cutting, filling and grading up slope of the R7 Access Road in slopes adjacent to new retaining walls and access road to meet grades indicated on plans, including keyway excavation, overbuilding of fill slopes, compaction, trimming back of slopes to achieve finish grades, removing and resetting storm drain pipes and structures as necessary to construct retaining wall, and other work as specified herein and no additional allowance will be made therefor.

Vegetated Drainage Swale 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 to construct vegetated drainage swales including slope excavation and grading, compaction, trimming back of slopes to achieve finish grades, installing rock check dams and other work as specified herein and no additional allowance will be made therefor.

19-5 Compaction

19-5.03B Relative Compaction (95 percent – ASTM D 1557): 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.

Relative compaction of not less than 95 percent shall be obtained for retaining wall footings without pile foundations within the limits established by inclined planes sloping 1.5:1 out and down from lines one foot outside the bottom edges of the footing.

19-7.02A General

Borrow material and engineered fill obtained off-site and used for structure backfill shall be free of organic matter, debris and other deleterious material, and conform to the following gradation and quality requirements and test methods:

Fill Requirement		**Test Procedure**	
		ASTM	**Caltrans**
Gradation			
Sieve Size	**Percent Passing**	ASTM	Caltrans
2 inch	100	C 136	202
¾ inch	70 – 100	C 136	202
No. 200	10 – 70	C 136	202
Plasticity			
Liquid Limit	**Plasticity Index**		
<30	<12	D 4318	204
Organic Content			
No significant visible organics		--	--
Expansion Potential			
20 or less		D 4829	--

In addition to the above requirements for engineered fill, the retaining wall backfill shall be free draining, angular, have a minimum internal angle of friction of at least 34° and contain no less than 5 percent by weight passing a number 200 sieve. Retaining wall backfill materials shall be submitted to the City for approval prior to importing on site.

Onsite soils, including material excavated from storm drain trenches and aggregate base material under the existing access road pavement, may be accepted to be suitable for fill, but shall be approved by the City prior to placement. Localized areas of plastic clay may be encountered, which shall be segregated and removed from the site. Onsite soils to be reused for structure backfill and other areas of fill shall be sampled, tested and approved by the City prior to placement.

Imported materials used for structure backfill and other areas of fill shall be sampled, tested and approved by the City prior to being transported to the site.

19-7.04 Payment: Import Borrow shall be paid for at the contract price per **cubic yard**, which price shall include full compensation for all work as specified herein and no additional allowance will be made therefor.

Full compensation for placement and compaction is considered as included in the prices paid for various contract items of work and no additional allowance will be made therefor.

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.

[Version: 05/18/15 DCM STD2010]

20 LANDSCAPE

20-1.03C Watering: The contractor shall obtain water according to section 6-4.01A, construction water of these Special Provisions.

20-7.02 Materials:

A. Plants

1. Conditions: Plant shall be symmetrical, typical for variety and species, sound, healthy, vigorous, free from plant disease, insect pests or their eggs, excessive abrasions, or other objectionable disfigurements, and shall have healthy, normal root systems, well filling their containers, but not to the point of being root bound. Plants shall not be pruned prior to delivery. Plants shall be grown in nurseries which have been inspected by the State Department of Agriculture and have complied with its regulations.

2. Identification: Plants shall be of the variety and size shown on the plans and shall conform to the requirements herein. One of each bundle or lot shall be tagged with plant name in accord with recommendations of the American Association of Nurserymen.

3. Substitutions: Substitutions for the indicated plant materials will be permitted, provided the substitute materials are approved in advance by the City, and the substitutions are made at no additional cost to the City. Except for the variations so authorized, all substitute plant materials shall conform to the requirements of these specifications. If accepted substitute materials are of less value than those indicated or specified, the contract price will be adjusted in accordance with the provisions of the contract.

4. Plant Inspection and Rejection: Root condition of plants will be determined by the City through the removal of earth from the roots of at least two (2) plants but not more than 2 percent of the total number of species from each source.

20-7.02D(1) Soil Amendments: All areas to be planted and irrigated shall receive soil amendments. The following soil amendments shall be incorporated per 1,000 square feet of soil surface area:

1. Three cubic-yards organic amendment. Material shall be organic wood-based product consisting of redwood or fir only. Material shall contain no manure of any kind, weed seeds, or any foreign substance. Maximum particle size shall be ¼-inch. Product shall contain a minimum of one percent available nitrogen.

2. 200 lbs. agricultural gypsum

3. A copy of delivery slips on all materials used on the project shall be delivered to the City.

4. Substitutions will not be permitted except when proof is submitted that any material specified is not obtainable. All substitutions are subject to the approval of the City.

20-7.03 Construction:

A. Scheduling

Planting shall not commence until completion of all construction work, grading, soil preparation, and sprinkler installation. All container stock shall be spotted on-site by the Contractor per plans prior to planting. Set out only quantity that can be reasonably planted in one work day. Plant pits shall not be excavated until the approval of plant locations by the City.

B. Soil Preparation

1. Rip in two directions all areas to be planted or seeded to a depth of at least 12 inches. Broadcast soil amendments evenly over surface and cultivate thoroughly by rototilling to depth of at least 6 inches.

2. Pre-germination of weed seeds: After incorporation of soil amendments, but before hydroseeding or planting, Contractor shall water once daily using the irrigation system at the rate of 1 inch of water per week for two (2) weeks to germinate any weed seeds. Spray weeds with Phytar 560 per manufacturer's recommended rates and eight (8) ounces Surfactant in one hundred (100) gallons per acre. All herbicide applications shall be handled by a licensed, registered, and experienced pest control operator.

3. At time of planting, all areas to be planted or seeded shall be free of weeds, stones, stumps, roots, or other deleterious matter 1 inch in diameter or larger and shall be free from all wire, plaster, or similar objections that would be a hindrance to planting or maintenance.

C. Spacing

When plant material is spaced in rows, the total dimension shall be verified and the plants equally spaced within the designated area. Where plant material is shown in loose pattern, the Contractor shall space the material as shown on plans or as directed by the City. Ground cover material shall be triangularly spaced per dimensions indicated on plans (where applicable).

D. Plant Pits

Plant pits shall be dug with level bottoms two times the diameter and two times the depth of root ball. Sides of excavated plant pits shall be scarified by pry bar or shovel.

E. Removal from Containers

All canned stock 5-gallon size and under shall be vertically cut on two opposite sides with approved instrument for the purpose. Fifteen (15) gallon size containers shall be cut on four opposite sides. Cutting with an axe or spade shall NOT be permitted.

F. Handling

No canned plant material shall be planted if the ball is broken or cracked either before or during the process of planting.

G. Setting

Plant shall be same relation to soil level when planted as it was when in container. Each plant shall be placed in center of plant pit.

H. Pit Backfill

Backfill material around plants shall be free from rocks or foreign material and shall consist of the following ratio:

50%, 1% Nitrogen-Stabilized Organic Amendment
50%, On-Site Topsoil
10 Lbs. Agricultural Gypsum per Cubic Yard of Mix
2 Lbs. Iron Sulfate per Cubic Yard of Mix

I. Backfilling Procedure

1. Backfill pit with backfill mix halfway to finish grade and water thoroughly.

2. Commercial fertilizer in the form of 20-10-5 Agriform 21-gram tablets shall be added to the plant pits at the following rates:

1 Gallon Plant	1 Tablet
5 Gallon Plant	2 Tablets
15 Gallon Plant	5 Tablets
Larger Than 15 Gallons	1 Tablet per ½" Trunk Diameter

3. Backfill finish to grade. Backfill finish shall be tamped firm and a shallow basin formed at the perimeter of plant pit to hold enough water to saturate the root ball and backfill mix.

4. Water immediately to saturate entire root ball and backfill.

L. Flatted Ground Cover

1. Rooted cuttings shall be planted sufficiently deep to cover all roots.

2. Ground cover plants (rooted cuttings) shall have been grown in flats and shall remain in those flats until time for transplanting. At time of transplanting, the flat soil shall contain sufficient moisture so that the soil does not fall apart when lifting plants from flat. Each plant shall be planted with its proportionate amount of the flat soil in a manner that will insure a minimum of disturbance to the root system.

3. Rooted cuttings shall not be allowed to dry out before or while being planted. Wilted plants shall not be accepted.

4. At time of planting all ground cover plants, the earth around each plant shall be firmed sufficiently to force out all air pockets.

M. Quantities

1. In all cases, quantities of plant material shall be furnished as needed to complete work as indicated on plans, including reseeding, redressing, and maintenance (replacements) during the contract period.

N. Protection

1. The Contractor shall carefully and continuously protect all areas included in the contract, including lawn areas, plant materials, supports, etc., until final acceptance of the work by the City.

O. Cleanup

1. After all planting operations are completed Contractor shall remove all trash, excess soil, empty plant containers, or other accumulated debris from the site at no extra cost to City. Contractor shall repair all scars, ruts, or mars in area caused by work operations. Areas shall be left in a neat and orderly condition.

P Inspections

1. Contractor shall give forty-eight (48) hours' notice and set appointment for all inspections by the City.

2. Inspections and/or field supervision by the City shall be scheduled for the following operations:

a. Approval of all plant material.

b. Tree and shrub replacement PRIOR to digging holes and placement planting.

c. Approval of ground cover PRIOR to planting.

d. Final inspection.

3. Inspection shall be called for at the end of all planting operations for the purpose of determining compliance with plans and specifications, intent, workmanship, and cleanup. Contractor shall secure written verification of inspection data, any corrections required to work, and limits of inspected area before beginning the described maintenance work.

4. A final inspection shall be made at the end of the maintenance period for full approval of the work area.

5. In the event the Contractor requests inspection of work, and said work is substantially incomplete, the Contractor shall be responsible for inspection costs.

Q. Guarantee

1. All shrubs, ground covers, and lawn areas shall be guaranteed as to growth and health for a period of ninety (90) days after final acceptance by the City; all trees shall be guaranteed for a period of one (1) year.

2. Plants which die or lose more than 30 percent of their original leaves shall be replaced under this section.

3. The Contractor, within fourteen (14) days of written notification by the City, shall remove and replace all guaranteed plant materials which for any reason fail to meet the requirements of the guarantee. All plant material replaced shall be guaranteed for the original period, starting from the date of replacement.

20-7.04 Payment: Payment for the work of this Section shall be included in the contract **lump sum** price bid for **Landscaping**, which shall include full compensation for furnishing all labor, materials, tools and equipment, and doing all the work involved in restoring existing landscape, including replanting juniper bushes, restoring existing modular block retaining walls, and restoring natural ground surface as shown on Project Plans, and no additional compensation will be considered.

(STD2010)

21 EROSION CONTROL

21-1.01A Summary: Section 21 includes specifications for applying permanent erosion control measures to the soil surface at locations shown on the Project Plans and as directed by the Engineer to minimize erosion, reinforce the ground surface, and establish new vegetation.

21-1.02E Fiber: Fiber mulch material shall be clean, natural wood cellulose fiber, Conwed Silvafiber, or equal. Natural wood cellulose fiber shall be processed in such a manner that it will contain no growth or germination-inhibiting factors and shall be dyed green to facilitate metering of materials. It shall be manufactured in such a manner that after each addition and agitation in slurry tanks with fertilizer, seed, water, and other approved additives, the fibers in the material will become uniformly suspended to form a homogeneous slurry; and that when hydraulically sprayed, will uniformly cover the ground with seed and mulch, and which after application, will allow the absorption of moisture and will allow rainfall to percolate to the underlying soil.

The Contractor shall utilize suppliers who are prepared to certify that laboratory and field testing of their product has been accomplished, and that it meets all of the foregoing requirements based on testing. Weight specifications of this material from suppliers, and for all applications, shall refer only to air dry weight of the fiber material. All dry weight is based on the normal weight standards of the Technical Association of the Pulp and Paper Industry for wood cellulose and is considered equivalent to 10 percent moisture. Each package of the cellulose fiber shall be marked by the manufacturer to show the air dry weight content.

21-1.02F Tackifier

21-1.02F(1) General: Binding agent shall be Ecology Controls "M-Binder".

21-1.02G Seed: Seed used for any reasons specified in the plans or listed in the specifications shall be labeled and shall be furnished in sealed standard containers with duplicate signed copies of a statement from the vendor, certifying that each container of seed delivered is fully labeled in accordance with the California State Agricultural Code and is equal to or better than the requirements of these specifications. Seed which has become wet, moldy, or otherwise damaged in transit or storage will not be accepted.

All grass seed shall be fresh, "Blue Tag Certified", clean, new crop seed, tested minimum percentage of purity and germination as follows:

All seed varieties shall have an 85 percent minimum germination rate.

Variety	Purity
Festuca Rubra (Creeping Red Fescue)	95%
Trifolium Fragifern (Strawberry Clover)	95%
Coreopsis Lanceolate (Perennial Coreopsis)	95%
Lipunus Succulentes (Lupine)	95%
Eschscholzia Californica (California Poppy)	95%

The Contractor shall place order for seed from a distributor as soon as possible to avoid any delays in the project due to seed shortages.

21-1.02H Fertilizer: Fertilizer shall conform to the provisions in Section 20-2.07D(1), "Fertilizer," of the Standard Specifications and shall have the following guaranteed chemical analysis percentages by weight

Nitrogen	18%
Phosphoric Acid	6%
Potash	8%

Fertilizer shall be a commercial grade uniform in composition, dry and free flowing, of analysis as noted on plans, and particle size of not less than 2 percent through a number 48 mesh.

Fertilizer shall be delivered to the site in the original unopened container, bearing the manufacturer's guaranteed analysis. Any fertilizer that becomes caked or damaged will not be acceptable.

