

# **INVITATION FOR BIDS**



## **FOR CONSTRUCTING**

### **W 6<sup>TH</sup> ST AT MADISON ST SEWER AND WATER IMPROVEMENTS**

CONTRACT NUMBER

**C01896**

ISSUED BY

**CAPITAL PROJECTS ENGINEERING DIVISION**

**CITY OF SANTA ROSA, CALIFORNIA**

**2017**

ATTENTION  
Prebid Conference  
See Page 1



STATE OF CALIFORNIA

INVITATION FOR BIDS

CONTAINING:

NOTICE TO BIDDERS

SPECIAL PROVISIONS

BID FORMS

CONTRACT

FOR

**W 6<sup>TH</sup> ST AT MADISON ST SEWER AND WATER  
IMPROVEMENTS**

**Contract No. C01896**

# **W 6TH ST AT MADISON ST SEWER AND WATER IMPROVEMENTS**

## **TABLE OF CONTENTS**

### **NOTICE TO BIDDERS**

NOTICE TO BIDDERS .....	1
-------------------------	---

### **SPECIAL PROVISIONS**

#### **GENERAL SPECIFICATIONS**

1 General.....	4
2 Bidding.....	6
3 Contract Award and Execution.....	9
4 Scope of Work .....	13
5 Control of Work .....	14
6 Control of Materials.....	18
7 Legal Relations and Responsibility to the Public .....	21
8 Prosecution and Progress.....	25
9 Measurement and Payment.....	26

TECHNICAL SPECIFICATIONS .....	30
--------------------------------	----

Section 12	Temporary Traffic Control .....	31
Section 13	Water Pollution Control .....	35
Section 14	Environmental Stewardship .....	39
Section 15	Existing Facilities .....	42
Section 19	Earthwork .....	46
Section 26	Aggregate Base .....	49
Section 39	Hot Mix Asphalt.....	50
Section 39A	Asphalt Concrete Trench Paving.....	62
Section 71	Sanitary Sewer System.....	64
Section 73	Concrete Curbs and Sidewalks.....	77
Section 81	Monuments.....	80
Section 84	Traffic Stripes and Pavement Markings.....	81
Section 85	Raised Pavement Markers.....	82
Section 90	Concrete.....	83
Section 99	Water System .....	84
Section 121	Notification.....	98
Section 124	Material Recycling .....	99
Section A	Fees and Permits.....	100

### **BID FORMS**

Contract Bid .....	101
Unit Price Schedule .....	102
List of Subcontractors.....	105
List of Previous Similar Jobs.....	106
Noncollusion Declaration.....	107
Bid Bond Affidavit and Bidder's Signature.....	108

### **CONTRACT**

Contract .....	109
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CITY OF SANTA ROSA  
STATE OF CALIFORNIA

**NOTICE TO BIDDERS**

➤	For technical questions regarding this project, contact Tanya Mokvyts at (707) 543-3958.
➤	For direct access to plans, specifications and planholders' lists, go to <a href="http://www.srcity.org/bids">www.srcity.org/bids</a> and click on <u>Bid/Proposal Opportunities</u> or call (707) 543-3800.
➤	For direct access to bid results, go to <a href="http://www.srcity.org/bids">www.srcity.org/bids</a> . Under Link to Capital Projects, click on <u>Capital Projects Contracts</u> 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., July 11, 2017, for W 6<sup>th</sup> St at Madison St Sewer and Water Improvements, Contract No. C01896. (Engineer's Estimate: \$490,000.)

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

**Pre-Bid Meeting**

Prospective bidders, subcontractors, and material suppliers are invited to attend a pre-bid meeting scheduled to be held at 10:00 a.m., June 29, 2017, in the Transportation and Public Works Department located at 69 Stony Circle, Santa Rosa, California.

**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  
ESTIMATED QUANTITIES  
W 6TH ST AT MADISON ST SEWER AND WATER IMPROVEMENTS**

Item No.	Description	Quantity	Units
1	TRAFFIC CONTROL	1	LS
2	WATER POLLUTION CONTROL	1	LS
3	ADJUST EXISTING MANHOLE TO GRADE	1	EA
4	REMOVE AND REPLACE SIDEWALK DRAIN	1	EA
5	POTHOLING TO VERIFY UTILITY CLEARANCES	1	LS
6	UTILITY CONFLICT RESOLUTION	1	FA
7	SUBGRADE STABILIZATION/DIG-OUT	150	SY
8	ROADWAY EXCAVATION (F)	272	CY
9	STABILIZATION FABRIC	1,576	SY
10	ASPHALT CONCRETE SURFACE	240	TON
11	ASPHALT CONCRETE BASE	390	TON
12	PERMANENT TRENCH PAVING	20	TON
13	8" PVC SEWER MAIN	364	LF
14	ABANDON OR REMOVE EXISTING SEWER SYSTEM COMPONENTS	1	LS
15	4" SEWER LATERAL	8	EA
16	SEWER BACKWATER VALVE	3	EA
17	48" SEWER MANHOLE	1	EA
18	CURB AND GUTTER	10	LF
19	SIDEWALK	60	SF
20	CITY MONUMENTS	1	EA
21	8" PVC WATER MAIN	365	LF
22	WATER MAIN LOWERING	1	EA
23	1" SINGLE WATER SERVICE	5	EA
24	1-1/2" DUAL WATER SERVICE	2	EA
25	8" GATE VALVE	1	EA
26	ABANDON OR REMOVE WATER SYSTEM COMPONENTS	1	LS
27	LEADED JOINT REMOVAL	1	EA
28	TEMPORARY BLOW-OFF	2	EA
29	WATER MAIN TIE-IN	2	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 W 6<sup>th</sup> St at Madison St Sewer and Water Improvements may be obtained through PlanetBids at [www.srcity.org/bids](http://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](http://www.srcity.org/bids), downloads documents/attachments, and is added to the prospective bidders list for this project. If there is an addendum, bidders must log into PlanetBids and acknowledge the addendum to be eligible for bidding.

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

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

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

TRACY DUENAS  
Supervising Engineer

Date

# **SPECIAL PROVISIONS**

## **General Specifications**

### **CITY OF SANTA ROSA, CALIFORNIA**

#### **W 6<sup>TH</sup> ST AT MADISON ST SEWER AND WATER IMPROVEMENTS**

## **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 5 sheets entitled W 6<sup>th</sup> St at Madison St Sewer and Water Improvements, 2016-0017
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 Water 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. Notification of addenda will be handled through PlanetBids: the listed primary contact will receive an e-mail generated by PlanetBids informing them of a recently uploaded addendum. 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](http://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](http://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, cashier's 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: 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.

**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 5 sheets entitled W 6<sup>th</sup> at Madison St Sewer and Water Improvements, 2016-0017
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.

**Each submittals shall have a table of contents and numbered pages.**

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](http://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](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:

30 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 7:30 a.m. or later than 6:30 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 15<sup>th</sup> day after receipt of the written request from the Engineer. If the 15<sup>th</sup> day falls on a weekend, holiday, or day City offices are closed, then the information shall be provided to the Engineer no later than close of the next business day. Failure to submit the requested information to the Engineer within the time specified will be sufficient cause for denying the Claim.

Contractor shall keep full and complete records of the costs and additional time incurred for any work for which a claim for additional compensation is made. The Engineer or any designated Claim

investigator or auditor shall have access to those records and any other records as may be reasonably required by the Engineer to determine the facts or contentions in each Claim. Failure to grant access to such records shall be sufficient cause for denying the Claims.

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

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

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

\_\_\_\_\_,  
(Name)

\_\_\_\_\_ of  
(Title)

\_\_\_\_\_  
(Contractor)

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

Dated \_\_\_\_\_

/s/ \_\_\_\_\_

Subscribed and sworn before me this \_\_\_\_\_ day of

\_\_\_\_\_

\_\_\_\_\_  
Notary Public

My Commission Expires \_\_\_\_\_

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

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

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





**TECHNICAL SPECIFICATIONS**

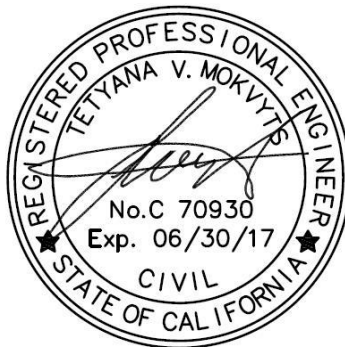
**For**

**W 6<sup>TH</sup> ST AT MADISON ST**

**WATER AND SEWER IMPROVEMENTS**

**CONTRACT NUMBER**  
**C01896**

**JUNE 2017**



## **SECTION 12**

### **TEMPORARY TRAFFIC CONTROL**

#### **12-1 General**

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

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

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

#### **12-3 Traffic-Handling Equipment and Devices**

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

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 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 the block (between nearest intersections), where the construction is in progress, for their sole use, without the need to provide 2-way traffic through that block. The Contractor will be required to maintain vehicle access to homes and other properties within the block where work is in progress.

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

The Contractor shall notify the local Postal Service at (707) 526-0113 and Santa Rosa Recycling and Collection at (707) 586-8234 5 calendar days prior to any lane closures or restrictions in turning movements.

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 50feet 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, 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.

## **SECTION 13**

### **WATER POLLUTION CONTROL**

#### **13-1 General**

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

1. The California Water Quality Control Board, North Coast Region Order No. R1-2009-0050, National Pollutant Discharge Elimination System Municipal Storm Water Permit, Part 8 – Development Construction Program, Sections 1 through 5, commonly referred to as the “Storm Water Permit”. A copy of the Storm Water Permit is available for review at the City of Santa Rosa Transportation and Public Works Department, 69 Stony Circle, Santa Rosa, CA, and at [www.srcity.org/stormwaterpermit](http://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.

#### **13-2 Water Pollution Control Program**

**13-2.01B Submittals:** The program to control water pollution required to be submitted under this section of the Standard Specifications shall include a spill contingency plan that establishes clean-up procedures that will be followed in the event of a spill of potentially hazardous, toxic, or polluting materials.

#### **13-3 Storm Water Pollution Prevention Plan**

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

#### **13-4 Job Site Management**

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

If a spill occurs at the construction site and the contractor does not take immediate and adequate steps to contain and clean up the spill, especially if rain is threatening or if a discharge to a storm drain or creek could occur, the City shall have the right, in its sole and absolute discretion, to clean up the spill using City forces or an independent contractor. The cost of any such cleanup, in addition to recovery of any penalty or fine imposed upon the City, plus an administrative charge of

fifteen percent (15%) of the costs incurred by the City, shall be deducted from any amounts owed to Contractor hereunder.

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

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

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

Do not block storm water flows.

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

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

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

**13-4.03D(5): Liquid Waste:** Liquid waste includes water generated from excavation dewatering. Minimize transfer piping by locating containers near the excavation to be dewatered while protecting the containers from moving vehicles and equipment.