21-1.02O Rolled Erosion Control Products: Rolled Erosion Control product (RECP) shall be a machine-produced mat of 100% coconut fiber matrix incorporated into permanent three-dimensional turf reinforcement matting. The matrix shall be evenly distributed across the entire width of the matting and stitch bonded between super heavy-duty UV-stabilized nettings with 0.50 x 0.50-inch openings, an ultra-heavy-duty UV- stabilized, corrugated intermediate netting with 0.5 x 0.5-inch openings, and covered by super heavy-duty UV-stabilized nettings with 0.50 x 0.50-inch openings. The middle corrugated netting shall form prominent closely spaced ridges across the entire width of the mat. The three nettings shall be stitched together on 1.50-inch centers with UV- stabilized polypropylene thread to form permanent three-dimensional turf reinforcement matting. All mats shall be manufactured with colored thread stitched along both outer edges as an overlap guide for adjacent mats. The RECP shall have the following physical properties:

Property	Test Method	Value
Thickness	ASTM D6525	0.73 in.
Resiliency	ASTM D6524	90%
Density	ASTM D792	0.917 g/cm^3
Mass/Unit Area	ASTM D6566	18.36 oz/sy
UV Stability	ASTM D4355/ 1000 HR	86%
Porosity	ECTC Guidelines	99%
Stiffness	ASTM D1388	0.24 in.-lb
Light Penetration	ASTM D6567	7.2%
Tensile Strength – MD	ASTM D6818	585.8 lbs/ft
Elongation – MD	ASTM D6818	45.3%
Tensile Strength – TD	ASTM D6818	687.6 lbs/ft
Elongation – TD	ASTM D6818	19.5%
Biomass Improvement	ASTM D7322	380%

Permanent Turf Reinforcement Mats shall be, VMax C350 by North American Green or approved equal.

21-1.02P Fiber Rolls: Fiber Rolls shall be Type B.

21-1.03E Hydroseed:

1. After preparation of soil has been completed, the areas to be seeded shall be brought to finish grade, with the finish surface being smooth and even, and reasonably well firmed. It shall be the responsibility of the Contractor to make the entire area smooth and even, to ensure that finish grades shall be generally 1 inch below the surface of walks, curbs, and paved areas, and in all cases without abrupt changes in gradient.

2. The ground surface shall be inspected by the City prior to seeding to determine suitability for planting. The Contractor shall obtain such approval before seeding.

3. All seed shall be new crop certified seed labeled in accordance with U.S. Department of Agriculture Rules and Regulations under the Federal Seed Act. All seed shall be furnished in sealed, standard containers. Seed which has become wet, moldy, or otherwise damaged will not be acceptable.

4. Hydroseed Mixes: The following material shall be applied in the amounts indicated per acre:

Fiber	1,800 lbs./acre
Tackifier	60 lbs./acre
Commercial Fertilizer	400 lbs./acre
Festuca Rubra (Creeping Red Fescue)	125 lbs./acre
Trifolium Fragifern (Strawberry Clover)	10 lbs./acre
Lipunus Succulentes (Lupine)	10 lbs./acre
Eschscholzia Californica (California Poppy)	3 lbs./acre

5. Equipment and Application: Hydraulic equipment used for the application of slurry shall have a built-in agitation system with an operating capacity sufficient to agitate, suspend, and homogenously mix the above slurry. Distribution lines shall be large enough to prevent stoppage and to provide even distribution of the slurry over the ground. The pump shall be capable of exerting at least 150 psi at the nozzle or sufficient additional pressure for proper coverage. The slurry tank shall have a minimum capacity of 1,500 gallons and shall be mounted on a traveling unit which will place the slurry tank and spray nozzles within sufficient proximity to the areas to be seeded so as to provide uniform distribution without waste and shall be thoroughly clean and free of seed species that are not specified.

   With the engine at half throttle, water shall be added to the tank. When the water level has reached the height of the agitator shaft, good recirculation shall be established and at this time the seed shall be added. Fertilizer shall then be added to the mixture followed by wood pulp mulch. The wood pulp mulch shall only be added to the mixture after the seed and when the tank is at least one third filled with water. The engine throttle shall be opened to full speed when the tank is half-

filled with water. All the wood pulp mulch shall be added by the time the tank is two-thirds to three-fourths full. Spraying shall commence when the tank is full.

6. Application: The operator shall spray the surfaces with a uniform, visible coat by using the green color of the wood pulp as a guide. The slurry shall be applied in a sweeping motion, in an arched stream so as to fall like rain allowing the wood fibers to build on each other until a good coat is achieved and the material is spread at the required rate per acre.

7. Time Limit: All slurry mixture which has not been applied to the surfaces within four hours after mixing will be rejected and removed from the project at the Contractor's expense.

8. Watering shall be as follows:

   (a) Prior to hydroseeding, the area shall be irrigated in order to provide a moist seed bed for the hydroseed application.

   (b) Hydroseed areas shall receive several consecutive waterings the day of the hydroseeding to thoroughly saturate the soil.

   (c) After initial irrigation, water shall be applied as often and in sufficient amounts as conditions may require to keep the soil wet above, around, and below the root systems of the plants (until germination is complete).

21-1.04 Payment: Rolled Erosion Control Product 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 the work involved in installing permanent rolled erosion control product, including but not limited to preparing the soil, hydroseeding, anchoring and securing the product, and backfill and compaction of key trenches as shown on the plans and specified herein, and no additional allowance will be made therefor.

Fiber Rolls 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 the work involved in installing fiber rolls as shown on the plans and specified herein, and no additional allowance will be made therefor.

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 paid for at the contract price per **cubic yard**, which price 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 and blue shale material as specified, including furnishing, hauling and applying water as specified and directed by the Engineer.

[Version: 05/03/14 STD2010]

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 where shown on the Project Plans and as stated herein.

New and existing asphalt concrete dikes shall receive a seal coat on the exposed face and top surfaces.

Seal coat shall be applied as the last order of work at each site, 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 at any of the site locations.

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 a clean friction top bucket.

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 7200 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 yard** 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.

39 HOT MIX ASPHALT

39-1.01 General

39-1.01A Summary: Section 39-1 includes general specifications for producing and placing HMA by mixing aggregate and asphalt binder at a mixing plant and spreading and compacting the HMA mixture.

For these specifications, Hot Mix Asphalt (HMA) and asphalt concrete shall be the same. A minimum of two weeks prior to the placement of any asphalt concrete, the Contractor shall notify the Materials Laboratory of which asphalt plant will be used to supply the mix. For any job, asphalt concrete shall be supplied from a single plant.

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

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

Permanent paving shall not take place until all underground work is finished, except as otherwise noted in these Special Provisions, and the City has given written notice of acceptance to the Contractor.

All existing asphalt concrete that is adhered to the top of gutters shall be removed prior to placement of new asphalt concrete surface in a manner satisfactory to the Engineer and that does not damage the gutter.

The existing R7 Access Road is less than 10 feet wide in some areas. Contractor is hereby advised of the narrow width of the R7 Access Road, which may present limitations on the type and capacity of paving equipment and means and methods used to install new HMA pavement.

Asphalt concrete paving shall be accomplished by use of a paving machine. Any equipment used to transfer asphalt concrete to the paving machine shall not exceed the load capacity of any surface it is driven over and shall not produce rutting or pumping of the existing roadway surface or newly placed asphalt concrete base at any time.

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

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 asphalt concrete 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.

The Engineer shall provide reference points and cut sheets for the placing of asphalt concrete base and asphalt concrete surface.

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 R7 Road Access and adjacent residential streets
6. Staging locations
7. Sequencing
8. Taper grind locations

A tack coat of SS-1h or SS-1 emulsified asphalt shall be applied to all vertical mating surfaces and conforms to existing pavement, curbs, gutters, and construction joints prior to placement of new asphalt concrete surface or base, unless otherwise shown on the Plans. The tack coat shall be allowed to break before placing the subsequent lift of asphalt concrete.

The asphalt concrete base and asphalt concrete 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 shall be in accordance with City STD-209, the modified detail on the Plans or as specified herein. Longitudinal edge grinds shall be 6’ in width.

All ground edges adjacent to curb ramps and driveways shall have temporary asphalt concrete ramps (tapers) installed if the asphalt concrete 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 start.

39-1.02 Materials:

39-1.02B Tack Coat:

Tack coat must comply with the specifications for asphaltic emulsion or asphalts. Tack coat shall be diluted SS1 or SS1h.

Notify the Engineer if you dilute asphaltic emulsion with water. The weight ratio of added water to asphaltic emulsion must not exceed 1 to 1.

39-1.02C Asphalt Binder:

Asphalt binder in HMA must comply with the specifications for asphalts.

Asphalt binder to be mixed with aggregate for asphalt concrete 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% 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.

39-1.02E Aggregate:

The aggregate grading of the various types of asphalt concrete shall conform to one of the following as directed by the Engineer:

Surface or Leveling Course……¾-inch HMA Type A, or ½-inch Coarse HMA Type A, or ½-inch Medium HMA Type A
Base Course……..……¾-inch HMA Type A

Aggregate must be clean and free from deleterious substances. Aggregates should be of high abrasion resistance and durability. Excessively soft and friable aggregates are not allowed.

The specified aggregate gradation must be determined before the addition of asphalt binder and includes supplemental fine aggregate.

Choose sieve size TV within each TV limit presented in the aggregate gradation tables.

The proposed aggregate gradation must be within the TV limits for the specified sieve sizes shown in the following tables:

Aggregate Gradation (Percentage Passing) HMA Types A

3/4-inch HMA Type A

Sieve sizes	TV limits	Allowable tolerance
1"	100	--
3/4"	95–100	TV ± 5
3/8"	65–80	TV ± 5
No. 4	49–54	TV ± 5
No. 8	36–40	TV ± 5
No. 30	18–21	TV ±5
No. 200	2.0–8.0	--

1/2-inch Coarse HMA Type A

Sieve sizes	TV limits	Allowable tolerance
3/4"	100	—
1/2"	94–100	--
3/8"	70–90	--
No. 4	55–61	TV ± 5
No. 8	40–45	TV ± 5
No. 30	20–25	TV ± 5
No. 200	2.0–8.0	--

1/2-inch Medium HMA Type A

Sieve sizes	TV limits	Allowable tolerance
3/4"	100	--
1/2"	95-100	--
3/8"	80-95	--
No. 4	59-66	TV ± 5
No. 8	43-49	TV ± 5
No. 30	22-27	TV ± 5
No. 200	2.0–8.0	--

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 Fine aggregate (% min) (Passing no. 4 sieve and retained on no. 8 sieve.) One fractured face	California Test 205	 90 75 70
Los Angeles Rattler (% max.) Loss at 100 rev. Loss at 500 rev.	California Test 211	 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.
17. If any of the above criteria are not satisfied, or if the RAP HMA test result determined by the City are inconsistent, RAP HMA production shall stop for City projects until the issue(s) are corrected.

39-1.03 HOT MIX ASPHALT MIX DESIGN REQUIREMENTS:

39-1.03A General:
The mix design process consists of performing California Test 367 and laboratory procedures on combinations of aggregate gradations and asphalt binder contents to determine the OBC and HMA mixture qualities. The results become the proposed JMF.

The Engineer reviews the aggregate qualities, mix design, and JMF and verifies and authorizes the JMF.

You may change the JMF during production. Do not use the changed JMF until it is authorized. Perform a new mix design and submit a new JMF submittal if you change any of the following:

1. Target asphalt binder percentage
2. Asphalt binder supplier
3. Combined aggregate gradation
4. Aggregate sources
5. Substitution rate for RAP aggregate of more than 5 percent
6. Any material in the JMF

39-1.03G Job Mix Formula Acceptance: You may start HMA production if Engineer approves the JMF.

39-1.05 Acceptance Criteria: HMA acceptance is specified in Section 39-3 Method Construction Process.

39-1.06 Dispute Resolution: Work with the Engineer to avoid potential conflicts and to resolve disputes regarding test result discrepancies.

39-1.08 Production:

39-1.08A General: Produce HMA in a batch mixing plant or a continuous mixing plant. Proportion aggregate by hot or cold feed control.
Before production, the HMA plant must have current qualification under Department's Materials Plant Quality Program.

During production, with approval of the Engineer, you may adjust hot or cold feed

proportion controls for virgin aggregate and RAP.

39-1.09 Subgrade, Tack Coat, and Geosynthetic Pavement Interlayer:

39-1.09B Subgrade: The subgrade to receive asphalt concrete or asphalt concrete base shall not vary more than 0.05 – foot above or below the grade established by the Engineer.

39-1.11 Transporting, Spreading, and Compacting: 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, and acceptable equipment shall be furnished by the Contractor.

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

Dikes shall be shaped and compacted with an extrusion machine or other equipment capable of shaping and compacting the material to the required cross section.

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 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 recompacted 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 asphalt concrete.
Asphalt concrete not meeting the above requirements shall be removed and replaced at the Contractor's expense.

39-3.03 Spreading and Compacting Equipment: Compaction rollers shall be either 2-axle steel-tired rollers, pneumatic-tired rollers, or approved double-drum vibratory rollers. Steel-tired static compaction rollers shall weigh not less than 12 tons.

Double-drum vibratory rollers shall be operated at a maximum speed of 135-feet per minute (approximately 1.5 mph). Double drum-vibratory rollers shall have a minimum frequency of 2400 Vibrations per Minute (VPM) and the amplitude shall be field-adjustable.

All pneumatic-tired rollers shall be equipped with an approved windskirt unless otherwise permitted by the Engineer. Pneumatic-tired rollers used for compaction of asphalt concrete base shall be so equipped that the air pressure in all tired may be regulated uniformly by the operator while the roller is in motion.

39-3.04 Transporting, Spreading, and Compacting: Asphalt concrete shall not be placed on any roadbed until all utility construction beneath the roadbed has been completed, sewer and water lines have been tested, and water lines chlorinated. The surface course of asphalt concrete shall not be placed until final utility connections have been made, unless otherwise permitted by the Engineer.

No asphalt concrete shall be placed within thirty (30) minutes of sunset, as established by weather bureau, except as otherwise authorized by the Engineer.
Asphalt concrete or asphalt concrete base shall not be placed during rainy weather or on a wet surface. Asphalt concrete shall not be placed when the atmospheric temperature is below fifty (50) degrees Fahrenheit or conditions indicate it will drop below fifty (50) degrees Fahrenheit before the material can be satisfactorily compacted. Asphalt concrete base shall not be placed when the atmospheric temperature is below forty (40) degrees Fahrenheit or conditions indicate it will drop below forty (40) degrees Fahrenheit before the material can be satisfactorily compacted. Material which cannot be placed in compliance with these requirements shall be rejected.