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

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

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

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

1. Restrict paving and repaving activity to exclude periods of rainfall or predicted rainfall unless required by emergency conditions;
2. Install gravel bags and filter fabric or other appropriate inlet protection at all susceptible storm drain inlets and manholes to prevent paving products and tack coat from entering the storm drain;

3. Prevent the discharge of release agents including soybean oil, other oils, or diesel to the storm water drainage system or watercourses;
4. Minimize non-storm water runoff from water use for the roller and for evaporative cooling of the asphalt;
5. Clean equipment over absorbent pads, drip pans, plastic sheeting or other material to capture all spillage and dispose of properly
6. Collect liquid waste in a container, with a secure lid, for transport to a maintenance facility to be reused, recycled, or disposed of properly **13-4.03D(5)**;
7. Collect solid waste by shoveling and vacuuming or sweeping and securing in an appropriate container for transport to a maintenance facility to be reused, recycled, or disposed of properly **13-4.03D(5)**;
8. Cover "cold-mix" asphalt (i.e., pre-mixed aggregate and asphalt binder) with protective sheeting during a rainstorm **13-4.03C(3)**;
9. Cover loads with tarp before haul-off to a storage site, ensuring that trucks are not overloaded;
10. Minimize airborne dust by using water spray during grinding **14-9.03** and;
11. Avoid stockpiling soil, sand, sediment, asphalt material and asphalt grindings materials or rubble in or near storm water drainage system or watercourses **13-4.03C(1)**,

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

**13-4.03G Dewatering:** Dewatering consists of discharging accumulated stormwater, groundwater, or surface water from excavations or temporary containment facilities. The Contractor shall **remove all water** which accumulates in the excavation during the progress of work until the pipe or other structures are installed and until backfilling has progressed to a sufficient height to anchor the work against possible flotation or leakage. The Contractor shall have a minimum of 2 working pumps available for immediate use at all times.

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

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

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

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

#### **13-6 Temporary Sediment Control**



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

**13-7 Temporary Tracking Control**

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

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

**13-8 Payment:** Full compensation for conforming to the provisions of this section shall be paid for at lump sum price for **Water Pollution Control**.

**13-10 Temporary Linear Sediment Barrier**

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

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

[Revised: 05/18/15CDA STD2010]

## **SECTION 14**

### **ENVIRONMENTAL STEWARDSHIP**

#### **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.

**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**

##### **14-11.11.01A 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 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.

**Should the Contractor elect to dispose** of material at the City's Municipal Service Yard in Pond 2, a 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 Water Department.

Truck drivers will be required to sign a log and be subject to periodic inspections to insure that only soil from this project is deposited in Pond 2. Any excess trench spoils placed in Pond 2 not associated with this project will be cause for terminating Contractor's option to deposit excess trench spoils 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.

The haul route shall be through the City's 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. The Contractor shall prevent the tracking of material from the disposal location onto any and all paved surfaces. Should tracking become evident sweeping will be required at the Contractors cost no later than the end of day, with no exceptions. Dust control shall be provided at all times on an as needed basis in accordance with Section 10. 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.

**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 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]

## **SECTION 15 EXISTING FACILITIES**

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

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

Existing utility trenches and/or structures that are in close proximity to proposed trenches shall be safeguarded in an appropriate manner from damage.

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

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

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

**15-2.10B 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.

**15-2.08A 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.

**15-2.04G Reconstruct Sidewalk Drain:** Reconstruct sidewalk drain shall be done in conformance with requirements of Section 73 of the City Specifications, City STD-406 and as directed by the Engineer.

The Contractor shall remove portions of existing curb, gutter, and sidewalk, and the existing sidewalk drain and install new sidewalk drain, curb, gutter and sidewalk at the location designated and as directed by the Engineer.

### **15-2.13 Payment:**

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

**Remove and Replace Sidewalk Drain** 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 installation of sidewalk drain complete in place, including 4-inch drain pipe, wire mesh, breaking out and replacing curb and gutter, as specified herein, 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 sidewalk, curb, gutter and driveway areas shall be removed to the nearest score mark or construction joint as directed by the Engineer unless otherwise noted on Project Plans. The edge of existing concrete to remain shall be neat and free of defects. Saw cutting may be required to achieve this.

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

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

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

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

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

**15-7 Potholing to Verify 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:** **Potholing to Verify 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 5-1.36 Property and Facility Preservation, and 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)



## SECTION 19 EARTHWORK

### **19-1 General**

#### **19-1.01 General:**

1. Non-contaminated site: See section 19-2.03B, Surplus Material, of these Technical Specifications.

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 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 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 4-1.05A of the

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

The estimated quantity subgrade stabilization/dig-out is for bidding purposes only. This quantity may be increased, decreased or eliminated in its entirety based on field condition evaluation by the Engineer, and no adjustment in the contract bid price or other contract items will be made therefor.

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

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

## **19-2 Roadway Excavation**

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

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

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

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

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

**19-2.04 Payment:** Roadway Excavation shall be a final pay quantity **(F)** paid for at the contract price per **cubic yard**, which price shall include full compensation for all work 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.

## **19-5 Compaction**

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

Relative compaction of not less than 95 percent shall be obtained for embankment under bridge and 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.

## **19-8 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 <sup>-1</sup>

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

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

**19-8.04 Payment:** **Stabilization Fabric** shall be paid for at the contract price per **square yard** as measured in the field. Payment shall include full compensation for doing all work involved in placing the fabric including root pruning labor, materials, tools and equipment, and no additional allowance will be made therefor.

Quantities of stabilization fabric to be paid for shall be computed on the basis of the exact amount of area covered in the field.

[Version: 05/18/15 DCM STD2010]

## **SECTION 26**

### **AGGREGATE BASE**

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

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

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

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

**26-1.04 Payment:**

Full compensation for aggregate base shall be considered as included in the prices paid for the **various contract items** of work, and no additional allowance will be made therefor.

[Version: 05/03/14 STD2010]

## **SECTION 39 HOT MIX ASPHALT**

### **39-1.01 General:**

#### **39-1.01A Summary:**

Section 39-1 herein includes specifications for producing and placing Hot Mix Asphalt (HMA) by mixing aggregate and asphalt binder at a mixing plant and spreading and compacting the HMA mixture.

For these specifications, 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.

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

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

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

Roadway excavation and asphalt concrete base paving shall be completed for half the street width before beginning excavation of the remaining street.

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.

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

Asphalt concrete base paving shall be accomplished by use of a paving machine. The asphalt mix shall be transferred from the trucks to the hopper of the paving machine by means of a shoulder machine equipped with a side caster. 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 93% relative compaction and satisfactory surface condition following final rolling. The number of coverage's required shall be the minimum number required to obtain 93% relative compaction.

Construction vehicles/equipment shall not be allowed on the newly placed asphalt concrete base until the day after it is placed. Super Dumps or other trucks with liftable trailing load bearing axles shall not be allowed on the newly placed asphalt concrete base at any time. All trucks or other construction equipment to be driven on the newly placed asphalt concrete base shall not exceed the surface load bearing capacity and shall not produce rutting or pumping at any time.

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

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

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

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

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

Temporary asphalt tapers and associated bond breaker material shall be removed prior to placement of the 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 adjacent residential streets
6. Staging locations

## 7. Sequencing

## 8. Taper grind locations

The Contractor shall set a string line based on the reference points to control the grade of the paving machine along the crown line. A rotary laser level may be used in lieu of a string line provided the level can be accurately set to the design centerline slope, and the detector is directly mounted to the paving machine screed to control the grade of the paving along the crown line. The Contractor shall also furnish a grade setter to insure that the asphalt concrete base and asphalt concrete surface paving conforms to the lines and grades established by the Engineer.

A tack coat of SS-1h or SS-1 emulsified asphalt shall be applied to all asphalt concrete and concrete surfaces, and allowed to break immediately in advance of placing all lifts of asphalt concrete. Unless otherwise shown on the Plans, a tack coat shall also be applied to all vertical mating surfaces and conforms to existing pavement, curbs, gutters, and construction joints, and allowed to break immediately in advance of placing all lifts of asphalt concrete. The tack coat shall be reapplied 1) where it becomes contaminated, 2) where it is significantly tracked (removed) from the surface, and/or 3) as otherwise directed by the Engineer.

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.

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.

#### **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 to 1% 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.....3/4-inch HMA Type A, or 1/2-inch Coarse HMA Type A, or 1/2-inch Medium HMA Type A  
Base Course.....3/4-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 $\pm$ 5
No. 8	40–45	TV $\pm$ 5
No. 30	20–25	TV $\pm$ 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 $\pm$ 5
No. 8	43-49	TV $\pm$ 5
No. 30	22-27	TV $\pm$ 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.) <sup>a</sup>	California Test 217	50 <sup>b</sup>
Fine aggregate angularity (% min.)	California Test 234	45
Flat and elongated particles (% max. by weight @ 5:1)	California Test 235	10

<sup>a</sup> Reported value must be the average of 3 tests from a single sample.

<sup>b</sup> 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:**

### **39-1.03E Job Mix Formula Verification:**

**(Not/Applicable)**

### **39-1.06 Dispute Resolution:**

In lieu of Section 39-1.06, work with the Engineer to avoid potential conflicts and to resolve disputes regarding test result discrepancies.

### **39-1.08 Production:**

#### **39-1.08A General:**

The following shall apply in lieu of Section 39-1.08A:

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.

**39-1.15 Minor Hot Mix Asphalt:**

**(Not Applicable)**

**39-3 Method Construction Process:**

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

**39-3.02 Acceptance Criteria:**

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

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

<sup>1</sup> Asphalt concrete with a 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%.

<sup>2</sup> TSR testing shall be performed on recompact 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:**

The following shall apply in lieu of Section 39-3.03:

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

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

**39-5 Measurement:** 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:**

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

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

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

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

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

[Revised: 11/20/14 Lab STD2010 4-28-16]



## **SECTION 39A**

### **ASPHALT CONCRETE TRENCH PAVING**

**39A-1.01 Description:** Asphalt concrete surfacing and asphalt concrete base and the placing thereof shall conform to the requirements of the Standard Specifications, Section 39 of the City Specifications and these Special Provisions.

**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 Standard 215, the modified detail on the Plans or as specified herein. The Engineer may require additional paving beyond the minimum dimensions shown in Standard 215.

The Contractor shall provide compaction of backfill and base material as the job progresses. Temporary paving, as specified in Section 39A-2.01, shall be placed over the work each day, leaving not more than 25 feet unpaved. This temporary paving shall be removed for final street reconstruction and/or trench paving. The 25 feet of unpaved trench shall be covered with skid resistant steel plates (with a coefficient of friction of 0.35 or greater per CTM342), capable of sustaining normal (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 7-1.13 "Disposal of Materials Outside the Highway Right-of-Way".

Permanent asphalt trench paving shall be even, smooth riding, and have an appearance that closely matches the surrounding surface, unless prior written approval has been provided by the Engineer. There shall be no gaps between the edges of final trench paving and the existing asphalt.

The Engineer may require additional paving beyond the minimum dimensions shown in Standard 215 (36" beyond the trench wall), or as shown on the Project Plans. This additional paving shall be paid for under the "Trench Paving" item.

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

**39A-6.03 Compacting:** Compaction shall be in accordance with Section 39-6.03 of the City Specifications, 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.