The compacted thickness of asphalt concrete layers shall be as directed by the Engineer. The normal minimum and maximum compacted lift thickness for asphalt concrete surfacing are

0.17’ to 0.25’ respectively. The normal minimum and maximum compacted lift thickness for asphalt concrete base are .025’ and 0.50’ respectively.

The temperature of the Asphalt Concrete shall be specified by the Engineer. Unless lower temperatures are specified by the Engineer, all mixtures shall be spread, and the first coverage of initial or breakdown compaction shall be performed, when the temperature of the mixture is not less than 250°F at mid-depth, and all breakdown compaction shall be completed before the temperature of the mixture drops below 200°F at mid-depth. Additional rolling equipment shall be required, or the rate of spread shall be reduced to permit compliance with this requirement.

A. Asphalt concrete surface course and leveling courses.

1. Equipment Required

If production in any one hour exceeds the limits set forth below, the Contractor shall cease his paving operation until additional rolling equipment has arrived on the project.

a. 125 tons per hour or more.

The Contractor will be required to furnish a minimum of two approved double-drum vibratory rollers and one minimum 3-ton double-drum vibratory finish roller for each asphalt paver with a separate operator for each roller.

A pneumatic roller may be substituted for one of the vibratory rollers if approved by the Engineer.

b. 50-125 tons per hour.

The required minimum rolling equipment specified above may be reduced to one approved double-drum vibratory roller and one 3- ton double-drum vibratory roller for each asphalt paver with a separate operator for each roller when the compacted thickness is not less than 0.17’.

c. 50 tons per hour or less, at any location.

The required minimum rolling equipment specified above may be reduced to one approved double-drum vibratory roller, weighing not more than 12 tons for each paving machine.

2. Compaction Requirements.

Compaction rolling shall consist of a minimum of four complete vibratory coverages with an approved double-drum vibratory roller.

Finish rolling shall consist of one or more coverages with a minimum 3-ton double-drum vibratory roller immediately following completion of compaction rolling.

B. Asphalt concrete base.

1. Equipment required

The Contractor shall be required to furnish one approved double- drum vibratory roller and a minimum of one pneumatic-tired roller with a separate operator for each roller.

An approved double-drum vibratory roller may be substituted for the pneumatic-tired roller specified above.

2. Compaction requirements.

   Compaction rolling shall consist of the following: a minimum of two complete vibratory coverages with an approved double-drum vibratory roller and two complete coverage with a pneumatic- tired roller. The order of rolling shall be specified by the Engineer.

   Final rolling shall consist of one coverage with the vibrating units turned off.

   Approval of vibratory roller: The Engineer may approve initial use of a double-drum vibratory roller not previously approved on the basis of tests by other agencies or other information provided by the Contractor.

   Approval for subsequent use of the roller shall be based on cores taken from test section designated by the Engineer and compacted with different numbers of coverages.

Test sections shall be compacted under the following conditions:

1. Asphalt Concrete temperature at mid-depth shall be between 270 and 280 degrees Fahrenheit at the beginning of rolling. Rolling shall not continue after the mix temperature has dropped to 200 degrees Fahrenheit. The compacted thickness shall be between 2" and 3.5".

2. The Contractor or manufacturer's representative shall specify the operating conditions of frequency and amplitude.

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.

The mix will be sampled during paving of the test sections, and the test maximum density will be the average density of specimens compacted in accordance with California Test 304. The in-place density for each test section shall be the average of three core densities. Relative density will be the ratio of in-place density to test maximum density.

39-5 Measurement: Asphalt concrete and asphalt concrete 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:

Hot Mix Asphalt (Type A) 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 hot mix asphalt surface and base, including tack coat and conforms, and no additional allowance will be made therefor.

A.C. Pavement Repair 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 A.C. pavement repair, including but not limited to sawcutting, removal of existing A.C., tack coating, stabilization fabric, asphalt concrete base, compaction and conforms, and no additional allowance will be made therefor.

Hot Mix Asphalt Dike (Type A) 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 placing hot mix asphalt dike, including tack coat

and conforms, and no additional allowance will be made therefor.

Hot Mix Asphalt Dike (Type E) 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 placing hot mix asphalt dike, including tack coat and conforms, 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 hot mix asphalt (Type A) 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 hot mix asphalt (Type A) 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 hot mix asphalt (Type A and Type E) and no additional allowance will be made therefore.

[Revised: 11/20/14 Lab STD2010]

39A HOT MIX ASPHALT TRENCH PAVING

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

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

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.

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. Any modification to the STD-215 shall be made by written change order only.

Per Note 1 of City STD-215, the Contractor shall construct a structural section consisting of either: 12-inch thick section of Class II aggregate base, or 6-inch thick section of asphalt concrete base. The Contractor shall select a structural section per Note 1 of City STD-215 at your sole discretion with no cost to the City.

If the Contractor elects to construct the structural section using asphalt concrete base, this asphalt concrete quantity shall not be included in the payment item for permanent trench paving.

The Contractor shall notify City at time of pre-paving meeting which option you will be using prior to performing any trench work to allow coordination with the Materials Lab and schedule compaction test.

Areas requiring permanent trench paving for this project per City STD-215 shall have a minimum HMA thickness per the project plans.

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 (H20) 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 the Standard Specifications, Section 14-10 “Solid Waste Disposal and Recycling”.
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 for Asphalt Concrete Surface and Asphalt Concrete Base shall be in accordance with Section 39-6.03 of the City Specifications, reprinted here for clarity.

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.

39A-8.02 Payment: Full compensation for furnishing and installing temporary 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.

Full compensation for permanent trench paving shall be considered as included in the per ton price paid for **Hot Mix Asphalt (Type A)**, 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.

[Revised: 8/28/13 STD2010]

51 CONCRETE STRUCTURES

51-4 Precast Concrete Members

51-4.01 General

51-4.01A Summary: Section includes specifications for constructing precast concrete modular block gravity retaining walls.

Work shall consist of furnishing and constructing a gravity retaining wall in accordance with these specifications. Contractor shall submit wall design drawings and calculations for the retaining wall system for approval. The gravity retaining wall design shown on the Plans is for bidding purposes only, and is based upon a Redi-Rock gravity retaining wall system. Submitted wall design shall reflect the general lines, grades, design and dimensions shown on the Plans with revisions as necessary for the gravity retaining wall system. Shop drawing submittal shall include all slopes, top of wall elevations, wall gutter elevations, rock slope protection limits, and all other elements related to the retaining wall system, wall gutter and sub-drainage system.

Work includes preparing foundation soil, furnishing and installing leveling pad, and backfilling to the lines and grades shown on the Plans.

Work includes furnishing and installing foundation drainage system, subdrain and other wall-related drainage systems that are shown on the Plans and/or required by the approved wall design.

Precast concrete units must comply with Section 51 and have a minimum unit weight of 570 pounds.

The gravity retaining wall for this project shall be manufactured by Redi-Rock, Ultrablock, Stone Strong Systems or approved equal.

Reinforcement must comply with Section 52.

Geogrid soil reinforcement behind the retaining wall shall not be used.

Earthwork must comply with Section 19. See Section B – Geotechnical Report of these Special Provisions for additional information. The Geotechnical Report is included for reference only.

51-4.01C Submittals: Submit shop drawings and calculations stamped and wet-signed by a California licensed Civil or Structural Engineer.

The soil properties shown in the following table shall be used:

Symbol	Description	Value and Units
ϕ_d	Angle of Internal Friction (drained / long-term)	34 degrees
ϕ_u	Angle of Internal Friction (undrained / seismic)	48 degrees
c	Soil Cohesion	0 (Unitless)
γ	Unit weight of soil	120 Pounds per cubic foot
δ_a	Soil Friction Angle, Active Soil	17 degrees
δ_p	Soil Friction Angle, Passive Soil	0 degrees

The coefficients for backfill pressures on a non-restrained retaining wall with a level slope at the toe of the wall and inclusive of seismic deflections shown in the following table shall be used:

Earth Pressure	Max 2H:1V Backslope		Level Slope (Toe of Wall)	
	Coefficient of Lateral Pressure	Equivalent Fluid Density (lb/ft^3)	Coefficient of Lateral Pressure	Equivalent Fluid Density (lb/ft^3)
Active (K_a)	0.4	50	NA	NA
Passive (K_p)	NA	NA	3.5	400

The values shown in the table above do not contain a design factor of safety. Selection of a design factor of safety depends on the design method used and shall be the responsibility of the Contractor's engineer.

The seismic design factors shown in the table below shall be used:

Parameter	Description	Value and Units	2013 CBC Reference
Lat	Latitude	38.47526 degrees	-
Long	Longitude	-122.64450 degrees	-
S_S	Short Period Response Acceleration	1.724g	Section 1613.3.1
S_1	1 Second Period Response Acceleration	0.683g	Section 1613.3.1
Site Class	-	C	Section 1613.3.2
F_a	Short Period Site Coefficient	1.0	Table 1613.3.3(1)
F_v	Long Period Site Coefficient	1.3	Table 1613.3.3(2)
S_{MS}	MCE Short Period Acceleration	1.724g	Section 1613.3.3
S_{M1}	MCE 1 Second Period Acceleration	0.888g	Section 1613.3.3
S_{DS}	Short Period Spectral Response Acceleration	1.149g	Section 1613.3.4
S_{D1}	1 Second Period Spectral Response Acceleration	0.592g	Section 1613.3.4
PGA_M (MCE_G)	MCE Peak Ground Acceleration Adjusted for Site Class Effects	0.666g	Section 1808.5.12 (ASCE 7-10, Figure 22-7)

PGA = Peak Ground Acceleration
MCE = Maximum Considered Earthquake

51-4.01C(5) Gravity Retaining Walls: For gravity retaining walls, shop drawings must include:

1. Plans, sections, elevations and details of each retaining wall, including slope and foundation drainage system.
2. Detailed calculations.

Submit Manufacturer's certification prior to start of work that the retaining wall system components meet the requirements of these Special Provisions, the Caltrans Standard Specifications, and the structural design and calculations.

Submit a Manufacturer's test report documenting the strength of the specific precast concrete unit.

51-4.01D Quality Control and Assurance

A City of Santa Rosa Transportation Permit is required. The weight of delivery loads shall not exceed the capacity of roadways as specified in the permit. See Section A, "Fees and Permits" of these Special Provisions.

51-4.04 Payment:

Gravity retaining wall "exposed height" shall be measured as the distance from new access road finished grade where the road meets the wall to the top of wall at the southern face of the wall. Exposed heights shall be measured at 'step up' and 'step down' locations along the wall alignment.

Gravity Retaining Wall Type I (0-4.5' Exposed Height) shall be paid for at the contract price per **linear foot**, which price shall include full compensation for furnishing all design, shop drawings, manufacturer certification, labor, tools, materials, and equipment, including delivery to the job site, providing aggregate base, compaction, wall back drain system, meeting manufacturer embedment requirements, foundation, erection of precast units into final position, complete in place and as shown on the plans and as specified in these specifications, the Special Provisions and as directed by the Engineer.

Gravity Retaining Wall Type II (>4.5' to 6.0' Exposed Height) shall be paid for at the contract price per **linear foot**, which price shall include full compensation for furnishing all design, shop drawings, manufacturer certification, labor, tools, materials, and equipment, including delivery to the job site, providing aggregate base, compaction, wall back drain system, meeting manufacturer embedment requirements, foundation, erection of precast units into final position, complete in place and as shown on the plans and as specified in these specifications, the Special Provisions and as directed by the Engineer.

Gravity Retaining Wall Type III (>6.0' Exposed Height) shall be paid for at the contract price per **linear foot**, which price shall include full compensation for furnishing all design, shop drawings, manufacturer certification, labor, tools, materials, and equipment, including delivery to the job site, providing aggregate base, compaction, wall back drain system, meeting manufacturer embedment requirements, foundation, erection of precast units into final position, complete in place and as shown on the plans and as specified in these specifications, the Special Provisions and as directed by the Engineer.

51-7.01A Description: Minor Structures shall be constructed in accordance with the applicable sections of the City Standards, Section 51-7 of the Standard Specifications, the details shown on the plans, and these Special Provisions. Minor concrete structures are drainage inlets, trench dams and manholes.

Minor Concrete shall conform to the provisions of Section 90-2 of the Standard Specifications.

Concrete shall be cured in accordance with Section 90-1.03B of the Standard Specifications.

Placing of concrete under water will not be permitted.

51-7.01D Payment: Precast Concrete Drop Inlet shall be paid for at the contract price **each,** which shall include full compensation for furnishing all labor, materials, tools, and equipment, and doing all the work involved in furnishing and installing the precast concrete drop inlet as specified, including metal frames and grates, excavation, bedding, backfilling and hauling as

directed by the Engineer, and no additional allowance will be made therefor.

Catch Basin (Type II) shall be paid for at the contract price **each,** which shall include full compensation for furnishing all labor, materials, tools, and equipment, and doing all the work involved in furnishing and installing the catch basin per City Standards as specified, connection to private CMP storm drain where shown on plans, installing PVC pipe and connecting catch basin to existing PVC pipe where shown on plans, installing HDPE pipe and connecting pipe to catch basin and storm drain manhole where shown on plans, including excavation, coordination with utility owners, including standby, bedding, backfilling and hauling as directed by the Engineer, and no additional allowance will be made therefor.

Storm Drain Gallery shall be paid for at the contract price **each,** which shall include full compensation for furnishing all labor, materials, tools, and equipment, and doing all the work involved in furnishing and installing the storm drain gallery as specified, including, bedding, backfilling and hauling as directed by the Engineer, and no additional allowance will be made therefor.

Trench Dams shall be paid for at the contract price **each** for the type of structure indicated on the plans, which shall include full compensation for furnishing all labor, materials, tools, and equipment, and doing all the work involved in constructing the trench dam, including CLSM, drain pipe, and filter fabric as shown on the plans and as directed by the Engineer, and no additional allowance will be made therefor.

[Version: 10/03/14 DCM STD2010]

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 15 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.

The use of HDPE plastic storm drain pipe shall not be permitted in unpaved areas, unless otherwise shown on the drawings.

The use of PVC plastic storm drain pipe shall be used only where shown on the plans.

Visual inspection of Storm Drain Pipe shall be made upon produce delivery and prior to backfill.

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 soil 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.

Fittings shall be factory fabricated and conform to AASHTO M252, AASHTO M294 or ASTM F2306. Bell and spigot connections shall utilize a spun-on or welded bell and valley or saddle gasket meeting the soil tight joint performance requirements of AASHTO M252, AASHTO M294 or ASTM F2306.

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.

All required coordination with private underground utility owners, including standby, shall be the responsibility of the Contractor. Direction from private underground utility owners to perform excavation activities per the utility owner requirements shall be completed at no additional cost to the City.

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:

Pipe Size, Inside Diameter	Trench Width (inches)*
15	36
18	48
24	54

* 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: 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: The contractor shall hire an independent television inspection service to perform a closed-circuit television inspection of all newly constructed storm drain systems. The video camera shall be able to pan and tilt and shall be equipped with high intensity lights. The video camera shall be mounted on a transporter at a height equal to the radius of the pipe. A video tape of the television inspection shall be produced and delivered to the Engineer in color DVD format, together with a typed log of the inspection.

The video tape shall display the following information:

The camera's location via a continuously updated footage counter measuring the distance from point of entry. At the beginning of each run of storm drain pipe, between adjacent structures, the video shall display the project name, date, company performing the inspection and the structure's number (as labeled on the plans) at each end.

The following conditions shall exist prior to the television inspection:

All storm drain pipes shall be installed, grouted, backfilled and compacted;
All structures shall be in place and grouted;
Flow line wetted with clean water immediately before televising.

When the above work has been completed the contractor shall notify the Engineer 48 hours in advance of the date for television inspection. During this inspection, the contractor or authorized representative shall be present to observe the video as provided by the television camera.

The following video tape observation shall be considered defects in the construction of the storm drain system and will require corrections prior to acceptance.

a. Off grade - 0.08 foot or more deviation from grade.

b. Joint separation - greater than one corrugation.

c. Cracked or damaged pipe or evidence of the presence of an external object bearing upon the pipe (rock, root, etc.).

d. Pipe deflection of 7.5 percent or greater, measured inside the pipe.

e. Debris or other foreign objects;

f. Other obvious deficiencies when compared to approved Plans and Specifications, these Standards and Standard Drawings.

The contractor shall be notified in writing of any deficiencies revealed by the television inspection that will require repair, following which the contractor shall excavate and make the necessary repairs and request a television re-inspection. Television re-inspection shall be at the contractor's expense.

64-1.04 Payment:

Abandon or Remove Existing Storm Drain Components 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 removing or abandoning existing City storm drainage facilities, including but not limited to pipes, inlets, catch basins, concrete drainage channels open metal pipe inlets (OMPIs), filling inlets with concrete as specified in the plans, excavation, backfilling voids with suitable fill material, and compaction as specified herein, and no additional allowance will be made therefor.

15" HDPE Storm Drain Pipe 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 storm drains including sawcutting, pavement removal, excavation, coordination with utility owners, including standby, compaction, connection to the existing SD system, replacement of street striping or pavement markings, and placing backfill, 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 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 storm drains including sawcutting, pavement removal, excavation, coordination with utility owners, including standby, replacement of street striping or

pavement markings, and placing backfill, complete in place and as shown on the plans and as specified in these specifications, the Special Provisions and as directed by the Engineer.

24" HDPE Storm Drain Pipe 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 storm drains including sawcutting, pavement removal, excavation, coordination with utility owners, including standby, replacement of street striping or pavement markings, placing and compacting backfill, installing CDF, supporting existing utilities, removing and replacing existing landscaping and driveway apron, complete in place and as shown on the plans and as specified in these specifications, the Special Provisions and as directed by the Engineer.

Type HDPE Drainage Inlet shall be paid for at the contract price per **each**, 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 HDPE drainage inlets including excavation, cast-in-place concrete base, fabricated fittings, trash racks, concrete drainage swale gutter pans, drop-in grate, hardware, backfill, compaction, complete in place and as shown on the plans and as specified in these Special Provisions and as directed by the Engineer.

Compensation for Video Inspection of plastic storm drain pipe shall be considered included in various contract items, which price shall include full compensation for furnishing all labor, materials, tools, and equipment and doing all work involved in recording the storm drain pipes per these specifications, including production and delivery of a color DVD 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 65-2 of these Special Provisions.

[Version: 10/30/14CDA STD2010]

65 REINFORCED CONCRETE PIPE

65-2.01 Description: Reinforced concrete pipe shall be installed on the alignment and grade as shown on the plans and in accordance with the applicable provisions of Section 65 of the City Specifications and the Standard Specifications.

65.2.01D Quality Control and Assurance: Visual inspection of Reinforced Concrete Pipe shall be made upon produce delivery and prior to backfill.

65-2.01E Trench Bracing and Shoring: All bracing and shoring shall conform to Section 7-1.02K(6)(b) of the Standard Specifications and the Division of Industrial Safety Construction Safety Orders which are currently in use.

The Contractor shall take all necessary measures to protect the workmen and adjacent areas and structures from the hazards of the trenching or excavation operations.

65-2.03E Video Inspection of Reinforced Concrete Pipe: The contractor shall hire an independent television inspection service to perform a closed-circuit television inspection of all newly constructed reinforced concrete pipe systems per Section 64-1.03D of these Special Provisions.

65-2.04 Payment: 12" Reinforced Concrete Storm Drain Pipe 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 the work involved in installing the pipe and flared end sections, including constructing the utility access road complete in place as shown on the plans, as specified herein, and no additional allowance will be made therefor.

Compensation for Video Inspection of reinforced concrete pipe systems shall be considered included in various contract items, which price shall include full compensation for furnishing all labor, materials, tools, and equipment and doing all work involved in recording the storm drain pipes per these specifications, including production and delivery of a color DVD to the Engineer and no additional compensation will be made therefor.

48" Storm Drain Manhole shall be paid for at the contract price **each,** which shall include full compensation for furnishing all labor, materials, tools, and equipment, and doing all the work involved in furnishing and installing the manhole as specified, including metal frames and covers, connection to new and existing storm drain pipes, concrete collars, couplings, bedding, backfilling and hauling as directed by the Engineer, and no additional allowance will be made therefor.

60" Storm Drain Manhole shall be paid for at the contract price **each,** which shall include full compensation for furnishing all labor, materials, tools, and equipment, and doing all the work involved in furnishing and installing the manhole as specified, including metal frames and covers, connection to new and existing storm drain pipes, concrete collars, couplings, bedding, backfilling and hauling as directed by the Engineer, and no additional allowance will be made therefor.

Trench Bracing and Shoring – Storm Drain 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 trench bracing and shoring as specified herein, and no additional allowance will be made therefor.

[Version:3/30/15 KKR STD2010]

68 SUBSURFACE DRAINS

68-2.01 Description: The subsurface drains for retaining walls shall be placed at the location shown on the plans in conformance with Section 68 of the Standard Specifications.

68-2.02 Materials: The subsurface drain materials shall be as shown on the plans and specified herein.

68-2.02D Perforated Plastic Pipe: Perforated plastic drain pipe shall be smooth-wall PVC plastic pipe or corrugated PVC plastic pipe with a smooth interior surface, in accordance with Section 68-2.02D of the Standard Specifications.

Plastic pipe shall be connected with belled ends.

68-2.02E Underdrain Outlets and Risers: Solid wall drain pipe shall be fabricated from the same material as and be compatible with the perforated underdrain pipe.

68-2.02F(5) Drain Rock: All permeable material for retaining wall back drains shall be 0.75" diameter crushed rock wrapped in filter fabric or Class 2 Permeable Material in accordance with Section 68-2.02F(3) of the Standard Specifications.

68-2.03 Construction: Excavate and backfill trenches as shown on the plans.

Install underdrains, perforated plastic pipe filter fabric and drain rock in accordance with Section 68-2.03 of the Standard Specifications.

Connect perforated plastic pipe and under drains to the storm drain system as shown on the drawings.

68-3.03 Construction: Contractor shall leave no more than 25 feet of un-backfilled trench open at the end of each work day.

68-3.04 Payment: Full compensation for perforated plastic pipe underdrain and backfill, as shown on the plans, including all work involved in construction a retaining wall foundation drainage system, labor, materials, tools and equipment shall be considered as included in the prices paid for Gravity Retaining Wall Type I, Gravity Retaining Wall Type II and Gravity Retaining Wall Type III, and no additional allowance will be made therefor.

[Version:01/05/15MK-GHD]

72 SLOPE PROTECTION

72-2.03A General: Rock slope protection shall be placed using Placement Method A.

72-2.04 Payment: Payment for installing salvaged rock slope protection (facing class, Method A) shall be considered included in the payment item for **Salvage**–**Existing Rock Slope Protection (Facing Class)**, and no additional allowance will be made therefor.

[Version:10/30/14DCMSTD2010]

73 CONCRETE CURBS AND SIDEWALKS

73-1.01A Summary: This work shall consist of curbs and gutters and minor concrete patching, and 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.

73-1.01E Color: A colored pigment designed for the integral coloring of concrete shall be added to the concrete mix. The pigment shall contain pure concentrated mineral pigments specifically processed for mixing into concrete and complying with ASTM C979. The colored pigment shall be Davis Colors color #860, applied in a dosage of 1 pound per 94-pound sack of cement (approximately 6 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. 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.

All concrete which is to be removed from curb and gutter 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.

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

73-2.04 Payment: Median Curb shall be paid for at the contract price per **linear 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 curb complete in place as specified, including excavating and backfilling in place as specified and no additional allowance will be made therefor.

Retaining Wall Gutter 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 the work involved in constructing retaining wall gutter complete in place as specified and shown on the plans, including applying curing materials, forming and constructing retaining wall gutter, providing wall drain and grate, connection of wall drain to storm drain system, connection of gutter to drainage inlets, furnishing and placing expansion joint filler, constructing weakened plane joints, excavating, and backfilling and doing all the work involved in constructing the gutter complete in place, and no additional allowance will be made therefor.

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, 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, and doing all the work involved in constructing curb and gutter complete in place as specified and no additional allowance will be made therefor.

73-3.04 Payment:

Sidewalk and Driveway 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 and driveway complete in place as specified, including furnishing and placing expansion joint filler, constructing weakened plane joints, excavating, and backfilling, and doing all the work involved in constructing sidewalk and driveway complete in place as specified and no additional allowance will be made therefor.

80 CHAIN LINK FENCE

80-1.01 General: Chain link fence, gates, and appurtenances to be erected under this contract shall be constructed in accordance with these Special Provisions, Section 80 of the Standard Specifications and as directed by the Engineer.

80-1.07 Temporary Fences: For site security purposes, there shall be a complete perimeter fence in place at all times consisting of existing, new and/or approved temporary fencing. Any additional temporary fencing required to maintain site security will be provided, maintained, and removed by the Contractor at no additional charge to the City.

Temporary perimeter fence shall be a minimum of 6 feet high with galvanized chain link fabric and either wood or steel posts.

80-3.02 Materials: Visual inspection of all material shall be made prior to installation. Any material showing signs of damage shall not be used.

The strength of the bond between the coating material and the steel of the bonded vinyl-coated chain link fabric or posts shall be equal to or greater than the cohesive strength of the polyvinyl chloride (PVC) coating material. The color of the vinyl coatings shall be black.

80-3.02B Post and Braces: All posts, gate frames, and rails shall be steel pipe galvanized and vinyl clad according to the specifications of AASHTO Designation M-111 and as specified on the Plans.

All line and corner posts shall be a minimum of 11 feet in length and gate posts a minimum of 12 feet in length.

All terminal and corner posts shall be truss braced from a first line post to the bottom of the terminal post with a 3/8" galvanized truss rod assembly.

80-3.02C Fabric: Chain link fence fabric shall be galvanized steel fabric conforming to the specifications of AASHTO Designation M-181. The fabric shall be #9 gauge, Type IV, Class B bonded vinyl-coated, black. Fabric shall be woven into approximately a one-inch mesh.

80-3.03 Construction: The fence shall be installed by skilled and experienced fence erectors on lines and grades furnished by the Engineer or shown on the plans. Line and corner posts for perimeter fence shall be set in concrete foundations a minimum of 36" inches deep and gate posts a minimum of 48" deep. Concrete foundations shall be no less than three times the diameter of the posts. Line post spacing shall not exceed ten-foot centers.

The existing fencing, gates and appurtenances shall become the property of the Contractor and shall be disposed of away from the construction site to the satisfaction of the Engineer.

80-1.06 Payment: Temporary Chain Link Fence will be paid for at the **lump sum** price, which price shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and doing all work involved in constructing the temporary chain link fence in place complete as specified to secure Tank R7, including but not limited to; submittals, furnishing and installing fence and appurtenances, additional site preparation as needed other then as specified in Section 16, removal of existing concrete footings, excavation or drilling, placement of new concrete post footings, attaching fabric to posts, drop bar, locking device, coating as required, and any other work necessary to construct chain link fence and gate not specifically enumerated herein, on the Project Plans or in the Standard Specifications, and no additional allowance will be made therefor.

Full compensation to remove and replace the existing chain link fence at Tank R7 shall be considered as included in the prices paid for under **Temporary Chain Link Fence,** which includes but is not limited to, furnishing all labor, materials, tools, equipment and incidentals, and doing all work involved in removing and replacing approximately 275 LF of existing chain link fence complete and in place as specified, including but not limited to; submittals, furnishing and installing new posts, adding to existing chain link as needed and appurtenances, additional site preparation as needed other then as specified in Section 16, removal of existing, concrete footings, filling and compacting holes, excavation or drilling, placement of new concrete post footings, attaching fabric to posts, removal and proper disposal of materials, and any other work necessary to remove and replace existing fence not specifically enumerated herein, on the Project Plans or in the Standard Specifications, and no additional allowance will be made therefor.