**Permanent Trench Paving** shall be paid for at the contract price per **ton**, which price shall include full compensation for furnishing all labor, materials, tools, and equipment, and doing all work as specified herein and as directed by the Engineer, including saw cutting, tack coat, compaction, final paving after grade adjustments to all new and existing iron and facilities, meeting the requirements of Note 2 of City Standard 215 as directed by the Engineer, and any other work required for permanent trench paving not specifically enumerated in the City Standards, these Special Provisions or on the Project Plans, and no additional allowance will be made therefor.

The estimated quantity of Permanent Trench Paving is for bidding purposes only. This quantity may be increased, decreased or eliminated in its entirety based on field condition evaluation by the Engineer, and no adjustment in the contract bid price or other contract items will be made therefor.

In the event of an increase or a decrease in the amount of the Engineer's Estimated quantity of Permanent Trench Paving, 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 4-1.03B of the Standard Specifications and no adjustment of the contract price for Permanent Trench Paving will be made by reason of such increase or decrease.

[Revised: 8/28/13 STD2010]

## **SECTION 71**

### **SANITARY SEWER SYSTEM**

**71-1 General:** Sanitary sewer system components and related appurtenances shall conform to the requirements of Section 71 of the City Specifications and Standards, with the following modifications and additional requirements:

**71-1.02 Materials:** Sewer pipe shall be Ductile Iron or SDR 26 PVC, unless otherwise specified herein or on the Project Plans.

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.

Mainline cleanout pipe shall be SDR 35. Mainline cleanout plug shall be Cherne End of Pipe "Original Gripper" or approved equivalent. A submittal with cut sheet is required.

Lateral bends from the cleanout to main shall be SDR 26 PVC gasket x spigot long radius bends.

Lateral bends from the cleanout to existing lateral connection behind sidewalk shall be SDR 26 long radius bends.

Long radius bends shall be legibly marked similar to pipe, as specified below, or additional documentation shall be required to verify origin of materials prior to acceptance.

Sewer lateral cleanout plugs shall all be of the same type, and shall be Cherne End of Pipe "Original Gripper" or ETCO "T-Cone" style, or an approved equivalent. A submittal with cut sheets is required. Glue on female adapters will not be permitted.

Couplings used to connect PVC pipe to PVC pipe shall be SDR 26 PVC gasketed type. Transition couplings shall have stainless steel sheer bands. A submittal with cut sheets is required.

Bolt-down lids, as required per City Standards, shall be equipped with ½-inch stainless steel bolts with a ¾-inch hex-head.

The pipe manufacturer shall legibly mark pipe materials. Name and/or trademark of manufacturer, nominal pipe size and manufacturing standard reference number shall be printed on the pipe.

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. Manhole components

**71-1.02C Ductile Iron Pipe:** Ductile iron sewer pipe and fittings shall be lined with Protecto401 Ceramic Epoxy or an approved equivalent. The interior of the pipe and fittings shall not have been previously lined and the liner shall be applied by a certified applicator where the pipe and/or fittings are manufactured or at a certified off site coating facility approved by the pipe and/or fitting manufacturer. The pipe and/or fitting manufacturer shall be fully responsible for insuring the liner

complies with all manufacturer's recommendations, including, but not limited to, pipe wall preparation, wet and dry film thickness, coating integrity and curing prior to shipment to jobsite.

Any request for substitution shall be accompanied by documentation showing a history of successful use in sanitary sewer systems and that the liner was applied by a certified applicator with a history of applying linings to the interior of ductile iron pipe and fittings.

**71-1.03 Excavation, Backfill and Resurfacing:** Excavation, backfill and resurfacing shall conform to all applicable City Specifications and Standards, and any modifications specified herein and/or on the Project Plans.

Blasting is not permitted.

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

Abandoned utilities found to reside in a common trench with sanitary sewer components shall be removed and disposed of prior to the installation of new sewer facility. Exposed pipe ends on abandoned lines shall be abandoned in accordance with City Standard 507.

All excavations shall be able to accommodate equipment and personnel required for backfilling and compaction testing. If, in the opinion of the Engineer, typical compaction methods cannot be used, the Engineer may require the use of a pneumatic Pogo Stick/Powder Puff type compactor at the Contractor's expense. Excavations around new and existing manholes shall be a minimum of 24 inches wider than the outside of the barrel section.

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

Sewer laterals constructed under curb, gutter and driveway culverts shall be accomplished by use of a trenchless method approved by the Engineer, unless otherwise specified herein or on the Project Plans. 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 curb, gutter or culvert; and/or the use of CDF backfill at the Contractor's expense. The limits of the curb and gutter replacement and any required dowelling will be at the discretion of the Engineer at the Contractor's expense.

The Contractor shall remove and replace sidewalk and concrete planter strips for the installation of sewer laterals to the nearest transverse score mark on both sides of the lateral. 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.

Where the existing sewer main is a material other than asbestos, the Contractor shall assume that approximately 15% of all existing sanitary sewer laterals to be replaced are constructed of asbestos cement pipe. Where the existing sewer main material is asbestos cement, it should be

assumed that all laterals are asbestos cement pipe. All related disposal costs shall be the responsibility of the Contractor.

All excavated material shall be removed from the job site by the end of each day unless otherwise specified herein.

**71-1.03A Bracing and Shoring – Sewer:** All bracing and shoring shall conform to Section 7-1.02K(6)(b) and Section 7-1.02K(6)(b)(1) of these Special Provisions, Section 7-1.02K(6)(a and b) of the Standard Specifications, and the Division of Industrial Safety Construction Safety Orders which are currently in use.

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

Trench sheeting and 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.

**71-1.05 Pipe Laying:** The Contractor shall provide the equipment, materials and personnel to maintain continuous sanitary sewer service to all customers, 24 hours a day and seven days a week during construction, including but not limited to the installation of temporary lines and pumping equipment at the Contractor's expense.

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

**71-1.05A Abandon or Remove Existing Sewer System Components:** Abandonment of existing sewer components shall conform to applicable City Standards, specifically Standards 507 & 508, and any modifications specified herein and/or on the Project Plans.

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

**71-1.06 Sewer Laterals:** Sewer laterals shall be installed or replaced in accordance with City Standard 513-A, and any modifications specified herein and/or on the Project Plans.

The estimated location of the existing sewer laterals as depicted on the Project Plans are based on record information, television inspection and field evidence. This information is available for review upon request. The City assumes no responsibility for the accuracy of this information or the inadvertent omission of any such information. Not all existing sewer laterals are guaranteed to be located through these means and the Contractor may, therefore, encounter sanitary sewer laterals not specified on the Project Plans.

Prior to the installation of each individual new sewer wye on the main the Contractor shall locate all existing laterals and determine if existing laterals are live at the back of sidewalk and determine exact elevations and alignments of existing sewer laterals at 235A, 235B, 229, 231, 225, 225 221

West 6<sup>th</sup> Street at the new Backflow Check Valve installation location. Two acceptable methods of locating a sewer lateral are:

1. Inserting a metallic electrician's "fish tape" into the existing lateral pipe after the pipe is exposed during sewer main excavation and tracing the "fish tape" using a pipe and cable metal locator.
2. Removing sidewalk and/or potholing by hand digging at the back of sidewalk and at the approximate Backflow Check Valve location to locate the existing lateral pipe a minimum of 24 hours prior to sewer main installation in that area.

If the Contractor chooses to use method No. 1 first and cannot locate the existing sewer lateral, he shall locate the lateral by using method No.2 prior to the installation of the wye at the main at the Contractor's expense.

**After the existing lateral is located and prior to the installation of new sewer wye on the main the Contractor shall determine whether the lateral is live and receive a new sewer wye installation approval from the City Engineer in writing.** Each active sewer lateral found to exist shall be replaced. Inactive laterals shall be abandoned per City Standards 507. The Contractor shall promptly notify the Engineer if they encounter an active sewer lateral not depicted on the Project Plans or any sewer lateral that is shown to be replaced but appears to be inactive.

Sewer laterals shall be installed perpendicular to the curb unless otherwise depicted on the Project Plans. Any lateral that is not installed perpendicular to the curb shall have one continuous piece of No.12 insulated solid copper wire installed in the following manner:

1. Wrap wire two times around wye connection at main and secure.
2. Lay both ends on top of and along the lateral to the cleanout and up the cleanout riser. Both ends of wire shall extend approximately 6 inches beyond riser.
3. Secure wire to top of lateral pipe at approximately 5 feet intervals. Ends of wire must be easily accessible inside the cleanout box.

Active sewer laterals are to remain in service at all times. The Contractor shall install a temporary connection between the new wye and the existing lateral until the new sewer lateral is constructed.

If the proposed sewer main invert(s) are at a higher elevation than the existing invert(s), the Contractor shall submit a temporary connection plan to the Engineer for approval a minimum of 5 working days prior to start of work. The temporary connection plan shall include a schedule of work. The Contractor shall continuously monitor the upstream manhole of any temporary connection.

Plastic flex pipe may be used for temporary connections between active existing sewer laterals and the new wyes on the main. Plastic flex pipe shall be the same size as the existing lateral pipe and shall be connected to the new wye and the existing lateral by means of a Fernco coupling, or approved equivalent. Squeezing the flex pipe and inserting it into the cut end of the existing lateral or into the lateral opening of the wye will not be allowed. All temporary connection material shall be removed from the trench prior to final compaction.

Temporary sewer lateral connections shall be replaced with permanent laterals after installation of the sewer mainline is completed for each block, or at a maximum of 20 calendar days, whichever is sooner.

Provide 1-foot minimum clearance between wyes on all sewer mains as measured between adjacent bell ends.

Sewer wyes installed at incorrect locations shall be removed and replaced with a 4-foot minimum length of pipe and approved couplings at the Contractor's expense. Capping of wyes installed at incorrect locations will not be allowed. Prior to installing wyes on the main, the Contractor shall investigate to ensure that the proposed alignment of new laterals will not be in conflict with any other facilities, existing or proposed. The Contractor shall promptly notify the Engineer of any field conditions that prohibit installing the wye in accordance with City Specifications and/or Standards.

A minimum separation of 3 feet shall exist between new sewer laterals and existing water and gas services. If this separation requirement cannot be met, the Contractor shall notify the Engineer immediately for direction prior to continuing work on this lateral. In all cases, a minimum of 5 feet separation shall be left between new sewer laterals and new water service laterals.

Two-way cleanouts shall be installed 18 inches behind the face of curb, unless otherwise depicted on the Project Plans.

If field conditions require the installation of a one-way cleanout per the conditions called out in City Standard 513A, the cleanout shall be installed behind the sidewalk or PUE, in accordance with City Standard-513, unless otherwise depicted on the Project Plans.

Connections to existing laterals shall be made at back of sidewalk or PUE unless otherwise specified herein or depicted on the Project Plans. Prior to connecting, the Contractor shall investigate to see if there is an existing cleanout not already shown to be removed located beyond the typical connection point would be and up to three feet behind the back of sidewalk. If an existing cleanout is discovered within these limits the Contractor shall remove it and any existing lateral piping as needed and then make the connection using approved pipe and couplings.

A 4-inch high letter 'S' shall be legibly inscribed in the face of new and existing curbs at the location of each lateral. Where bends are required behind the curb to make a connection an additional 'S' shall be legibly inscribed at the back of sidewalk where the connection to the existing lateral was made.