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. Any monuments which will or may be disturbed by construction activities must be tied out and corner record filed prior to construction. The Contractor **MUST** receive clearance from Engineer prior to disturbing any monument.

81-1.04 Payment: City Monuments 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.

[Revision:10/29/14DCM STD2010]

84 TRAFFIC STRIPES AND PAVEMENT MARKINGS

84-1 General

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: Full compensation for traffic stripes and pavement markings including all labor, materials, tools and equipment shall be considered as included in the prices paid for the **various contract items** of work, and no additional compensation will be made therefor.

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 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 most current State 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.

85-1.03 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: Full compensation for pavement markers including all labor, materials, tools and equipment shall be considered as included in the prices paid for the **various contract items** of work, and no additional compensation will be made therefor.

86 ELECTRICAL SYSTEMS

86-1General

86-1.01 Description: The Contractor shall furnish and install new conduits, cables and pull boxes at the location(s) shown on the plans in conformance with the applicable provisions of Section 86, "Electrical Systems", of the Standard Specifications, Standard Plans, these Special Provisions, and as directed by the Engineer.

86-1.06 Maintaining Existing and Temporary Electrical Systems: Contractor shall protect and maintain the existing R7 telemetry system, including conduits and cable until the new telemetry cables and conduits are installed and energized.

Where indicated on the Project Plans, the existing telemetry cable shall be removed and reinstalled in a temporary conduit until the new telemetry conduits and cables are installed. All shut-downs shall be coordinated in advance and scheduled with the City to minimize the amount of time the R7 telemetry system is off-line.

86-1.07 Scheduling of Work: Scheduling of work shall conform to Section 86-1.07 of the Standard Specifications except that no telemetry system shut-downs shall be scheduled for Monday, Friday, or the day before or after a legal State holiday. Contractor shall coordinate with the City a minimum of five (5) working days in advance of any proposed shut-downs or disconnections of the telemetry system. Shut-downs required to disconnect and reconnect telemetry cables shall be limited to one working day.

86-2 Materials and Installation

86-2.01 Excavating and Backfill: All trench spoils shall be removed from the work area as they are generated.

Native material shall not be used as trench backfill.

When conduit containing conductors of 100 volts or less is not installed adjacent to the lip of gutter it shall be installed with a minimum of 24 inches of cover.

Where existing facilities prevent installing conduit with 24 inches of cover, the Contractor shall depress the new conduit under the existing facilities without exception.

Trench backfill and surfacing for trenches shall conform to City STD.-215 or as shown on the plans.

86-2.02 Removing and Replacing Improvements: Concrete removal shall conform to the applicable provisions of Section 15-3 of the Standard Specifications and these Special Provisions.

All concrete to be removed shall be disposed of by the Contractor away from the site of the work. 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 slab areas shall be removed to the nearest score mark or construction joint as directed by the Engineer.

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.

All sidewalk and curb and gutter which are removed shall be reconstructed in accordance with Section 73 of the City of Santa Rosa Construction Specifications.

86-2.05 Conduit: Conduit shall conform to Standard Specifications and Part IV-F of the City Traffic Standards.

Trenching depth shall be per Section 86-2.01 of these Special Provisions.

86-2.06 Pull Boxes: Pull boxes shall be traffic rated and conform to STD 730 of the City Traffic Standards, these Special Provisions and Section 86-2.06 of the Caltrans Standard Specifications.

All existing pull boxes to receive new conductors and/or conduits shall be cleaned out, all existing grout removed, and the bottoms re-grouted with a drain hole or the boxes replaced to meet current City Standards.

86-2.08 Conductors and Cables:

86-2.08A General: All new cables for telemetry systems shall be PE-39 cable.

The telemetry cable shall be installed with no splices. Cable shall be pulled by hand and the use of winches or other power actuated pulling equipment will not be permitted. Six feet of slack shall be left in each pullbox. 100 feet of slack shall be left at the R7 Telemetry Cabinet at Tank R7, as shown on the plans.

A pull rope shall be installed in any empty conduit.

The Contractor shall remove the existing telemetry cable and install the cable in a temporary conduit prior to performing any construction activities for the new storm drain and R7 road access improvements. After the new telemetry conduits and cables are installed from the R7 Telemetry Enclosure on Yerba Buena Road to the R7 Telemetry Cabinet at Tank R7, as shown on the plans, the Contractor shall remove the temporary conduit and existing cable.

The existing telemetry cable is 19 AWG 6 Pair Direct Burial Type PE-39 AL RDUP/RUS. The City shall disconnect the existing and reconnect the new telemetry cable.

86-2.10 Bonding and Grounding: Grounding jumper shall be attached by a 3/16-inch or larger brass bolt in the standard and shall be run to the ground. Grounding jumper shall be visible after cap has been poured on foundation.

86-8.10 Payment: Telemetry Conduit shall be paid for at the contract price per **linear foot** of trench, which price shall include full compensation for furnishing all labor,

materials, tools and equipment to install two new 2-inch conduits and pull rope as shown on the plans, as specified, including all excavation, bedding, backfill, paving, disposal of spoils, conduits, and pull rope, and no additional allowance will be made therefor.

Temporary Conduit 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 removing the existing cable from the existing 2-inch conduit and reinstalling the existing cable in a temporary 1-inch conduit, including but not limited to, providing, placing, and maintaining the temporary conduit, removal of the temporary conduit after the new telemetry conduits and cables are installed and energized, coordination efforts required to maintain full operation of the existing Tank R7 telemetry system, and no additional allowance will be made therefor.

Telemetry Cable 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 to install telemetry cable as shown on the plans, as specified, including coordination with the City on shit-down and connecting cables, as specified herein, and no additional allowance will be made therefor.

Telemetry Pull Boxes shall be paid for at the contract unit price **each**, which price shall include full compensation for furnishing all labor, material, tools, equipment and doing all work involved in installing new traffic rated pull boxes, including excavation, backfill, and reconnecting new and existing conduits as shown on the plans and as specified herein and no additional allowance will be made therefor.

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.

99 WATER SYSTEM

99-1 General: Any damage to the existing water system and appurtenances shall be repaired and/or replaced by the Contractor in accordance to the specifications in this Section and at no additional cost to the City.

All water mains and related appurtenances shall conform to Section 99 of the City Specifications and Standards, with the following modifications and additional requirements:

Contractor shall provide as-built information within a week of the final tie-in when vertical or horizontal field adjustments result in a deviation from the Project Plans or when elevations are not shown on the Project Plans. Recorded elevations shall be no greater than every 25 linear feet of installed pipe. Recorded information shall be provided on a full set of Project Plans.

99-1.01A Materials: Where CL150 DR18 or CL200 DR14 PVC pipe is called for in these Special Provisions, on the Project Plans or in the City Standards, the Contractor shall instead use PC235 DR18 or PC305 DR14 respectively.

All materials used shall be lead free per California Health & Safety Code Section 116875.

Per U.S. et al., ex rel. Hendrix v. J-M Manufacturing Co., Inc., et al., Case No. ED CV-06-0055-GW (C.D. of CA), the City of Santa Rosa is not currently accepting PVC pipe manufactured by J-M Manufacturing Co. or JM Eagle for installation on City projects.

The Contractor shall use a single manufacturer for each of the following items supplied for this project unless otherwise approved by the Engineer:

1. Pipe
2. Fittings
3. Valves

The Contactor shall submit the installation location for any proposed use of flange fittings not already specified herein.

99-1.02 Pipe: Any pipe that is delivered to the job site that exhibits, in the opinion of the Engineer, signs of contamination, damage and/or defect, will be rejected.

All ductile iron pipe buried underground shall be encased with 8 mil (minimum) polyethylene film in tube form. Polyethylene material and installation procedure for the encasement shall conform to ANSI/AWWA C105/A21.5-10 or most recent issue.

Tracer wire shall be installed on all water pipe and HDPE tubing unless otherwise specified. Tracer wire shall be 12 AWG solid copper wire with a blue type UF 60 mil insulation that is designed for use in the detection of underground utilities. Where splicing is required only watertight connectors shall be used, and shall be either Copperhead Snakebite, 3M DBR, or an approved equivalent.

99-1.03 Copper Water Service Tubing: All copper service tubing shall be Mueller Streamline PlumbShield blue coated Type K soft temper tubing for 1-inch services and type K hard temper tubing for 1-1/2-inch & 2-inch services, or an approved equivalent.

99-1.03A High Density Polyethylene (HDPE) Water Service Tubing: All HDPE water service tubing shall be blue in color, and shall be copper tubing size (CTS) SDR9 tubing, and shall conform to both AWWA C901 and ASTM D2737and shall be either PE3608 - 200psi tubing or PE4710 - 250psi tubing.

If soil contamination is suspected during construction the Contractor shall notify the Engineer prior to the installation of HDPE material. Use of HDPE material within or adjacent to areas of known contaminated soils is strictly prohibited.

99-1.04 Fittings: All fittings shall be ductile iron mechanical joint type unless otherwise specified.

Flanged fittings shall only be used on above ground installations or on tees/crosses when attached to a flange by mechanical joint valve or approved fitting unless otherwise specified.

All non-stainless fasteners shall be coated with Permatex spray-on heavy duty rubberized under-coating or approved equivalent. All surfaces to be coated shall be dry prior to coating.

99-1.04A Restrained Joint Fittings: Mechanical joint type restrained fittings shall be installed on all joints of a water main tie-in, cross, tee and anywhere a fitting is required to make a bend in the alignment of the water main unless otherwise specified.

99-1.11 Excavation, Backfill, and Resurfacing: Excavation, backfill and resurfacing shall conform to all applicable City Specifications and Standards, and any modifications herein and/or on the Project Plans.

An **air gap** shall be in use at all times when dewatering to the sanitary sewer system.

Blasting shall not be permitted.

It is the Contractor's responsibility to ensure that water system components are laid and bedded on sound, stable material. All existing material that has been disturbed must be removed from the trench prior to the installation of new bedding material. The Contractor shall promptly notify the Engineer of any field conditions that may affect alignment and/or grade.

All excavations shall be able to accommodate compaction and testing equipment and personnel required for backfilling. If, due to vertical and/or horizontal obstructions, typical methods cannot be used, the Engineer may require the use of a pneumatic Pogo Stick/Powder Puff type compactor at no additional cost to the City.

Control density fill (CDF) shall be in accordance with City Standard 215 and placed at the locations depicted on the Project Plans and where cover is less than 3 feet. All excavations backfilled with CDF shall be plated to allow for curing. Plates shall be removed by the close of the following work day unless it is deemed that the CDF is not traffic ready.

All lateral services constructed under curb, gutter and driveway culverts shall be accomplished by use of a trenchless method approved by the Engineer, unless otherwise specified. Boring under sidewalks and/or concrete filled planter strips will not be allowed. Boreholes shall be only large enough to allow for the size of pipe to be installed. If the Contractor's operations disturb the supporting soil, the Engineer may require the removal and replacement of any undermined sidewalk, curb, gutter or culvert; and/or the use of CDF backfill at the Contractor's expense. The limits of curb and gutter replacement and any required doweling will be at the discretion of the Engineer.

The Contractor shall remove and replace sidewalk and planter strips as required for all water work to the nearest transverse score mark on both sides and full sidewalk width. All areas of sidewalk removed for construction shall be backfilled and compacted level with temporary asphalt concrete or covered with 1-inch thick plywood, laid flat with ADA compliant temporary asphalt concrete taper on both ends.

All excavated material shall be removed from the job site by the end of each workday.

99-1.11A Trench Bracing and Shoring – Water: 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, and Section 7-1.02K(6) of the Standard Specifications, and the Division of Industrial Safety Construction Safety Orders which are currently in use.

The Contractor shall take all necessary measures to protect the workers and adjacent areas and structures from the hazards of the trenching or excavation operations.

Trench sheeting or boxes shall be withdrawn in such a manner as to prevent caving at the walls of excavations or damage to piping or other structures. Sheeting shall be completely removed from the trench and no backfill shall be installed against the sheeting before it is removed.

99-1.12 Laying and Handling Pipe Materials: All pipe stockpiled on the job shall be stored with the ends covered to prevent the entrance of foreign matter. The Engineer may reject stockpiled pipe with exposed ends. Whenever pipe laying is not in progress, the open ends of installed pipe shall be closed water tight by mechanical plug, cap or other means approved by the Engineer.

If proper separation between new sanitary sewer lines and water mains, per the latest guidelines from the California Department of Public Health (CDPH) cannot be maintained, the Contractor shall inform the Engineer immediately to get direction, unless direction has already been provided on the Project Plans or otherwise specified.

Where new mains cannot start on the same lines and grades as the existing main, restrained fittings shall be used to make grade and/or alignment transitions for tie-ins to existing mains. This does not eliminate the requirement for thrust blocking unless otherwise specified.

Proposed water main elevations may need to be adjusted in the field to allow for the required separation with sanitary sewer lines and other facilities. If water system components are proposed to be installed prior to sanitary sewer or storm drain components, the Contractor shall investigate for the possibility of conflicts or inadequate separation of facilities. The Contractor shall perform this investigation prior to water system installation and provide all relevant information in writing to the Engineer immediately upon discovery of any conflict.

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.

Installation of all pipe joints shall be per manufacturer's recommendations and installation instructions, and all PVC bell and spigot joints, up to and including 8 inch, shall be assembled using the bar and block method. At any time and at no additional cost to the City the Engineer may require the use of a device to prevent "over-insertion" such as a Mega-Stop Series 5000 from EBAA Iron, or an approved equivalent. All joints that are, in the opinion of the Engineer, over-inserted, shall be pulled back to the proper insertion point or removed and replaced at the Engineer's discretion. Any adjacent joint that may have been disturbed due to the over-insertion shall be allowed to be inspected by the Engineer and if required shall be pulled back or removed and replaced.

99-1.15A Water Services: Typically new service laterals shall be as close as possible to existing laterals. The Contractor shall coordinate with the Engineer for the exact location in the field prior to saw cutting or any concrete removal. New service laterals shall be installed with a minimum horizontal clearance of 5 feet from sewer laterals and 3 feet from gas laterals.

Water service tie-ins to existing building service lines of 3/4-inch or 1-inch in size shall be made with type "K" hard or soft temper copper or schedule 80 PVC tubing and shall match the size of the existing service line.

Water Service tie-ins to existing building service lines of 1-1/2-inch to 3-inch in size shall be made with type "K" hard temper copper tubing and shall match the size of the existing service line.

When connecting to any service line under 4 inches that has a backflow device, threaded brass or type "K" hard temper copper tubing shall be used. If the existing pipe between the meter and backflow device is found to be plastic the Contractor shall notify the Inspector and is directed to replace the existing pipe with threaded brass or type "K" hard temper copper.

When any existing service line being connected to is galvanized pipe, dielectric protection is required.

Bends and/or fittings shall not be permitted under the sidewalk, and all tie-ins to the existing service lines shall be made behind the sidewalk unless otherwise specified.

Submittals are required on all material used for water service tie-ins. Plastic or galvanized dresser type couplers will not be considered as acceptable material.

When connecting a 1-inch water service to a 5/8-inch x 3/4-inch meter the street side curb stop shall be a 1-inch x 3/4-inch angle meter ball valve (submittal required), and the meter box shall be per City Standard 863.

After the new water system is connected to the existing City system the Contractor shall purge the new service of air and sediment prior to transferring the meter.

The Contractor shall notify each customer before shutting down their existing service and transferring the meter and prior to turning their water back on after the transfer is complete. The Contractor shall also shut off any available property side valve after notifying but prior to cutting into the existing service line. All meter transfers and service tie-ins shall be

witnessed by the field Inspector, and it is the Contractor's responsibility to coordinate this inspection.

Prior to activating the new service the Contractor shall open the property side valve and flush the new service for a minimum of 5 minutes and until the water is clear and free of all air and foreign matter.

The existing building service line to be connected to may be metal or plastic and may not be the same size as the new service. The Contractor shall provide couplings, connectors and fittings as necessary to complete the connection to the new water service at no additional cost to the City.

Where new services are connected to existing backflow devices the Contractor shall provide documentation that the backflow devices have been certified after installation. Certifications must be completed by a certified tester off the "City of Santa Rosa Approved List of Backflow Testers" herein. All necessary paperwork shall be completed by the Tester and one copy given to the property owner and one to the Engineer within 72 hours after connection.

Where a new water service is shown to be connected to an existing water main, the connection shall be made by hot tap. The Contractor shall coordinate the work and excavate and install all necessary materials, and City Forces shall tap the main. There shall be a minimum distance of 18 inches between all taps, whether new or existing, unless otherwise approved by the Engineer.

If the Contractor damages any new or existing water service during construction, they shall replace the service at their own expense from the corporation stop at the main to the water meter without splicing. Size and material of new water service shall match existing.

99-1.15B High Density Polyethylene (HDPE) Water Services: HDPE services shall be installed per applicable City Standard and any modifications herein and/or on the Project Plans. Any HDPE water service may be replaced with a copper water service if deemed necessary by the Engineer.

99-1.15C Copper Water Services: Copper water services shall be installed per applicable City Standards and any modification herein and/or on the Project Plans. All brass material and sections of copper tubing where the polyethylene coating is removed shall be wrapped with an approved waterproof pipe wrap. The wrap shall extend a minimum of 4 inches beyond any exposed brass or copper. All cut ends of tubing shall be deburred prior to installation.

99-1.17A Leaded Joint Removal: Leaded joints encountered on water mains that are to remain active within the limits of excavations shall be removed by the Contractor. The Contractor shall remove the joint by cutting out the section of pipe containing the exposed joint to a minimum of two feet beyond the walls of the crossing trench and replacing the removed section with installing ductile iron pipe and approved couplings.

The removed joint shall be handled, and disposed of by the Contractor according to the Contractor's State Licensing Law and all other applicable laws and regulations.

99-1.19 Cleaning, Flushing and Chlorination of the new Water System: Cleaning, flushing and chlorination of the new water system shall conform to all applicable City Specifications and Standards, and any modifications herein and/or on the Project Plans.

During the installation of new water main(s), the Contractor shall insert an appropriately sized flexible polyurethane foam sweeping or cleaning style swab (density: 2 lbs. cu. ft.) complete with polyurethane drive seal, into the beginning or ending of each pipe segment, (e.g. if a tee is installed as part of the new system, swabs shall be placed so both the “run” and “branch” segments are able to be swabbed). The swab shall remain there until the pipeline is completed. The Engineer may allow, at their discretion, segments of new main less than 80 feet in length to be cleaned by flushing only.

Cleaning and flushing shall be accomplished by propelling the swab down the pipeline to the exit point with an approved source of potable water. After removal of the swab(s) a unidirectional flush of the new system shall continue until the water is completely clear.

After swabbing is complete, all segments of main that were not swabbed, and every lateral, shall be flushed until free of air and debris.

Water used for flushing shall be considered contaminated after exiting the new system and shall not be allowed to reenter the new system. If, in the opinion of the Engineer, the new system becomes contaminated the Contractor shall be required to re-disinfect the system, all or in part, at no additional cost to the City.

After all lines have been cleaned and flushed, and the hydrostatic test is accepted by the Engineer, the Contractor shall disinfect the new water system components.

All equipment used for hydrostatic testing and chlorination must first be approved by the Engineer.

Liquid chlorine shall be applied as stated herein. The point of application of the chlorination agent shall be through a corporation stop or temporary blow off installed in the newly laid pipe at the beginning of the pipe extension, or at a valve location.

Water from the existing distribution system shall be used to fill the new mains at a slow controlled rate of flow during the application of chlorine; this rate of flow shall not exceed the limits of any installed air release valves. Precautions shall be taken to prevent back pressure causing a reversal of flow into the City’s water system. In the process of chlorinating, all valves and other appurtenances on the new pipe shall be operated in such a way to allow the chlorine mixture to be fully distributed to all parts of the new water system.

The rate of chlorine feed shall be in such proportion to the rate of water entering the pipe that the chlorine dose applied to the water entering the newly laid pipe shall be at least 100 ppm and not greater than 200 ppm. The chlorine solution shall be retained in the pipe for a period of 24 hours. After 24 hours, chlorine levels shall not be less than 50% of the initial dosage, if the chlorine level is less than 50% of the initial dosage, the above chlorine procedures shall be repeated. The chlorinated water shall then be discharged as stated herein under “Discharge of Chlorinated Water” and all new mains and laterals shall be given a final flush and then filled with water from the City’s distribution system.

24 hours after the final flush of chlorinated water, the chlorine residual shall be taken at locations determined by the Engineer. All locations shall have at least 0.5 ppm but not greater than 1 ppm prior to the taking of the initial bacteria samples.

The initial bacteria samples shall consist of 2 consecutive sets of acceptable sample results taken at least 24 hours apart from the same locations as stipulated by the California Department of Public Health Water Works Standard Chapter 16, Article 5, Section 64580 "Disinfection of New or Repaired Mains."

If bacteria tests indicate contamination, or if the sampling procedure is questioned by the Engineer, the chlorination procedure shall be repeated until confirmed tests show that the water sampled from the newly laid pipe conforms to the requirements specified herein.

Costs for the collection and analysis of the initial bacteria test samples will be paid for by the City. Samples shall be taken at a minimum; on each blow off of the new water system and on at least one water service between each two blow-offs. The exact location and quantity of the samples will be determined in the field by the Engineer. There shall not be more than 1200 feet between sample points. If either of the initial bacteria tests fails at any sampling site, two consecutive passing bacteria tests must be obtained at that sampling site prior to making the tie-in.

The City will pay labor and analytical fees for collecting and analyzing up to 2 additional individual bacteria samples at each sampling site. If additional testing is required, the total costs of sampling and analysis will be deducted from the following progress payment. The Engineer may require a complete Title 22 potable water test at the Contractor's expense.

The initial bacteria tests are valid for 10 calendar days after the second set has been taken. All other individual bacteria tests are valid for 10 calendar days. If there is more than a 10 calendar day lapse between a bacteria test and the applicable tie-in, the bacteria test shall be repeated prior to performing the tie-in.

DISCHARGE OF CHLORINATED WATER: Chlorinated water used to disinfect the new water system is the property of the Contractor and its disposal is the responsibility of the Contractor. Chlorinated water used to disinfect the new system shall be disposed of in accordance with all laws and regulations. Discharge to the storm drain system or a waterway is not permitted without a permit from the North Coast Regional Water Quality Control Board.

Discharges may be allowed to be disposed of into the sanitary sewer system, but must first meet the following requirements:

1. The City of Santa Rosa Subregional Reclamation Facility shall be notified by the Engineer in coordination with the Contractor, prior to the discharge being disposed of in the sanitary sewer system. The payment of any fees required will be the responsibility of the Contractor.

2. The pH of the water must be between 6.0 and 9.5.

3. The Contractor shall maintain an "air gap" from the discharge conduit to the receiving sewer facility with a minimum vertical distance of twice the diameter of the discharge conduit.

99-1.20 Water Main Connection Work: Upon completion of construction and testing of new water mains, services and appurtenances, final connection shall be made by the Contractor under City inspection.

The Contractor shall schedule all hot taps and system shutdowns regardless of the nature of work with the Engineer. Tie-ins will not be scheduled until the Engineer has received documentation of all required passing bacteria tests. The Contractor shall submit a separate written request to the Engineer to schedule each individual shutdown required to facilitate a tie-in or any other work where a shutdown may be necessary. The Contractor shall submit written shut down requests at least 2 working days and 3 working days in advance for residential and commercial shutdowns respectively. The City will attempt to facilitate shutdowns within these timeframes; however, extenuating circumstances may result in response times in excess of those mentioned above. Under such conditions, no claims related to work delays shall be considered. System shutdown scheduling shall also be subject to the limitations of Section 6-4.01B, “Water Utility Notification”, of these Special Provisions. All shutdowns and valve turning operations shall be performed by authorized City personnel only. Authorized City personnel must be present during any operation requiring a shutdown unless otherwise approved by the Engineer and provided to the Contractor in writing. Tie-ins shall not be performed without prior authorization by the Engineer.

Excavations for individual tie-ins and hot taps must be completed as much as possible without causing damage to new or existing facilities and plated a minimum of 1 working day in advance of the scheduled work. If this requirement is not met, the scheduled work will be cancelled. All materials for the proposed work shall be on site for inspection the morning of the scheduled work.

Contractors who fail to keep field appointments shall be billed for City personnel and equipment time used, and the Contractor shall bear the costs incurred by the City for notification of its customers for the subsequent appointment.

After notification by the Contractor for such a need, the City will contact commercial customers for service interruption needs and will inform the Contractor accordingly.

City crews work a 9/80 schedule; this schedule may prohibit hot taps and shutdowns on alternating Fridays.

Individual hot taps may be requested a minimum of 2 working days in advance, if the request is for multiple hot taps to be done on the same day the request shall be made a minimum of 5 working days in advance. The City will attempt to facilitate hot taps within these timeframes; however, extenuating circumstances may result in response times in excess of those mentioned herein. Under such conditions, no claims related to hot tap delays will be considered. Hot tap scheduling shall also be subject to the limitations of Section 6-4.01B, “Water Utility Notification”, of these Special Provisions.

Hot taps and cut-ins shall not be allowed within 4 feet of a joint unless first receiving approval from the Engineer.

Where a “cut-in” tee or cross is shown on the Project Plans, the Contractor shall provide and install the entire assembly (including valves if shown), and any other hardware necessary under inspection by authorized City personnel, and shall provide all other work and materials necessary to complete the installation.

When installing a “cut-in” tee or cross that is larger than the existing pipe, the new assembly must be installed at the depth appropriate to the size of the “cut-in” tee or cross, and shall include all fittings, pipe and restraints required to make the change in grade and connections.

During the work, the Contractor shall exercise all necessary precautions to prevent the entrance of trench water or any other foreign material into the water main and appurtenances and shall conduct all operations in accordance with the most stringent sanitation practices. The interior of all appurtenances being installed, as well as the outside of pipe that will come in contact with distribution water when the system is active, shall be thoroughly swabbed with a one to three percent liquid chlorine solution prior to installation.

Connections to cast iron, PVC, or ductile iron pipes shall be made with mechanical joint solid sleeves. When connecting to asbestos cement and/or “over-sized” cast iron pipe, “wide range” style couplings from Ford, Smith-Blair, Romac or an approved equivalent shall be used. Submittals are required for all couplings.

When connecting to an existing water main the Contractor shall install temporary and permanent thrust blocking, as necessary, for restraint and to allow for reenergizing of the water main immediately after all plumbing is complete.

When installing new components by “cut-in” to an existing PVC or ductile iron main, all new joints shall be mechanically restrained.

99-1.22 Construction Water: Construction water for the work under this contract will not be furnished by the City.

At no time shall water trucks or any other unapproved vessel be used in the application of loading newly laid water mains unless first approved of by the Engineer.

99-3.01 Payment:

Leaded joints that are removed to accomplish other contact work shall be considered as paid for under the **various contract items** of work, and shall not be paid

Full compensation for **Water Main**, **Water Services** and **Trench Bracing and Shoring-Water** shall be considered as included in the prices paid for the various contract items of work and no additional allowance will be made therefor.

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.

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.

112-1.03 Payment: Full compensation for work in this section shall be considered as included in the prices paid for the various contract items of work and no additional allowances will be made therefor.

[Version: 4/14/09]

121 NOTIFICATION

121-1.01 Notification: 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 to, and attempt to make personal contact with all residents and businesses in the vicinity of each site 10 working days prior to the start of work. 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 a work site or 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.

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.

[Version: 10/13/14-CDA STD2010]

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.

[Version: 11/6/14CDA STD2010]

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 or County department. All other required permits shall be obtained at the Contractor's expense.

The Contractor shall obtain the following permits:

1. Encroachment Permit
2. Transportation Permit

All electrical service requirements are the responsibility of the Contractor.