Sewer laterals that have 3 feet or less cover at the connection to the main, as depicted on the Project Plans, shall have a 'Clean Check PVC Extendable' backwater valve or approved equivalent. Size of backwater valve shall be same as lateral. Backwater valves shall be installed similar to Standard 527 on the existing lateral within 5 feet of the building foundation, if conditions allow. The exact location shall be determined in the field by the Engineer after the Contractor has located the alignment using a fish tape and pipe and metal locator or other approved method. Backwater valves shall be installed with 1-foot sections of pipe minimum on both ends and connected to the existing lateral with approved couplings. 6-inch backwater valves shall be covered with a Christy G5 box, or approved equivalent, and set to grade with a lid marked 'Sewer'. Backwater valves shall be set so the riser pipe is not more than 5 degrees out of plumb. Deviations from this requirement will require Engineer approval.

Where an excavation for a new sanitary sewer lateral occurs within the drip line of any tree the Contractor shall hand dig to protect tree roots as directed by the Engineer. Root pruning shall be accomplished by use of sharp tools appropriate for the size of the root to be cut. Each cut shall be clean with no torn bark or splintered wood remaining on the root. Roots shall not be pulled on by excavating equipment.

Existing irrigation facilities not shown on Project Plans may be encountered during sewer lateral installation. The Contractor shall repair any damage to existing irrigation facilities caused by their operations at the Contractor's expense.

The Contractor shall notify and coordinate the replacement of individual sewer laterals with the effected resident or business.

**71-1.07 Sewer Structures:** Sanitary sewer structures shall conform to City Specification and Standards, and any modifications herein and/or on the Project Plans.

Attention is directed to Section 7-1.02K(6)(d) of these Special Provisions. For the purpose of this Contract, all manholes, existing and new, shall be considered confined spaces.

The Contractor shall provide submittals to the Engineer for all manhole components prior to construction.

All manholes, regardless of diameter, installed on this project shall have concentric tapered sections unless otherwise specified herein. Where the constructed height of a pre-cast base does not allow for this requirement, the Contractor shall submit a poured-in-place base for review. Slab sections shall only be considered where the height of a poured-in-place base will not allow for the installation of a tapered section.

Eccentric tapered sections may be required when the installation of an inside drop is required. When required to install an eccentric tapered section, the alignment of the opening shall be determined by the Engineer.

Precast manhole bases shall be constructed per ASTM C478. Concrete for cast-in-place manhole bases shall be "Class A" concrete per Section 90 of the City Standards.

The entire interior surface of all existing and new manholes within the project limits shall be coated including the flow channel down to the spring line. All cracks and/or chips shall be patched. Coating and patching materials shall be per the Engineer's List of Approved Items and shall be applied in accordance with the manufacturer's recommendations.

When a new sewer main or lateral are connected to an existing manhole, the manhole shall be modified to accept the new size of pipe and grouted to form a new flow channel in the manhole base. The wall of the manhole shall be breached by core drilling, sawing, or other approved method that does not disturb the manhole. The Contractor shall seal the penetration with StopAQ™ or SealGuard II, or an approved equivalent water stop, and shall grout the sealed penetration with a rapid set, high strength, non-shrink cementitious mortar to protect the sealer. The Contractor shall backfill the exterior of the manhole around the pipe penetration with concrete to stabilize the connection. When any other modifications are required to a new or existing manhole, the Contractor shall use a bonding agent such as Sakrete Concrete Bonder and Fortifier, or an approved equivalent, to adhere modification material to the existing structure.



The interior surface of all sewer mainline cleanouts (area under frame and cover and around pipe) shall be troweled and brushed smooth and free of pockets or depressions.

All manholes on active mains shall be accessible at all times, unless otherwise specified herein or on the Project Plans.

**71-1.08 Testing of Sewers:** The Contractor shall coordinate all required inspection and testing of the sewer system with the Engineer.

The Contractor shall provide all labor, tools, equipment, and materials required for testing and inspection of the sanitary sewers.

The Contractor shall provide all means necessary to the satisfaction of the Engineer that ensures continuous service to all customers during and after work hours, weekends and holidays, including the installation of temporary lines and/or temporary pumping equipment.

**71-1.08A Vacuum Testing of Sewer Manholes:** Testing of sewer manholes may be done by vacuum testing in lieu of the water test required in the City Standards, Section 71-1.08. If the vacuum-testing method is used, all manholes shall be tested for leakage in accordance with ASTM C 1244-93 as modified herein.

Vacuum testing shall not take place until after permanent paving is complete.

Installation and operation of vacuum equipment and indicating devices must be in accordance with manufacture's recommendations and performance specifications, which must be provided by the manufacturer and approved by the Engineer. The equipment must be capable of testing the entire manhole, including the cast iron frame and grade adjustment rings.

All new or rehabilitated sanitary sewer manholes shall be tested unless otherwise directed by the Engineer. If the manhole fails the test, the manhole shall be repaired and retested at the Contractor's expense. If manhole joint sealants are compromised during the vacuum test, the manhole must be disassembled and the joint sealants replaced. If there is reason to believe that the manhole has been disturbed after the initial vacuum test, additional tests may be requested by the Engineer and performed at the Contractor's expense.

The Contractor may pre-test manholes at any time during construction. Any pre-test results are solely for the Contractor's use and shall not be accepted as the final test.

Testing shall be done in the following manner:

1. All lift holes and joints shall be grouted and the entire manhole, including grade rings, sealed prior to testing.
2. All pipes entering the manhole shall be temporarily plugged, taking care to securely brace the pipes and plugs to prevent them from being drawn into the manhole.
3. The test head shall be placed in accordance with the manufacturer's recommendations. The test unit shall be braced against the manhole frame and not the grade ring(s) or taper.
4. The vacuum gauge and test equipment used for this test shall be supplied by the Contractor and shall be operated per manufacturer's specifications by qualified personnel.

Accuracy and calibration of the gauge shall be certified by a reliable testing firm at six month intervals, or when requested by the Engineer.

A vacuum of 10 inches Hg (4.91 PSI) of mercury shall be drawn on the manhole, the valve on the vacuum line of the test head closed, and the vacuum pump shut off. The time it takes the indicator gauge to drop from 10 inches Hg (4.91 PSI) to 9 inches Hg (4.4 PSI) shall be measured. The manhole will pass the vacuum test if the time is greater than shown in the following table:

**Minimum Test Time Based On Manhole Diameter (sec.)**

<u>Manhole Depth in Feet</u>	<u>Manhole Diameter in Inches</u>			<u>Time in Seconds</u>
	<u>48</u>	<u>60</u>	<u>72</u>	
0-4	10	13	16	
4-8	20	26	33	
8-12	30	39	49	
12-16	40	52	67	
16-20	50	65	81	
20-24	59	78	97	
24-30	74	98	121	

After the vacuum test, manholes shall be visually inspected for leaks and defects and repaired as required by the Engineer.

**71-1.08B Television Inspection:** The television inspection shall be in accordance with these Special Provisions and Section 71-1.08 of the City Standards.

When all sewer main and lateral work has been completed and inspected, except as otherwise noted herein, the Contractor shall notify the Engineer in writing 2 working days in advance of the date for television inspection. The Engineer shall be given the opportunity to be present during the inspection. Upon receipt of the completed televising inspection video discs and written logs, the Engineer requires ten working days to review the video records and logs before giving written notice of acceptance and/or deficiencies of the lines to the Contractor.

The Contractor shall supply plans and specifications for this work to the televising contractor with manhole and mainline cleanout numbers, street names, addresses and any other information required to facilitate the work.

During this inspection, the Contractor shall be present to observe the televising inspection. Acceptance of any portion of the sanitary sewer work shall not be given in the field at the time of televising.

The Engineer shall only receive video and written logs for areas not known by the Contractor to need correction. If while conducting the initial television inspection in the field the Contractor discovers areas that need correction, these corrections shall be made and the area televised again prior to submitting the logs to the Engineer for review. If footage of video that is not required for inspection, such as areas known to need repair, stationary video footage in sewer lines other than where required and footage not of sanitary sewer facilities, the submittal will be rejected.

The televising contractor is responsible for all stuck, broken, or lost equipment and any damage to sewer facilities due to their operations and shall bear all necessary costs to retrieve or replace said equipment and make required repairs to sanitary sewer facilities.

Any damage to facilities or obstruction to service caused by the televising operations shall be corrected immediately at the Contractor's expense.

The Contractor shall obtain Engineer approval prior to the removal of any manmade or natural obstruction needed to complete this work. Any item removed shall be replaced in kind, to the satisfaction of the Engineer at the Contractor's expense.

All lines shall be flushed clean with a high-pressure commercial sewer flusher unit or by balling prior to televising. If required to televise an existing line, it may be necessary to remove roots, grease or other obstructions prior to flushing. The equipment shall be appropriate for the type of obstruction being removed and shall not damage the pipe in any way. All debris shall be trapped at the first downstream manhole and removed. Debris will be hauled to an appropriate disposal site at the Contractor's expense.

After flushing and prior to televising, an approved source of water shall be discharged into the upstream manhole or mainline cleanout until water flows out of the downstream manhole. This is to be done no more than 24 hours before the video inspection takes place. High pressure flushing of the line is not to be considered as a substitute for this requirement. This shall be done to ensure that all dips or sags are filled before televising. If the sanitary sewer has live flow, the Engineer may waive this requirement. Live flows that are greater than the depth of the gauge shall be temporarily plugged upstream and bypass pumped to allow for proper televising.

The televising of all lines shall be recorded on either DVD or flash drive in a format that can be played on any computer without the installation of special software. The video and written logs shall become the property of the City. Every televised run (manhole to manhole, manhole to mainline cleanout, and individual laterals) shall be recorded as a separate video file, with the name of the file being the manhole and/or mainline cleanout numbers for the main and the address of the lateral. A lateral file shall consist of the run from the cleanout to the connection at the main and the run from the cleanout to the connection of the existing lateral.

A pan and tilt color camera shall be used for all video inspection of mainlines and shall be one specifically designed and constructed for such inspections. The camera shall be mounted on adjustable skids or a tractor to keep it in the center of the pipe. Lighting for the camera shall be supplied by a lamp on the camera, capable of being dimmed or brightened remotely from the control panel. The lighting system shall be capable of lighting the entire periphery of the pipe. The camera shall be operative in 100% humidity conditions and shall have a minimum of 330 lines of resolution. The camera equipment shall produce a continuously monitored color picture with the resolution capability to discern small hairline cracks and other minor and major defects in the sanitary sewer line. The camera equipment shall be capable of producing digital still pictures for permanent record as required. The camera shall be self-propelled or pulled by a cable winch from the downstream manhole through the line along the axis of the pipe at a uniform rate of ½-foot per second maximum.

Where infiltration in the sewer line is suspected, the camera shall be stopped for at least 30 seconds in the area of question and the camera shall pan and/or tilt as needed to ascertain that infiltration is occurring and the possible cause. The camera shall stop at all lateral connections, defects, sags, or anomalies, for a period of at least ten seconds and the camera shall pan and/or

tilt as needed so that all portions of the connection or defect that is visible from within the mainline can be completely inspected.

Each pipe run between manholes being inspected may be required to be isolated from the remainder of the line by the use of a line plug to ensure total viewing of the inside periphery of the pipe. Every effort shall be made by the Contractor to televise in the same direction as the flow, especially during live flow conditions. The Engineer must approve any video inspection that goes against the flow.

Televising contractor personnel shall be in constant communication during the televising operation.

The Contractor shall keep a copy of the written logs on-site that clearly shows the exact location, in relation to the starting manhole/mainline cleanout or lateral cleanout, of each following item discovered during the television inspection: infiltration points, lateral locations, cracks, open/pulled joints, roots, broken or collapsed sections, grease, debris, location of dips (*starting and ending footage plus depth*), and any other discernible features. In addition to the aforementioned items, the video and written logs shall also indicate project name, Contractor name, date, line material and size, length of run, manhole condition and live flow. Measurement for location of defects shall be at ground level by means of a metering device. Markings on the cable or the like which would require interpolation for depth of manhole or lateral cleanout will not be allowed. Measurement meters will be accurate to plus or minus one foot in a thousand and must show on video. A 1-inch depth gauge pulled or pushed in front of the camera is required for all mainlines up to and including 12 inches. For larger lines, the Contractor shall verify required gauge size with the Engineer prior to scheduling the television inspection. Measurement of laterals must be recorded on video and written log from bottom of cleanout to main and bottom of cleanout to connection at existing lateral.

The following conditions shall exist prior to the television inspection:

1. All sewer lines shall be installed, backfilled and compacted.
2. All structures shall be in place, all channeling complete and all pipelines accessible from structures.
3. All other underground facilities, utility piping and conduit shall be installed and accepted by the Engineer.
4. Mainlines to be inspected shall be balled/high pressure flushed and mandrel tested.
5. Laterals to be inspected shall be flushed.
6. The final air or water test on lines shall have been completed.

Inspection video shall be clear throughout. Any cloudy, dim, over-bright or unfocused areas during inspection may cause the rejection of the complete video.

Deficiencies revealed by the television inspection shall be repaired by the Contractor to the satisfaction of the Engineer. After all required repairs are completed, the areas of repair shall be re-televised at the Contractor's expense.

The Engineer may require the Contractor to re-mandrel any areas of concern during the 'one-year period' as noted in Section 2-1.12 of this Contract and per Section 71-1.08 of the City Standards.

**71-1.10 Bypass Pumping and/or Diversion System:** The Contractor shall provide a bypass pumping and/or diversion system, when required, for installation of the sewer system. Bypass pumping shall consist of furnishing, installing, and maintaining all equipment, tools, power, piping and incidentals required to maintain existing sewer flows and services without interruption.

The Contractor shall submit a bypass pumping and/or diversion plan for review by the Engineer at least 10 working days prior to planned commencement of bypass pumping and/or diversion. The Engineer shall approve the bypass pumping plan before commencing any bypass pumping work. The Contractor shall notify the Engineer 2 working days prior to commencing with the bypass pumping operation.

Bypass pumping plan shall include design flow, documentation of pump and discharge line capacities, manufacturer, and age. Bypass pumping plan shall include shop drawings that identify pumping location(s) and methods with sufficient detail to assure that the work can be accomplished without sewage spills. The plans shall include an emergency discharge response plan to be followed in the event of a failure of the bypass pumping system.

All components of the bypass pumping system shall be sound attenuated and produce noise emissions in accordance with City noise ordinances. All pumps shall be set into or surrounded by spill containment devices.

Bypass pumping shall be done in such a manner as not to damage private or public property or create a nuisance or public menace. The pumped sewage shall be in an enclosed hose or pipe system that is adequately protected from traffic and shall be redirected into the sewer system.

The Contractor shall take all necessary precautions including constant monitoring of bypass pumping to ensure that no private residences or properties are subjected to sewage backup or spills. Dumping, leaks or free flow of sewage onto private property, gutters, streets, sidewalks, or into storm sewers or waterways is strictly prohibited.

Except as specified herein for testing purposes, the Contractor must receive written Engineer approval prior to use of pneumatic test plugs or any other means for blocking sewer flows. The Contractor shall submit a blockage plan, for review by the Engineer, identifying at a minimum the following:

1. What devices and/or material will be used,
2. Depth of upstream manhole(s),
3. Location of existing lateral cleanouts and how they will be monitored,
4. Address of all parcels along with name and operating hours of all businesses located upstream of blockage to the next upstream manhole.

The Contractor shall also provide name and cell phone number of the employee(s) that will have the sole duty of monitoring all active blockages. If multiple lines are simultaneously blocked, the Contractor's submittal must show how each blockage is to be continuously monitored. For

multiple blockages, the Engineer may also require devices for each blockage to give audible and/or visual alarm of a pending overflow at the Contractor's expense.

The Contractor shall be liable for all cleanup, damages and resultant fines in the event of a spill.

Subsequent to removal of bypass pumping and/or diversion system, the Contractor shall verify existing sewer flows are restored to pre-existing condition.

**71-1.12 Payment:** **8" PVC Sewer Main** shall be paid for at the contract price per **linear foot** for the specified sizes and include both PC305 and SDR-26 materials, which price shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and doing all the work involved for sewer main installation, including but not limited to: potholing other than as specified in Section 15 to facilitate the progress of work; excavation and disposal of excavated materials; hand digging; root pruning; dewatering and disposal of trench groundwater; bypass pumping *if needed*; contamination awareness; fittings/couplings; felt expansion joint material; temporary connections; modifications to existing manholes to accept new mains; connections to new or existing manholes or mains, including sealing of penetrations water tight; supporting or removal and disposal of existing utilities in the same trench; placing and compacting all required bedding and backfill including control density fill; trench plates *as needed*; temporary trench paving; cleaning and flushing; testing; video inspection; as specified herein, and no additional allowance will be made therefor.

The actual quantity of sewer main to be paid for will be the length measured from center of manhole to center of manhole/mainline cleanout along the finished grade to the nearest foot, excluding the sweep and the portion of pipe used for constructing the mainline cleanout. Pipe purchased by the Contractor in excess of the measured amount will not be paid for by the City.

**Abandon or Remove Existing Sewer System Components** shall be paid for at the contract **lump sum** price, which price shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and doing all the work involved to abandon or remove existing sewer system components, included but not limited to: excavation and disposal of excavated materials; hand digging *if needed*; dewatering and disposal of trench groundwater; contamination awareness; supporting or removal and disposal of existing utilities in the same trench, *if required*; abandonment or removal and disposal of existing sewer system components; placing and compacting all required bedding and backfill including control density fill *if required*; trench plates *as needed*; temporary trench paving; removal and replacement of concrete curb, gutter and sidewalk *as needed*; bypass pumping *if needed*; as specified herein, and no additional allowance will be made therefor.

**4" Sewer Lateral** shall be paid for at the contract unit price **each**, which price shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and doing all the work involved for sewer lateral installation, including but not limited to: potholing other than as specified in Section 15 to facilitate the progress of work; investigation and removal of the existing cleanout within three feet of back of walk; excavation and disposal of excavated materials; hand digging *if needed*; root pruning; dewatering and disposal of trench groundwater; fittings/couplings; temporary connections; connection to main and existing lateral; supporting or removal and disposal of existing utilities in the same trench, *if required*; tracer wire *if required*; pipe wrap material and installation *if required*; placing and compacting all required bedding and backfill including control density fill; trench plates *as needed*; temporary trench paving; removal and replacement of curb, gutter, sidewalk and driveways; setting cleanout to grade and installing

concrete collars *as required*; restoration of irrigation and landscaping; cleaning and flushing; testing; video inspection; as specified herein, and no additional allowance will be made therefor.

**Sewer Backwater Valve** shall be paid for at the contract unit price **each** for the various sizes, which price shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and doing all the work involved for sewer backwater valve installation included but not limited to: private sanitary sewer lateral location, excavation and disposal of excavated material; hand digging; root pruning; pipe and couplings; placing and compacting all required bedding and backfill; setting backwater valve boxes to grade and installing concrete collars *as required*; restoring irrigation and landscaping; testing; video inspection; notification; building permit coordination; as specified herein, and no additional allowance will be made therefor.

**48" Sewer Manhole** shall be paid for at the contract unit price **each** for the various sizes, which price shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and doing all the work involved for the installation of sewer manholes, including but not limited to: potholing other than as specified in Section 15 to facilitate the progress of work; excavation and disposal of excavated materials; hand digging; dewatering and disposal of trench groundwater; bypass pumping; contamination awareness; couplings and pipe if connecting to existing mains; water tight sealing of penetrations; coating and patching; supporting or removal and disposal of existing utilities in the same trench,; placing and compacting all required bedding and backfill including control density fill *if required*; trench plates as needed; temporary trench paving; concrete collar; installing and adjusting the cast iron frame and cover to grade after final paving is complete; testing; as specified herein, and no additional allowance will be made therefor.

Full compensation for Trench Bracing and Shoring – Sewer 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.

Full compensation for television inspection shall be considered as included in the prices paid for the **various contract items** of work involved and no additional allowance will be made therefor.

Full compensation for bypass pumping shall be considered as included in the prices paid for the **various contract items** of work involved and no additional allowance will be made therefor.

Version Date: 7/08/14 STD2010

## **SECTION 73**

### **CONCRETE CURBS AND SIDEWALKS**

**73-1.01A Summary:** This work shall consist of curbs, gutters, sidewalks, driveways, curb ramps, 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 and City Specifications.

Curb and gutter shall be constructed in conformance to City STD-241 and in accordance with the City Specifications.

Curb openings, for driveways, shall be constructed at existing driveways, in conformance with City STD-250 and City Specifications.

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

Curb and gutter 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 score mark.

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

**73-3.03 Sidewalk, Driveway, Curb, Curb Ramp Construction and Gutter Construction:** Sidewalk, driveway, curb, curb ramp and gutter 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 with the following modifications and additional requirements.

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



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

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

All oil, paint, tire marks, and other discoloring shall be removed from the driveway, 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 score mark.

Curb Ramp shall be constructed in accordance with the details and at the locations shown on the plans per City STD.-232.

**73-3.03A Detectable Warning Surface:** Pedestrian ramp detectable warning surface shall consist of raised truncated domes in conformance with the details shown on the plans, City Specifications and these Special Provisions.

Contractor shall carefully remove and replace the existing detectable Warning Surface as shown on the plans. The detectable warning surface shall be Armor-Tile or approved equal cast-in-place 36"x48" tile. The detectable warning surface tiles shall be protected from concrete spatter while installing the cast-in-place detectable warning surface into the PCC sidewalk by temporary 4 mil plastic sheeting or approved equal.

The finished surfaces of the detectable warning surface shall be free from blemishes. Installation, cutting and grinding as required will be per the manufacturer's instructions or as directed by the Engineer.

The manufacturer shall provide a written 5 year warranty for prefabricated warning surfaces, guaranteeing replacement when there is a defect in the dome surface, color fastness, sound-on-cane acoustic quality, resilience, or attachment. The warranty shall begin upon acceptance of the contract.