The City has obtained a permit from the City of Santa Rosa Water Department for a one-time groundwater discharge permit into the City sewer system, Payment of the permit fee and any other fees for the discharge into the sewer system shall be paid for by the City. A copy of the Authorization to the Discharge is included herein. Any required water sampling will be the responsibility of the City. The phone number for the Industrial Waste Section is (707) 543-3369

Section A 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.

[Version: 4/14/09]

B GEOTECHNICAL REPORT

The following geotechnical report and addendum for this project are available for review upon request:

1. Geotechnical Investigation Report – Access Road Stabilization Storage Tank R7, Santa Rosa, California, by Kleinfelder (Project No.: 20155169.001A), dated June 1, 2015
2. Geotechnical Assessment and Report Addendum – Proposed Access Road Retaining Walls, City of Santa Rosa Storage Tank R7, Santa Rosa, California, by Kleinfelder (Project No.: 20155169.001A), dated January 19, 2018

An electronic copy (PDF) of the Geotechnical Investigation Report may be obtained via email from the City by request.

The information contained in the reports was obtained for design purposes only and is not considered part of the contract. The Contractor is responsible for any conclusions he may draw from the reports; should he prefer not to assume such risk, he should employ his own experts to analyze available information and/or to make additional investigative efforts upon which to base his conclusions, all at no cost to the City.

[Version: 4/14/09]

C STATEMENT OF SPECIAL INSPECTIONS

Statement of Special Inspections, 2016 CBC

Planning & Economic Development Department
Building Division
100 Santa Rosa Avenue, Room 3
Santa Rosa, CA 95404
(707) 543-3200

This editable electronic form is intended to be modified (delete anything that does not apply) by the design professionals to reflect the specific tests and inspection requirements for this project.

PROJECT ADDRESS_____

PERMIT APPLICATION #_____

DESCRIPTION OF WORK:_____

This **Statement of Special Inspections** is submitted in fulfillment of the requirement of CBC Sections 1704 and 1705. Included are:

- Schedule of Special Inspections and tests applicable to this project:
  - ☒ Special Inspections per Sections 1704 and 1705
  - ☒ Special inspections for Seismic Resistance per Section 1704.3.2
- List of the Testing Agencies and other special inspectors that will be retained to conduct the tests and inspections.
- Structural Observation: In addition to special inspection requirements, the engineer or architect shall provide structural observation when required by Section 1704.6 of the 2016 California Building Code or the Building Official. The scope and frequency for structural observation shall be clearly noted on the plans.
  - ☒ Structural Observations for Seismic Resistance per Section 1704.6.1.
  - ☐ Structural Observation required by the Building Official

The **Schedule of Special Inspections** summarizes the Special Inspections and tests required. Special Inspectors will refer to the approved plans and specifications for detailed special inspection requirements. Any additional tests and inspections required by the approved plans and specifications will also be performed.

Interim reports will be submitted to the Building Official and the Registered Design Professional in Responsible Charge in accordance with CBC Section 1704.2.4.

A **Final Report of Special Inspections** documenting required Special Inspections, testing and correction of any discrepancies noted in the inspections shall be submitted prior to issuance of a Certificate of Use and Occupancy (Section 1704.2.4). The Final Report will document:

- Required special inspections.
- Correction of discrepancies noted in inspections.

The **Owner** recognizes his or her obligation to ensure that the construction complies with the approved permit documents and to implement this program of special inspections. In partial fulfillment of these obligations, the Owner or registered design professional in responsible charge acting as the owner's agent shall employ one or more approved agencies to perform Special Inspections as required in CBC Section 1704.2.

This plan has been developed with the understanding that the Chief Building Official will:

- Review and approve the qualifications of the Special Inspectors who will perform the inspections.
- Monitor special inspection activities on the job site to assure that the Special Inspectors are qualified and are performing their duties as called for in this Statement of Special Inspection.
- Review submitted inspection reports.
- Perform inspections as required by the local building code.

Prepared by:

_____

Registered Design Professional in Responsible Charge Email Address

_____

Signature Date

Statement of Special Inspections, 2016 CBC

Owner's Authorization:

Owner

Signature Date

Building Department Acceptance:

Name Title

Signature Date

CONTRACTORS RESPONSIBILITIES (Section 1704.4): Each contractor responsible for the construction of a main wind – or seismic-force-resisting system, designated seismic system or a wind – or seismic-resisting component listed in the statement of special inspections acknowledges:

1) Awareness of the special requirements contained in the statement of special inspections;
2) Control will be exercised to obtain conformance with the construction documents approved by the Chief Building Official;
3) Procedures for exercising control within the contractor's organization, the method and frequency of reporting and the distribution of the reports.

Contractor or Owner/Builder Acknowledgment of Responsibilities:

Contractor Contractor License Number

Signature Date

Schedule of Inspection, Testing Agencies, and Inspectors

The following are the testing agencies and special inspectors that will be retained to conduct tests and inspection on this project.

Responsibility	Firm	Address, Telephone, Email
1. Geotechnical Inspections	*To Be Determined*	
2. Special Inspection	*To Be Determined*	
3. Material Testing	*To Be Determined*	
4. Structural Observation	*To Be Determined*	
5. Other	*To Be Determined*	

Seismic Requirements (Section 1704.3.2)

Description of seismic-force-resisting system and designated seismic systems subject to **special inspections and testing** as per Section 1705.12 or 1705.13:

1) TBD

The extent of the seismic-force-resisting system is defined in more detail in the construction documents.

Structural Observations (Section 1704.6)

Description of frequency and extent of required **structural observations**:

The extent of the structural observations is defined in more detail in the construction documents.

Schedule of Special Inspection

Notation Used in Table:

Column headers:

- C — Indicates continuous inspection is required.
- P — Indicates periodic inspections are required. The notes and or contract documents should clarify.

Box entries:

- X — Is placed in the appropriate column to denote either “C” continuous or “P” periodic inspections.
- --- — Denotes an activity that is either a one-time activity or one whose frequency is defined in some other manner.

Additional detail regarding inspections and tests are provided in the project specifications or notes on the drawings.

Verification and Inspection	C	P	Notes
1704.2.5 – Inspect fabricator’s approved detailed fabrication and quality control procedures.		---	
1704.2.5 – Certificate of Compliance from Approved Fabricator 1704.2.5.1		---	
Section 1705.2 – Structural Steel Quality Assurance Inspection Requirements of AISC 360			
1. Fabricator and erector documents. (Verify reports, certifications, specifications and qualifications listed in AISC 360, Section N3 for compliance with construction documents.)		---	
2. Material verification of structural steel.		X	

Verification and Inspection	C	P	Notes
3. Verify member locations, braces, stiffeners, and application of joint details at each connection comply with construction documents.		X	
4. Structural steel welding:			
a. Inspection tasks Prior to Welding (Observe, or perform for each welded joint or member, the QA tasks listed in AISC 360, Table N5.4-1.)		---	
b. Inspection tasks During Welding (Observe, or perform for each welded joint or member, the QA tasks listed in AISC 360, Table N5.4-2.)		---	
c. Inspection tasks After Welding (Observe, or perform for each welded joint or member, the QA tasks listed in AISC 360, Table N5.4-3.)		---	
d. Nondestructive testing (NDT) of welded joints:			EXCEPTION: NDT of welds completed in an approved fabricator's shop. See AISC 360, N7
1) Complete penetration groove welds 5/16" or greater in risk category III or IV.		---	UT on 100%, may reduce to 25% per AISC 360, N5e
2) Complete penetration groove welds 5/16" or greater in risk category II.		---	UT on 10%, may increase to 100% per AISC 360, N5f
3) Thermally cut surfaces of access holes when material t > 2".		---	
4) Welded joints subject to fatigue when required by AISC 360, Appendix 3, Table A-3.1.		---	
5) Fabricator's NDT reports when fabricator performs NDT.		---	AISC 360, N5d
5. Structural steel bolting:			
a. Inspection tasks Prior to Bolting (Observe, or perform tasks for each bolted connection in accordance with QA tasks listed in AISC 360, Table N5.6-1.)		---	
b. Inspection tasks During Bolting (Observe the QA tasks listed in AISC 360, Table N5.6-2.)		---	
c. Inspection tasks After Bolting (Perform tasks for each bolted connection in accordance with QA tasks listed in AISC 360, Table N5.6-3.)		---	
6. Inspection of steel elements of composite construction prior to concrete placement in accordance with QA tasks listed in AISC 360, Table N6.1.		---	
1705.2.2 – Cold-Formed Steel Deck			
1. Material verification of cold-formed steel deck: a. Identification markings to conform to ASTM standards specified in the approved construction documents.		X	
b. Manufacturer's certified test reports.		X	
2. Inspection of welding:			
a. Cold-formed steel deck:			
1) Floor and roof deck welds.		X	SDI QA/QC
Table 1705.2.3 Open-Web Steel Joists and Joist Girders			

Verification and Inspection	C	P	Notes
1. Installation of open-web steel joists and joist girders.			
a. End connections – welding or bolted.		X	SJI specifications listed in Section 2207.1
b. Bridging – horizontal or diagonal.			CBC 1705.2.4 (spans > 60')
1. Standard bridging.		X	SJI specifications listed in Section 2207.1
2. Bridging that differs from the SJI specifications listed in Section 2207.1.		X	
Table 1705.3 – Concrete Construction			
1. Inspection of reinforcing steel, including prestressing tendons and placement.		X	ACI 318: 3.5
2. Reinforcing bar welding: a. Verification of weldability of reinforcing bars other than ASTM A 706; b. Inspect single-pass fillet welds, maximum 5/16"; c. Inspect all other welds.	 X	 X X 	AWS D1.4 ACI 318: Section 26.5.4 AWS D1.4 ACI 318: Section 26.5.4 AWS D1.4, ACI 318: Section 26.5.4
3. Inspection of anchors cast in concrete.		X	ACI 318: 17.8.2
4. Inspection of anchors post-installed in hardened concrete members. a. Adhesive anchors installed in horizontally or upwardly inclined orientations to resist sustained tension loads. b. Mechanical anchors and adhesive anchors not defined in 4.a.	 X	X X	ACI 318: 17.8.2.4 ACI 318: 17.8.2
5. Verify use of required design mix.		X	ACI 318: Ch. 19, 26.4.3, 26.4.4 CBC 1904.1, 1910.2, 1908.2, 1908.3
6. Prior to concrete placement, fabricate specimens for strength tests, perform slump and air content tests, and determine the temperature of the concrete.	X		ASTM C 172; ASTM C 31; ACI 318: 26.4.5, 26.12; CBC 1908.10
7. Inspect concrete and shotcrete placement for proper application techniques.	X		ACI 318: 26.4.5; CBC 1908.6, 1908.7, 1908.8
8. Verify maintenance of specified curing temperature and techniques.		X	ACI 318: 5.11-5.13; CBC 1910.9
9. Inspection of prestressed concrete for:			
a. Application of prestressing forces; and	X		ACI 318: 26.9.2.1
b. Grouting of bonded prestressing tendons.	X		ACI 318: 26.9.2.3
10. Inspect erection of precast concrete members.		X	ACI 318: Ch. 26.8
11. Verify in-situ concrete strength, prior to stressing of tendons in post-tensioned concrete and prior to removal of shores and forms from beams and structural slabs.		X	ACI 318: 26.10.2
12. Inspect formwork for shape, location, and dimensions of the concrete member being formed.		X	ACI 318: 26.10.1(b)
1705.4 – Masonry Inspections (TMS 402/ACI 530/ASCE 5 and TMS 602/ACI 530.1/ASCE 6)			
1. Verify compliance with the approved submittals.		X	TMS 602; Art.1.5
2. Verification of *f* 'm and *f* 'AAC prior to construction except where specifically exempted by the code.		X	TMS 602; Art 1.4B
3. Verification of slump flow and VSI as delivered to the site for self-consolidating grout.	X		TMS 602; Art.1.5B.1.b.3
4. As masonry construction begins, the following shall be verified to ensure compliance:			
a. Proportions of site-prepared mortar.		X	TMS 602; Art.2.6A
b. Construction of mortar joints.		X	TMS 602; Art.3.3B
c. Location of reinforcement, connectors, prestressing tendons, and anchorages.		X	TMS 602; Art.3.4, 3.6A

Verification and Inspection	C	P	Notes
d. Prestressing technique.		X	TMS 602; Art.3.6B
e. Grade and size of prestressing tendons and anchorages.		X	TMS 602; Art.2.4B, 2.4H
5. During construction verify:			
a. Compliance with required inspection provisions of the construction documents and the approved submittals.		---	
b. Size and location of structural elements.		X	TMS 602; Art.3.3F
c. Type, size, and location of anchors, including other details of anchorage of masonry to structural members, frames, etc.		X	TMS 402;1.16.4.3, 1.17.1
d. Welding of reinforcing bars.	X		TMS 402; Sec. 2.1.7.7.2, 3.3.3.4(c); 8.3.3.4(b)
e. Protection of masonry during cold weather (temperature below 40 degrees F) or hot weather (temperature above 90 degrees F)		X	CBC 2104.3, 2104.4; TMS 602; Art. 1.8C, 1.8D
f. Application and measurement of prestressing force.		X	TMS 602; Art. 3.6B
6. Prior to grouting verify the following:			
a. Grout space is clean.		X	TMS 602; Art. 3.2B
b. Specified size, grade, and type of reinforcement.		X	TMS 602; Art.2.4, 3.4
c. Placement of reinforcement and connectors and prestressing tendons and anchorages.		X	TMS 402; Sec. 1.16; TMS 602; Art. 3.4
d. Proportions of site-prepared grout and prestressing grout for bonded tendons.		X	TMS 602; Art. 2.6B
e. Construction of mortar joints.		X	TMS 602; Art. 3.3B
7. Verify grout placement to ensure compliance with code and construction document provisions.	X		TMS 602; Art. 3.5
a. Observe grouting of prestressing bonded tendons.	X		TMS 602; Art. 3.6C
8. Observe preparation of required grout specimens, mortar specimens, and/or prisms.	X		CBC 2105.2.2, 2105.3; TMS 602; Art. 1.4
9. Additional levels of masonry inspection are required as otherwise noted on the plans.		---	
1705.5 – Wood Construction			
1. Inspect prefabricated wood structural elements and assemblies in accordance with Section 1704.2.5.		---	
2. Inspect site built assemblies.			
a. Inspect high-load diaphragms:		---	CBC 1705.5.1
1) Inspect grade and thickness of structural panel sheathing.			
2) Verify nominal size of framing members at adjoining panel edges. Verify nail or staple diameter and length, number of fastener lines, and spacing between fasteners in each line and at edge margins.			
b. Metal-plate-connected wood trusses spanning 60 feet or greater: verify		---	CBC 1705.5.2
that the temporary installation restraint bracing and the permanent individual truss members restraint bracing are installed in accordance with the approved truss submittal package.			