Any damage to the curb ramp caused by the contractor during the detectable warning surface removal and replacement shall be repaired by the contractor to the satisfaction of the Engineer at no additional cost to the City.

Full compensation for **Detectable Warning Surface** removal and replacement shall be considered included in the prices paid for the various contract items of work involved and no additional compensation will be allowed therefor.

**73-2.04 Payment:** **Curb and Gutter** shall be paid for at the contract price per **linear foot**, which price shall include full compensation for furnishing and applying curing materials, forming and constructing curb openings for driveways, removing discoloring, 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.

**73-3.04 Payment:**

**Sidewalk** shall be paid for at the contract price per **square foot**, which price shall include full compensation for furnishing and applying curing materials, removing discoloring, furnishing all

labor, materials, tools and equipment and doing all the work involved in constructing sidewalk complete in place as specified, including furnishing and placing expansion joint filler, constructing weakened plane joints, excavating, and backfilling.

[Version: 10/21/14CDA STD2010]

## **SECTION 81 MONUMENTS**

**81-1.01 Description:** All City monuments shown on the plans shall be placed in accordance with the requirements of Section 81 of the City Specifications, these Special Provisions City monuments and City Standard 280, 281, and 282.

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]

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

[Version: 04/29/15 DCM STD2010]

## **SECTION 85**

### **RAISED 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:** **Raised Pavement Markers**, retroreflective and nonreflective, shall be considered as included in the prices paid for the **various contract items** of work, which price shall include full compensation for furnishing all labor, materials, tools and equipment, and doing all work involved in placing raised pavement markers, complete in place, including adhesives, removing existing pavement markers, and no additional allowance will be made therefor.

[Version: 04/29/15 DCM STD2010]

## **SECTION 90 CONCRETE**

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

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

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

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

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

05/18/2015 DCM 2010STD

## **SECTION 99 WATER SYSTEM**

**99-1 General:** 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 call 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.

**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 D2737 and shall be either PE3608 - 200psi tubing or PE4710 - 250psi tubing.

If soil contaminations 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.

**99-1.04B Cut-in Tee/Cross:** The Contractor shall install a new tee/cross on an existing main, with or without valve(s), by “cut-in” in accordance with City Standards 854 and 877. Any valves shown to be installed with a “cut-in” tee/cross shall be paid for as a separate item unless otherwise specified.

**99-1.05 Gate Valves:** Gate valves shall be mechanical joint type unless otherwise specified.

New gate valves that are to be installed by “cut-in” on an existing main shall be done by removing a section of the existing main, including any disturbed joints, and installing the required gate valve, pipe and couplings. Sections of pipe used shall be at least 18 inches in length.

When any part of the new water system is pressurized, all effective gate valves shall be accessible to City personnel at all times. Valves that require “valve stem risers” shall not be considered accessible unless the riser is in place.

**99-1.07 Valve Boxes:** Valve box riser pipe shall be installed centered over and plumb with the valve stem nut prior to final paving. If the riser pipe needs to be lowered for paving it shall be cut by hand square and neat. If sections need to be added after paving it shall be done in accordance with City Standard 877. The riser pipe shall extend into the bottom of the valve box a minimum of 2 inches and the upper section shall be no shorter than 1-foot in length.

Valve stem risers shall be installed and inspected for operation prior to paving.

**99-1.09 Fire Hydrant and Lateral Assembly:** Unless stationing is called out on the Project Plans, fire hydrant locations are approximate and shall be field located with Engineer approval.

It is not acceptable to remove partial squares of concrete for fire hydrant installations.

**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 disturbs 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.

**99-1.14A Water Main Lowering/Over-Structure:** Water main lowering/over-structure or half water main lowering/overstructure shall be in accordance with City Standard 855 or 856 and any modifications herein and/or on the Project Plans.

The Contractor may request to install a half or full water main lowering or over-structure to make grade transitions as a substitute to 'roping' the pipe if shown on the Project Plans. If the Contractor receives Engineer approval, the lowering or over-structure shall include restrained joints on and beyond the lowering as directed by the Engineer. Additional water main lowering or over-structure and restraint shall be at the Contractor's expense.

**99-1.15A Water Services:** The Contractor shall install new water service laterals at the locations shown on the Project Plans, including removal and disposal of old meter boxes and removal, disposal and replacement of sidewalk, curb and gutter and/or landscaping. 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.

**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.

**99-1.15D Backflow Device Installation:** The Contractor shall coordinate their work to provide minimum out-of-service time to the customer.

All piping downstream of the backflow device shall be of the same material specified for between the meter and backflow device unless otherwise specified.

Only brass unions shall be installed unless otherwise approved by the Engineer.

New backflow devices and piping shall match the size of the new water service. When the existing building service line is galvanized iron, dielectric protection is required.

Where excavation for a new backflow prevention device occurs within the drip line of any street tree, the Contractor shall hand dig to protect tree roots, as directed by the Engineer.

After installation, the backflow prevention device must be certified. Certifications shall be completed by a certified tester off the Approved List of Backflow Contractors herein. All necessary paperwork shall be completed by the Tester and one copy given to the property owner and one to the City within 72 hours after connection to the existing building service line.

Submittals are required for all backflow device and related materials.

**99-1.16 Thrust Blocking:** Regardless of restrained joint installation, thrust blocks shall be installed behind all tees, when connecting to any existing line larger than 2", and where restrained joints cannot be used or alone are deemed insufficient by the Engineer.

**99-1.17 Abandon or Remove Existing Water System Components:** Water mains shall be abandoned in accordance with City Standard 507. If the end of pipe to be abandoned is connected in any way to an active main, the abandonment shall consist of a water tight cap or plug with proper thrust blocking unless otherwise approved by the Engineer.

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

Prior to abandoning mains, all water services transfers shall be completed.

Tees or crosses shown to be removed on water mains that will remain in service, shall have the tee/cross, any related valve(s) shown and thrust blocking removed and the main repaired with the appropriate pipe material and approved couplings unless otherwise specified.

Barrels of existing fire hydrants to be removed shall be carefully separated from risers and buried by the Contractor, and the hydrant only shall be delivered to the City Municipal Services Center, located at 35 Stony Point Road, unless the Contractor has obtained specific written approval by the Engineer to otherwise dispose of the materials. All hydrant appurtenances shall be removed to a minimum of 1 foot below grade.

Remove all valve boxes and risers on abandoned mains and backfill and resurface per City Standards. If any portion of a gate valve that is to be abandoned is in the structural section of the street, the valve must be fully removed and the pipe ends abandoned. Any valves not in the structural section of the street may be abandoned in place in the fully closed position.

After a new water service lateral is installed on an existing main and the meter is transferred, the old service lateral shall be abandoned by disconnecting it from the main and installing an approved stainless steel full circle clamp over the old penetration under City inspection. The old meter box shall be removed and the area backfilled and resurfaced to match the surrounding surface. Any sidewalk that must be replaced shall be done to the nearest transverse score mark on both sides and the full sidewalk width.

Any abandonment that requires a system shutdown, such as an old water service on an active main, shall be done under inspection by authorized City personnel.

**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.

**99-1.18A Temporary Blow-Offs:** All temporary blow-offs installed for the purpose of removing foam swabs required for water main cleaning shall be constructed with a (same size as main) elbow and vertical stand pipe to prevent trench and dispelled water from flowing back into the main. After the swab is removed the end of the pipe shall be sealed watertight and all parts restrained to allow for testing.

**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 of 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:** 8" PVC Water Main shall be paid for at the contract price per **linear foot**, (as determined by measuring the total horizontal length of pipe installed and including tie-ins), which price shall include full compensation for furnishing all labor, materials, tools, equipment, incidentals, and doing all the work involved in water main installation, including but not limited to: potholing other than as specified in Section 15 to facilitate the progress of work; excavation and disposal of excavated materials; hand digging; root pruning; dewatering and disposal of trench groundwater; contamination awareness; supporting or removal and disposal of existing utilities in the same trench; water main and fittings; restrained joints, thrust blocking and harnesses as *required*; placing and compacting all required bedding and backfill including control density fill;



trench plates *as needed*; temporary trench paving; construction water and all work involved in its obtainment, development and distribution; testing and chlorination of the new water system and appurtenances; purging lines prior to bacteria sampling; disposal of all chlorinated water by the contractor; cleaning, swabbing and flushing of water main and appurtenances; as specified herein, and no additional allowance will be made therefor.

**Water Main Lowering** shall be paid for at the contract price **each**, which price shall include full compensation for furnishing all labor, materials, tools, equipment, incidentals, and doing all the work involved in water main lowering installation, including but not limited to: potholing other than as specified in Section 15 to facilitate the progress of work; excavation and disposal of excavated materials; hand digging; root pruning; dewatering and disposal of trench groundwater; contamination awareness; supporting or removal and disposal of existing utilities in the same trench; pipe in excess of horizontal distance between beginning and end of lowered section for lowering; connecting to non-lowered portion of water mains; fittings; installing restrained joints, thrust blocking and harnesses; placing and compacting all required bedding and backfill including control density fill *if required*; trench plates *as needed*; testing and chlorination; temporary trench paving; as specified herein, and no additional allowance will be made therefor.

**1" Single Water Service** shall be paid for at the contract price **each**, which price shall include full compensation for furnishing all labor, materials, tools, equipment, incidentals, and doing all work involved in water service installation, including but not limited to: excavation and disposal of excavated materials; dewatering and disposal of trench groundwater; contamination awareness; saddle and valve; proper size penetration in main; water service tubing and fittings; meter box and lid to grade; meter shut off valves; tie-in at back of sidewalk; meter transfer; placing and compacting all required bedding and backfill; trench plates *as needed*; testing and chlorination; temporary trench paving; removal and replacement of curb, gutter, sidewalk and driveways; restoration/reconstruction of landscaping/irrigation; as specified herein, and no additional allowance will be made therefor.

**1-1/2" Dual Water Service** shall be paid for at the contract price **each**, which price shall include full compensation for furnishing all labor, materials, tools, equipment, incidentals, and doing all work involved in dual water service installation, including but not limited to: excavation and disposal of excavated materials; dewatering and disposal of trench groundwater; contamination awareness; saddle and valve; proper size penetration in main; water service tubing and fittings; manifold; meter boxes and lids to grade; meter shut off valves; tie-ins at back of sidewalk; meter transfers; placing and compacting all required bedding and backfill; trench plates *as needed*; testing and chlorination; temporary trench paving; removal and replacement of curb, gutter, sidewalk and driveways; restoration/reconstruction of landscaping/irrigation; as specified herein, and no additional allowance will be made therefor.

**8" Gate Valve** installed on a new main shall be paid for at the contract price **each**, which price shall include full compensation for furnishing all labor, materials, tools, equipment, incidentals, and doing all work involved in gate valve installation, including but not limited to: excavation and disposal of excavated materials; dewatering and disposal of trench groundwater; contamination awareness; valve; valve box and riser set to grade; concrete collar; pier blocks; placing and compacting all required bedding and backfill including control density fill *if required*; trench plates *as needed*; testing and chlorination; temporary trench paving; as specified herein, and no additional allowance will be made therefor.

**Abandon or Remove Water System Components** shall be paid for at the contract **lump sum** price, including furnishing all labor, materials, tools and equipment, incidentals, and doing all work involved in abandoning and/or removal of water system components, including but not limited to: potholing other than as specified in Section 15 to facilitate the progress of work; excavation and disposal of excavated materials; dewatering and disposal of trench groundwater; contamination awareness; abandonment and/or removal and disposal of old sections of main and fittings; abandonment of pipe ends 2-inch and larger; removal and/or abandonment of valves; removal of old tees and installing like size ductile iron pipe with couplers when water main is to remain active; removal of valve boxes and risers; removal of thrust blocks; removal and disposal of abandoned blow offs and appurtenances; abandoning unused or replaced water services on existing main; removing and disposing of meter boxes and lids, valves, saddles, curb stops and installing a full circle clamp; installing blind flanges *if required*; placing and compacting all required bedding and backfill including control density fill *if required*; trench plates *as needed*; temporary trench paving; removal and replacement of sidewalk and driveways *as needed*; restoration/reconstruction of landscaping/irrigation and fencing *as needed*; as specified herein, and no additional allowance will be made therefor.

**Leaded Joint Removal** shall be paid for at the contract price **each**, which price shall include full compensation for furnishing all labor, materials, tools, equipment and doing all the work involved in the removal and proper disposal of lead joints and installing new pipe and couplers, as specified herein, and no additional allowance will be made therefor.

This item may be eliminated in its entirety based on field conditions, and no adjustment in the contract bid price will be made therefor. The provisions in Section 4-1.05A of the Standard Specifications shall not apply.

**Temporary Blow-off** shall be paid for at the contract price **each**, which price shall include full compensation for furnishing all labor, materials, tools, equipment, incidentals, and doing all work involved in temporary blow installation, including but not limited to: potholing other than as specified in Section 15 to facilitate the progress of work; excavation and disposal of excavated materials; dewatering and disposal of trench groundwater; contamination awareness; pipe; fittings *as required*; valve box; trench plates *as needed*; temporary trench paving; as specified herein, and no additional allowance will be made therefor.

**Water Main Tie-in** shall be paid for at the contract price **each**, which price shall include full compensation for furnishing all labor, materials, tools, equipment, incidentals, and doing all the work involved in water main tie-in installation, including but not limited to: scheduling and notifications; excavation and disposal of excavated materials; hand digging *if needed*; root pruning; dewatering and disposal of trench groundwater; contamination awareness; supporting or removal and disposal of existing utilities in the same trench *if required*; water main and fittings *as required*; removal of temporary blow-offs; temporary restrained caps or plugs required to facilitate tie-in operations; partial water main lowerings at tie-in locations; restrained joints, thrust blocking and harnesses *as required*; placing and compacting all required bedding and backfill including control density fill *if required*; trench plates *as needed*; pressure testing large scope tie ins *if required*; temporary trench paving; as specified herein, and no additional allowance will be made therefor.

Work under water main tie-ins excludes that portion of pipe paid for as under the Water Main pay item.

Full compensation for Trench Bracing and Shoring – Water shall be considered as included in the prices paid for the **various contract items** of work involved and no additional compensation will be allowed therefor.

**APPROVED LIST OF BACKFLOW CONTRACTORS**  
**INSTALLATION, TESTING & REPAIR**

<b>AAA BACKFLOW PREVENTION SERVICES</b> 4949 NADOTTI ROAD STOCKTON, CA 95215 PHONE: (209) 931-5253 FAX: (209) 931-1916	<b>ALL PRO BACKFLOW</b> P.O. BOX 2193 FOLSOM, CA 95763 PHONE: (916) 276-7162 FAX: (916) 435-4167	<b>A.S.T.I SERVICES, INC.</b> MIKE DESCHLER 102 COUCH STREET VALLEJO, CA 94590 PHONE: (707) 645-1782 FAX: (707) 645-1807
<b>BANNER ENTERPRISES</b> P.O. BOX 1457 SANTA ROSA, CA 95402 PHONE: (707) 523-1244	<b>BAY CITIES FIRE PROTECTION</b> JOHN HESS 2304 DONNA MARIA CT SANTA ROSA, CA 95401 PHONE: (707) 579-8694 FAX: (707) 579-8920	<b>CAGWIN &amp; DORWAN</b> P.O. BOX 1600 NOVATO, CA 94948-1600 PHONE: (800) 891-7710 FAX: (415) 897-7864
<b>CARRIER CORPORATION</b> 600 MCCORMICK ST., SUITE B SAN LEANDRO, CA 94577 PHONE: (510) 347-2000 FAX: (510) 347-2099	<b>CHECKRITE BACKFLOW SERVICES, INC.</b> CHUCK SCHOOP 3618 CHANATE ROAD SANTA ROSA, CA 95404 PHONE: (707) 575-5296 FAX: (707) 578-6595	<b>C.V. PLUMBING</b> CHRIS VINE P.O. BOX 219 CLOVERDALE, CA 95425 PHONE: (707) 894-8580 FAX: (707) 894-9642
<b>DEVOTO PLUMBING COMPANY*</b> 1345 TRIPLE OAK WAY FULTON, CA 95439 PHONE: (707) 545-0734	<b>ECONOMY PLUMBING</b> P.M.B. #287, 1275 4 <sup>TH</sup> ST. SANTA ROSA, CA 95404 PHONE: (707) 545-4455 FAX: (707) 543-8111	<b>GROUND HOG CONSTRUCTION</b> 5353 HESSEL ROAD SEBASTOPOL, CA 95472 PHONE: (707) 529-2085 FAX: (707) 823-9389
<b>INCOM MECHANICAL, INC.</b> JEFF LOCATI 975 TRANSPORT WAY, #5 PETALUMA, CA 94954 PHONE: (707) 586-0511 FAX: (707) 586-0239	<b>INSPECTION SERVICES &amp; FIRE PROTECTION, INC.</b> P O BOX 11457 SANTA ROSA, CA 95406 PHONE: (707) 523-0404	<b>INTERNATIONAL FIRE EQUIP. CO.</b> 437 OHIO AVE. RICHMOND, CA 94804 PHONE: (510) 237-5000 FAX: (510) 235-5388
<b>LEDUC &amp; DEXTER SUPER SERVICE PLUMBING</b> P.O. BOX 11157 SANTA ROSA, CA 95406 PHONE: (707) 544-6444 FAX: (707) 527-0281	<b>NORTHBAY BACKFLOW</b> AARON ROBELLO 814 RANCHO WAY PETALUMA, CA 94954 PHONE: (707) 484-3949 FAX: (707) 769-8960	<b>NORTHWOOD BACKFLOW SERVICE</b> 925 LAKEVILLE ST #369 PETALUMA, CA 94952 PHONE: (800) 750-4547
<b>ONGARO AND SONS PLUMBING</b> 2995 DUTTON AVENUE SANTA ROSA, CA 95407 PHONE: (707) 579-3511 FAX: (707) 579-0842	<b>RH &amp; SONS WATER SERVICES</b> 225 GOLDEN RIDGE AVENUE SEBASTOPOL, CA 95472 PHONE: (800) 675-3569	<b>ROBERTS MECHANICAL &amp; ELECTRICAL, INC.</b> 4649 DOWDELL AVENUE SANTA ROSA, CA 95407 PHONE: (707) 584-5880
<b>ROBERTSON'S BACKFLOW</b> 6229 SPECKLED ROAD POLLOCK PINES, CA 95726 PHONE: (530) 306-1056 FAX: (530) 303-1497	<b>ROTO ROOTER</b> JERRY BRISTOL 1315 N. DUTTON AVENUE SANTA ROSA, CA 95401 PHONE: (707) 578-5885 FAX: (707) 578-1190	<b>SIMPLEX GRINNELL</b> 3077 WILJAN CT., STE A SANTA ROSA, CA 95407 PHONE: (707) 578-3212 FAX: (707) 578-3902

**NOTE:** These contractors have a C-16 or C-36 State Contractor's License or an A-General Engineering License. They are licensed and certified to test, repair, and install any type of backflow device. They are also licensed to work on fire protection backflow devices or fire protection systems. In addition, a City Business License is necessary. When installing a backflow device, a City Plumbing Permit is required, and if working in the City right-of-way, an Encroachment Permit is needed. All testers are required to have a City Business License.

(Version 5/4/15 – List Only)

*\*Spanish speaking*

## SECTION 121

### NOTIFICATION

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

**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]

## **SECTION 124**

### **MATERIAL RECYCLING**

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

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

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

[Version: 11/6/14CDA STD2010]

## **SECTION A FEES AND PERMITS**

The Contractor shall obtain all necessary and required permits for the project. All permits issued by the City Building Department will be issued at no cost to the Contractor; these fees will be paid by an appropriate City department. All other required permits shall be obtained at the Contractor's expense.

All electrical service charges or fees that may be required by Pacific Gas and Electric Company shall be paid for by an appropriate City department.

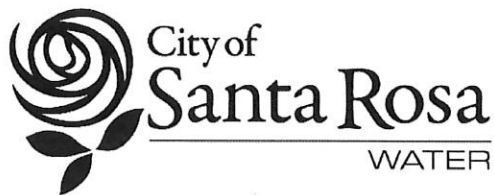
The Contractor shall obtain the following permits:

- 1) A permit for excavating and shoring trenches in excess of five feet or more in depth will be required from the State of California Division of Industrial Safety.
- 2) In the event that hazardous material is encountered, the Contractor shall obtain a hazardous material excavation permit from the Santa Rosa Fire Department prior to removal and disposal of contaminated soils.

A letter of approval for West College Pond #2 soils disposal is included herein.

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 discharge into the sewer system shall be paid for by the City. A copy of the Authorization to 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.

Full compensation for securing, complying and the cost of all permits shall be considered as included in the contract prices paid for the various items of work and no additional allowance will be made therefor.



**NON-RESIDENTIAL  
ONE TIME DISCHARGE PERMIT SR-1X08696**

**Mail To:**

**Jerry Winterlin  
City of Santa Rosa Public Works Department  
69 Stony Circle  
Santa Rosa, CA 95401**

**Located At:**

**Sewer and Water Improvements  
West 6<sup>TH</sup> at Madison Street  
Santa Rosa, CA 95401**

**Permit #: SR-1X08696  
Account #: P70749**

**Effective Date: 12/29/2015  
Expiration Date: 12/31/2017**

The contractor to be awarded the City of Santa Rosa project referenced above is authorized to discharge any generated non-contaminated groundwater and/or trench water to the City of Santa Rosa's sewer collection system. This discharge will be in accordance with the City of Santa Rosa's Most Current Sewer Code and/or Ordinance, any applicable provisions of federal or state law or regulation, and in accordance with discharge point(s), effluent limitations, monitoring requirements, and other conditions set forth herein.