Verification and Inspection	C	P	Notes
Table 1705.6 – Required Special Inspections and Tests of Soils			
1. Verify materials below shallow foundations are adequate to achieve the desired bearing capacity.		X	
2. Verify excavations are extended to proper depth and have reached proper material.		X	
3. Perform classification and testing of compacted fill materials.		X	
4. Verify use of proper materials, densities and lift thicknesses during placement and compaction of compacted fill.	X		
5. Prior to placement of compacted fill, inspect subgrade and verify that site has been prepared properly.		X	
Table 1705.7 – Required Special Inspections and Tests of Driven Deep Foundation Elements			
1. Verify element materials, sizes and lengths comply with the requirements.	X		
2. Determine capacities of test elements and conduct additional load tests, as required.	X		
3. Observe driving operations and maintain complete and accurate records for each element.	X		
4. Verify placement locations and plumbness, confirm type and size of hammer, record number of blows per foot of penetration, determine required penetrations to achieve design capacity, record tip and butt elevations and document any damage to foundation element.	X		
5. For steel elements, perform additional inspections in accordance with CBC Section 1705.2.		---	
6. For concrete elements and concrete-filled elements, perform additional inspections in accordance with CBC Section 1705.3.		---	
7. For specialty elements, perform additional inspections as determined by the registered design professional in responsible charge.			
Table 1705.8 – Required Special Inspections and Tests of Cast-In-Place Deep Foundation Elements			
1. Observe drilling operations and maintain complete and accurate records for each element.	X		
2. Verify locations of piers and their plumbness, confirm element diameters, bell diameters (if applicable), lengths, embedment into bedrock (if applicable) and adequate end-bearing strata capacity. Record concrete or grout volumes.	X		
3. For concrete elements, perform additional inspections in accordance with CBC Section 1705.3.			
1705.9 – Required Verification and Inspection for Helical Pile Foundation			
1. Record installation equipment used, pile dimensions, tip elevations, final depth, final installation torque, and other pertinent data.	X		

Verification and Inspection	C	P	Notes
1705.12 – Special Inspections for Seismic Resistance			
1. Structural Steel Special Inspections for Seismic Resistance:			CBC 1705.12.1, Seismic Design Category (SDC)
a. Inspection of structural steel in accordance with AISC 341.		---	CBC 1705.12.1 or 1705.12.1.2, SDC D, E or F
2. Structural Wood Special Inspection for Seismic Resistance:			CBC 1705.12.2, SDC C, D, E or F
a. Inspection of field gluing operations of elements of the seismic-force resisting system.	X		
b. Inspection of nailing, bolting, anchoring and other fastening of components within the seismic-force resisting system, including wood shear walls, panels, diaphragms, collectors, and hold-downs.*		X	* Not required where fastener spacing of sheathing is more than 4" o.c.
3. Cold-formed Steel Light-Frame Construction Special Inspections for Seismic Resistance:			CBC 1705.12.3, SDC C, D, E or F
a. Inspection during welding operations of elements of the seismic-force resisting system.		X	
b. Inspections for screw attachment, bolting, anchoring and other fastening of components within the seismic-force resisting system, including shear walls, diaphragms*, collectors, and hold-downs.		X	* Not required where fastener spacing of sheathing is more than 4" o.c.
4. Designated Seismic Systems Verification:			
a. Inspect and verify that the component label, anchorage or mounting conforms to the certificate of compliance in accordance with Section 1705.12.4.		X	ASCE 7, Section 13.2.2, SDC C, D, E or F
5. Architectural Components Special Inspections For Seismic Resistance:			CBC 1705.12.5, SDC D, E or F
a. Inspection during the erection and fastening of exterior cladding and interior and exterior veneer.		X	*Not required if 30' or less in height above grade or walking surface or weighing 5 psf or less.
b. Inspection during the erection and fastening of interior and exterior nonbearing walls.		X	
c. Inspection during anchorage of access floors.		X	SDC D, E or F
6. Plumbing, Mechanical and Electrical Components Special Inspections for Seismic Resistance:			CBC 1705.12.6
a. Anchorage of electrical equipment for emergency or standby power systems.		X	SDC C, D, E or F
b. Anchorage of other electrical equipment.		X	SDC E or F
c. Installation and anchorage of piping systems designed to carry hazardous materials, and their associated mechanical units.		X	SDC C, D, E or F
d. Installation and anchorage of HVAC ductwork that will contain hazardous materials.		X	SDC C, D, E or F
e. Installation and anchorage of vibration isolation systems.		X	SDC C, D, E or F
7. Storage Racks Special Inspections for Seismic Resistance:			CBC 1705.12.7, SDC D, E or F
a. Inspection during the anchorage of storage racks 8 feet or greater in height.		X	
8. Seismic Isolation Systems:			CBC 1705.12.8

Verification and Inspection	C	P	Notes
a. Inspection during the fabrication and installation of isolator units and energy dissipation devices used as part of the seismic isolation system.		X	SDC B, C, D, E or F
9. Cold-formed steel special bolted moment frames.		X	CBC 1705.12.9, SDC D, E or F
1705.13 – Testing for Seismic Resistance			
1. Structural Steel Testing for Seismic Resistance:			CBC 1705.13.1
a. Nondestructive testing of structural steel in seismic force-resisting systems of buildings and structures assigned to Seismic Design Category B, C, D, E or F shall be performed with the quality assurance requirements of AISC 341.		---	* Not required for buildings or structures assigned to SDC B or C not specifically detailed for seismic resistance with R< or = 3 excluding cantilever column systems.
2. Seismic Certification of Nonstructural Components:			CBC 1705.13.2
a. Review certificate of compliance for designated seismic system components.			ASCE 7, Section 13.2.1, SDC B, C, D, E or F
3. Designated Seismic Systems:			
a. For structures assigned to Seismic Design Category C, D, E or F and designated seismic that are subject to the requirements of ASCE 7, Section 13.2.2 for certification.		---	
a. Test in accordance with the quality assurance requirements of AISC 341.		---	
4. Seismic Isolation Systems:			CBC 1705.13.4
a. Test seismic isolation system in accordance with ASCE 7 Section 17.8.		---	
1705.14 – Sprayed Fire-Resistant Materials			
1. Verify surface condition preparation of structural members.		X	CBC 1705.14.2
2. Verify application of sprayed fire-resistant members.		X	CBC 1705.14.3
3. Verify minimum allowable thickness of sprayed fire-resistant materials applied to structural members.		X	CBC 1705.14.4
4. Verify density of the sprayed fire-resistant material complies with approved fire-resistant material.		---	CBC 1705.14.5
5. Verify the cohesive/adhesive bond strength of the cured sprayed fire-resistant material.		---	CBC 1705.14.6
1705.15 – Mastic and Intumescent Fire-Resistant Coatings			
1. Inspect mastic and intumescent fire-resistant coatings applied to structural elements and decks.		X	
1705.16 – Exterior Insulation and Finish Systems (EIFS)			
1. Verify materials, details and installations are per the approved construction documents.		X	
2. Inspection of water-resistive barrier over sheathing substrate.		X	CBC 1705.16.1
1705.17 – Fire-Resistant Penetrations and Joints			
1. Inspect penetration firestop systems.		---	ASTM E2174

Verification and Inspection	C	P	Notes
2. Inspect fire-resistant joint systems.		---	ASTM E2393
1705.18 – Testing for Smoke Control Systems			
1. Leakage testing and recording of device locations prior to concealment.		X	CBC 1705.18.1
2. Prior to occupancy and after sufficient completion, pressure difference testing, flow measurements, and detection and control.		X	
Designer Specified Verification, Inspection or Field Testing			
Other – Designer Specified:		---	

C I T Y O F S A N T A R O S A

STATE OF CALIFORNIA

R7 ROAD ACCESS STABILIZATION REPAIRS

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:

CITY OF SANTA ROSA
C01801 - R7 ROAD ACCESS STABILIZATION REPAIRS
UNIT PRICE SCHEDULE

Bidder Name:_____

Item No.	Description	Quantity	Units	Unit Price	Total Price
1	TRAFFIC CONTROL	1	LS	$_____	$_____
2	WATER POLLUTION CONTROL	1	LS	$_____	$_____
3	TEMPORARY REINFORCED SILT FENCE	2545	LF	$_____	$_____
4	ABANDON OR REMOVE EXISTING CONDUITS AND PULL BOXES	1	LS	$_____	$_____
5	REMOVE EXISTING ROCK SLOPE PROTECTION (F)	461	CY	$_____	$_____
6	SALVAGE EXISTING ROCK SLOPE PROTECTION (FACING CLASS)	25	CY	$_____	$_____
7	REMOVE AND REPLACE EXISTING BARBED WIRE CATTLE FENCE	66	LF	$_____	$_____
8	ADJUST EXISTING VALVE BOXES, CLEANOUTS TO GRADE	6	EA	$_____	$_____
9	ADJUST EXISTING MANHOLES TO GRADE	2	EA	$_____	$_____
10	CONFORM GRIND ASPHALT CONCRETE PAVEMENT	381	SF	$_____	$_____
11	REMOVE CONCRETE (CURB, CURB AND GUTTER)	158	LF	$_____	$_____
12	UTILITY CLEARANCES	1	LS	$_____	$_____
13	UTILITY CONFLICT RESOLUTION	1	FA	$_____	$_____
14	CLEARING AND GRUBBING	1	LS	$_____	$_____
15	SUBGRADE STABILIZATION/DIG-OUT	364	SY	$_____	$_____
16	ROADWAY EXCAVATION (F)	485	CY	$_____	$_____
17	STRUCTURE EXCAVATION (RETAINING WALL) (F)	2950	CY	$_____	$_____
18	VEGETATED DRAINAGE SWALE	590	LF	$_____	$_____
19	IMPORT BORROW	820	CY	$_____	$_____
20	LANDSCAPING	1	LS	$_____	$_____
21	ROLLED EROSION CONTROL PRODUCT	5609	SY	$_____	$_____
22	FIBER ROLLS	3040	LF	$_____	$_____
23	CLASS 2 AGGREGATE BASE	525	CY	$_____	$_____
24	SEAL COAT	800	SY	$_____	$_____
25	HOT MIX ASPHALT (TYPE A)	400	TON	$_____	$_____
26	A.C. PAVEMENT REPAIR	14	SY	$_____	$_____
27	HOT MIX ASPHALT DIKE (TYPE A)	57	LF	$_____	$_____
28	HOT MIX ASPHALT DIKE (TYPE E)	703	LF	$_____	$_____
29	GRAVITY RETAINING WALL TYPE I (0-4.5' EXPOSED HEIGHT)	420	LF	$_____	$_____
30	GRAVITY RETAINING WALL TYPE II (>4.5' TO 6.0' EXPOSED HEIGHT)	55	LF	$_____	$_____
31	GRAVITY RETAINING WALL TYPE III (>6.0' EXPOSED HEIGHT)	280	LF	$_____	$_____

Item No.	Description	Quantity	Units	Unit Price	Total Price
32	PRECAST CONCRETE DROP INLET	11	EA	$_____	$_____
33	CATCH BASIN (TYPE II)	3	EA	$_____	$_____
34	STORM DRAIN GALLERY	2	EA	$_____	$_____
35	TRENCH DAM	4	EA	$_____	$_____
36	ABANDON OR REMOVE EXISTING STORM DRAIN COMPONENTS	1	LS	$_____	$_____
37	15" HDPE STORM DRAIN PIPE	1440	LF	$_____	$_____
38	18" HDPE STORM DRAIN PIPE	142	LF	$_____	$_____
39	24" HDPE STORM DRAIN PIPE	414	LF	$_____	$_____
40	TYPE HDPE DRAINAGE INLET	5	EA	$_____	$_____
41	12" REINFORCED CONCRETE STORM DRAIN PIPE	18	LF	$_____	$_____
42	48" STORM DRAIN MANHOLE	2	EA	$_____	$_____
43	60" STORM DRAIN MANHOLE	1	EA	$_____	$_____
44	TRENCH BRACING AND SHORING-STORM DRAIN	1	LS	$_____	$_____
45	MEDIAN CURB	62	LF	$_____	$_____
46	RETAINING WALL GUTTER	750	LF	$_____	$_____
47	CURB AND GUTTER	140	LF	$_____	$_____
48	SIDEWALK AND DRIVEWAY	230	SF	$_____	$_____
49	TEMPORARY CHAIN LINK FENCE	1	LS	$_____	$_____
50	CITY MONUMENTS	2	EA	$_____	$_____
51	TELEMETRY CONDUIT	1306	LF	$_____	$_____
52	TEMPORARY CONDUIT	1	LS	$_____	$_____
53	TELEMETRY CABLE	1910	LF	$_____	$_____
54	TELEMETRY PULL BOXES	3	EA	$_____	$_____
	GRAND TOTAL BID				$_____

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.)

LIST OF PREVIOUS SIMILAR JOBS

NAME OF BIDDER: _____

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. C01801
R7 ROAD ACCESS STABILIZATION REPAIRS

This Contract is made and entered into as of _____, 20____ 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 26 sheets entitled, R7 Road Access Stabilization Repairs, File Number 2017-0006, 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:	**Contractor:**
City of Santa Rosa, a Municipal corporation	Name of Contractor, Type of entity
By: _____	By: _____
Title: _____	Name: _____
ATTEST: By: _____	Title: _____
Title: _____	By: _____
Approved as to form:	Name: _____
By: _____ Office of City Attorney	Title: _____