**PART I — SPECIAL CONDITIONS**

1. The discharge rate to the sanitary sewer shall be at a discharge rate that will not result in any spillage or surcharging of the sewer system.
2. Perchloroethylene/tetrachloroethylene is prohibited from being discharged to the sanitary sewer.
3. Sediment must be removed prior to any discharge to the sanitary sewer, and the discharge shall not exceed 25,000 gallons per day.
4. The permittee shall be responsible for all liability imposed by law for personal injury or property damage caused by work done by permittee under this permit, including work beyond the scope of this permit. If any claim of such liability is made against the City, its officers or employees, permittee shall defend, indemnify and hold them, and each of them, harmless from such claim and liability insofar as permitted by law.
5. It is required that this office be notified 48 hours in advance of the commencement of the discharge so that an Environmental Compliance Inspector may be on site at the beginning of the operations to verify the discharge point to the sanitary sewer.
6. A permit fee of \$222.00 will be assessed plus an additional \$128.00 per hour will be charged for any permit related services that exceed initial (3) hour base period.

Deputy Director of Environmental Services:

Date: DEC 29 2015



BID FORMS

**CITY OF SANTA ROSA**

**STATE OF CALIFORNIA**

W 6<sup>TH</sup> ST AT MADISON ST SEWER AND WATER IMPROVEMENTS

The work to be performed and referred to herein is in the City of Santa Rosa, California and consists of improvements to be constructed in accordance with the provisions of the Invitation for Bids, containing the Notice to Bidders, the Special Provisions, the Project Plan(s), the Bid Forms and the Contract, all of which are by reference incorporated herein, and each Addendum, if any is issued, to any of the above which is also incorporated by reference herein.

TO THE AWARD AUTHORITY OF THE CITY OF SANTA ROSA

The undersigned, as bidder, declares that the only person or parties interested in this bid as principals are those named herein; that this bid is made without collusion with any other person, firm, or corporation; that Contractor has carefully examined the Project Plans, Invitation for Bids and conditions therefor, and is familiar with all bid requirements, that Contractor has examined this Contract and the provisions incorporated by reference herein, and Contractor hereby proposes, and agrees that if its bid is accepted by the City, Contractor will provide all necessary machinery, tools, apparatuses, and other means of construction, and to do all the work and furnish all the materials and services required to complete the construction in accordance with the Contract, the Special Provisions, the Project Plan(s), and Addenda to any of the above as incorporated by reference, in the time stated herein, for the unit prices and/or lump sum prices as follows:

NAME OF BIDDER:

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**CITY OF SANTA ROSA  
UNIT PRICE SCHEDULE  
W 6TH ST AT MADISON ST SEWER AND WATER IMPROVEMENTS**

Item No.	Description	Quantity	Units	Unit Price	Total Price
1	TRAFFIC CONTROL	1	LS	\$_____	\$_____
2	WATER POLLUTION CONTROL	1	LS	\$_____	\$_____
3	ADJUST EXISTING MANHOLE TO GRADE	1	EA	\$_____	\$_____
4	REMOVE AND REPLACE SIDEWALK DRAIN	1	EA	\$_____	\$_____
5	POTHOLING TO VERIFY UTILITY CLEARANCES	1	LS	\$_____	\$_____
6	UTILITY CONFLICT RESOLUTION	1	FA	<b>\$ 30,000.00</b>	<b>\$ 30,000.00</b>
7	SUBGRADE STABILIZATION/DIG-OUT	150	SY	\$_____	\$_____
8	ROADWAY EXCAVATION (F)	272	CY	\$_____	\$_____
9	STABILIZATION FABRIC	1,576	SY	\$_____	\$_____
10	ASPHALT CONCRETE SURFACE	240	TON	\$_____	\$_____
11	ASPHALT CONCRETE BASE	390	TON	\$_____	\$_____
12	PERMANENT TRENCH PAVING	20	TON	\$_____	\$_____
13	8" PVC SEWER MAIN	364	LF	\$_____	\$_____
14	ABANDON OR REMOVE EXISTING SEWER SYSTEM COMPONENTS	1	LS	\$_____	\$_____
15	4" SEWER LATERAL	8	EA	\$_____	\$_____
16	SEWER BACKWATER VALVE	3	EA	\$_____	\$_____

**CITY OF SANTA ROSA  
UNIT PRICE SCHEDULE  
W 6TH ST AT MADISON ST SEWER AND WATER IMPROVEMENTS**

Item No.	Description	Quantity	Units	Unit Price	Total Price
17	48" SEWER MANHOLE	1	EA	\$_____	\$_____
18	CURB AND GUTTER	10	LF	\$_____	\$_____
19	SIDEWALK	60	SF	\$_____	\$_____
20	CITY MONUMENTS	1	EA	\$_____	\$_____
21	8" PVC WATER MAIN	365	LF	\$_____	\$_____
22	WATER MAIN LOWERING	1	EA	\$_____	\$_____
23	1" SINGLE WATER SERVICE	5	EA	\$_____	\$_____
24	1-1/2" DUAL WATER SERVICE	2	EA	\$_____	\$_____
25	8" GATE VALVE	1	EA	\$_____	\$_____
26	ABANDON OR REMOVE WATER SYSTEM COMPONENTS	1	LS	\$_____	\$_____
27	LEADED JOINT REMOVAL	1	EA	\$_____	\$_____
28	TEMPORARY BLOW-OFF	2	EA	\$_____	\$_____
29	WATER MAIN TIE-IN	2	EA	\$_____	\$_____
				TOTAL	\$_____

In the case of any discrepancy between the unit price and the total set forth for the item, the unit price shall prevail; provided, however, that if the amount set forth as a unit price is ambiguous, unintelligible or uncertain for any reason, or is omitted, or in the case of lump sum items, is not the same amount as the entry in the "Total" column, then the amount set forth in the "Total" column for the item shall prevail in accordance with the following:

1. As to lump sum items, the amount set forth in the "Total" column shall be the unit price;
2. As to unit basis items, the amount set forth in the "Total" column shall be divided by the estimated quantity for the item and the price thus obtained shall be the unit price.

The Total Base Bid shall be the sum of the "Total" column. In case of discrepancy between the sum of the "Total" column and the amount entered as Total Base Bid, the sum of the "Total" column shall prevail. The bid comparison will be based on the sum of the "Total" column for each bidder.

If this Contract Bid is accepted by the City and the undersigned fails to execute the Contract and to give all the bonds required under the Contract, with a surety satisfactory to the Award Authority of the City of Santa Rosa, within ten calendar days after bidder has received the Notice of Award from the Engineer, then the Award Authority may, at its option, determine that the bidder has abandoned the Contract, and thereupon this bid and the acceptance thereof shall be null and void, and the forfeiture of the security accompanying this bid shall be in accordance with California Public Contract Code section 20172.

The undersigned understands and agrees that the City is not responsible for any error or omissions on the part of the undersigned in making this bid.

The bidder to whom the Contract is awarded agrees to execute the Contract in favor of the City, in the form attached, and to deliver any and all required bond(s) and insurance certificates within ten calendar days from the date of Contractor's receipt of the Notice of Award. Following the award of the Contract, Contractor shall commence work within ten calendar days from the day authorized in the Notice to Proceed and diligently prosecute the same to completion in accordance with Section 8-1.04.

## LIST OF SUBCONTRACTORS

**NAME OF BIDDER:** \_\_\_\_\_

The following is a list of each subcontractor who will perform work or labor or render services to the undersigned for the construction of the project in an amount in excess of ½ of 1% of the total amount of this bid.

The undersigned agrees that any portion of the work in excess of ½ of 1% of the total amount of this bid and for which no subcontractor is designated herein will be performed by the undersigned.

SUBCONTRACTOR NAME	SUBCONTRACTOR LICENSE NUMBER	SUBCONTRACTOR DIR REGISTRATION NUMBER	SUBCONTRACTOR BUSINESS ADDRESS	DESCRIPTION OF WORK (ITEM NO.)

## LIST OF PREVIOUS SIMILAR JOBS

NAME OF BIDDER:

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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):

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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 is 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. C01896**

**W 6<sup>TH</sup> ST AT MADISON ST SEWER AND WATER IMPROVEMENTS**

This Contract is made and entered into as of date to be added upon award 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 5 sheets entitled, W 6<sup>th</sup> St at Madison St Sewer and Water Improvements, File Number 2016-0017, approved by the Deputy Director of Transportation and Public Works, hereinafter referred to as the Project Plan(s).

ARTICLE II - Contractor agrees to receive and accept the following prices as full compensation for furnishing all materials and doing all the work contemplated and embraced in this Contract; also for all loss or damages arising out of the nature of the work aforesaid, or from the acts of the elements, or from any unforeseen difficulties or obstructions which may arise or be encountered in the prosecution of the work until its acceptance by City and for all expenses incurred by or in consequence of the suspension or discontinuance of work, and for well and faithfully completing the work, and the whole thereof in the manner and according to the Project Plans and Invitation for Bids therefor, and the requirements of the Engineer under them to wit:

ITEM NUMBER	QUANTITY	DESCRIPTION	UNIT PRICE	TOTAL
			\$ _____	\$ _____
TOTAL BASE BID (SUM OF "TOTAL" COLUMN)			\$ _____	

**BID ITEMS IN THIS SECTION WILL BE INSERTED  
UPON AWARD OF THE CONTRACT AND SHALL BE  
THE SAME AS THOSE BID UPON.**

ARTICLE III - City and Contractor hereby promise and agree that Contractor shall provide the materials and do the work according to the terms and conditions herein contained and referred to, for the prices aforesaid, and City hereby agrees to pay for the same at the time, in the manner, and upon the conditions set forth; and the parties for themselves, their heirs, executors, administrators, successors, and assigns, do hereby agree to full performance of the covenants herein stated.

ARTICLE IV - By execution of this Contract, Contractor hereby represents and certifies that Contractor is aware of the provisions of Labor Code section 3700 which require every employer to be insured against liability for Workers' Compensation or to undertake self-insurance in accordance with the provisions of that Code, and Contractor hereby agrees to comply with such provisions before commencing the performance of the work of this Contract.

ARTICLE V - It is further expressly agreed by and between the parties hereto that the Invitation for Bids, containing the Notice to Bidders including any required Bonds, the Contract Documents, and any Addenda are all essential parts of this Contract and are specially referred to and by such reference made a part hereof. In the event of any conflict in the provisions thereof, the terms of said documents shall control each over the other, in the following order:

1. Special Provisions
2. Project Plans
3. City Standards
4. City Specifications
5. Standard Specifications
6. Standard Plans

ARTICLE VI - Contractor agrees to commence work pursuant to this Contract within ten calendar days from the date authorized in the Notice to Proceed and to diligently prosecute the same to completion in accordance with Section 8-1.04C of the Special Provisions.

This Contract shall not be transferred or assigned without the prior written consent of City, which may be withheld by City in its sole and absolute discretion.

If Contractor is a corporation, two corporate officers of Contractor, one from each of the following two groups shall execute this Contract: a) the chairman of the board, president or any vice-president; b) the secretary, any assistant secretary, chief financial officer, or any assistant treasurer. The name and title of the corporate officers shall be printed under the signature.

In witness whereof, the parties hereto have executed this Contract as of the date first written above.

**City:**

City of Santa Rosa,  
a Municipal corporation

By: \_\_\_\_\_

Title: \_\_\_\_\_

ATTEST:

By: \_\_\_\_\_

Title: \_\_\_\_\_

Approved as to form:

By: \_\_\_\_\_

Office of City Attorney

**Contractor:**

Name of Contractor,  
Type of entity

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_