

# **INVITATION FOR BIDS**



## **FOR CONSTRUCTING**

# **BICYCLE AND PEDESTRIAN GAP CLOSURES - PINER RD AND DUTTON AVE**

CONTRACT NUMBER

**C02198**

ISSUED BY

**CAPITAL PROJECTS ENGINEERING DIVISION**

**CITY OF SANTA ROSA, CALIFORNIA**

**2019**

ATTENTION  
Prebid Conference  
See Page 1



STATE OF CALIFORNIA

INVITATION FOR BIDS

CONTAINING:

NOTICE TO BIDDERS

SPECIAL PROVISIONS

BID FORMS

CONTRACT

FOR

**BICYCLE AND PEDESTRIAN GAP CLOSURES -  
PINER RD AND DUTTON AVE**

**Contract No. C02198**

# BICYCLE AND PEDESTRIAN GAP CLOSURES - PINER RD AND DUTTON AVE

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**NOTICE TO BIDDERS**

|   |  |
|---|--|
| ➤ | For technical questions regarding this project, contact Lisa Welsh at (707) 543-3909.  |
| ➤ | 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., September 5, 2019, for Bicycle and Pedestrian Gap Closures - Piner Rd and Dutton Ave, Contract No. C02198. (Engineer's Range: \$1,100,000 - \$1,400,000.)

**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., August 22, 2019, 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  
BICYCLE AND PEDESTRIAN GAP CLOSURES - PINER RD AND DUTTON AVE**

| Item No. | Description  | Quantity | Units |
|----------|--|----------|-------|
| 1        | SB1 FUNDING SIGN   | 2        | EA    |
| 2        | TRAFFIC CONTROL  | 1        | LS    |
| 3        | WATER POLLUTION CONTROL  | 1        | LS    |
| 4        | REMOVE CONCRETE  | 5,850    | SF    |
| 5        | REMOVE THERMOPLASTIC STRIPING  | 900      | LF    |
| 6        | ADJUST EXISTING VALVE BOXES, MAINLINE CLEANOUTS, PULL BOXES, BLOW-OFF BOXES AND MONUMENTS TO GRADE | 9        | EA    |
| 7        | ADJUST EXISTING MANHOLES TO GRADE  | 11       | EA    |
| 8        | REMOVE/REPLACE AND RESET EXISTING CITY FACILITY BOXES AND LIDS TO GRADE                            | 16       | EA    |
| 9        | ADJUST INLET (TYPE II CATCH BASIN)   | 3        | EA    |
| 10       | RELOCATE "THE OAKS" SIGN   | 1        | LS    |
| 11       | CLEARING AND GRUBBING  | 1        | LS    |
| 12       | PAVEMENT REPAIR/DIGOUT   | 2,940    | SF    |
| 13       | ROADWAY EXCAVATION (F)   | 40       | CY    |
| 14       | RESTORE IRRIGATION SYSTEM  | 1        | LS    |
| 15       | PREPARATION FOR HIGH VOLUME TRAFFIC SLURRY SEAL  | 22,700   | SY    |
| 16       | HIGH VOLUME TRAFFIC SLURRY SEAL (TYPE III)   | 22,700   | SY    |
| 17       | CRACK SEAL   | 31,200   | LF    |
| 18       | PAVEMENT GRID  | 3,990    | SY    |
| 19       | HOT MIX ASPHALT (TYPE A)   | 64       | TON   |
| 20       | 0.17' COLD PLANE/HMA OVERLAY   | 5,050    | SF    |
| 21       | 0.40' COLD PLANE/HMA OVERLAY   | 53,730   | SF    |
| 22       | ROADSIDE SIGN (EXISTING POST)  | 13       | EA    |
| 23       | ROADSIDE SIGN (METAL POST)   | 3        | EA    |
| 24       | RELOCATE SIGN AND POST   | 1        | EA    |
| 25       | DETECTABLE WARNING SURFACE   | 270      | SF    |
| 26       | MINOR CONCRETE (CURB AND GUTTER)   | 395      | LF    |
| 27       | MINOR CONCRETE (TYPE A CURB) (4" CURB)   | 110      | LF    |
| 28       | MINOR CONCRETE (TYPE A CURB) (6" CURB)   | 350      | LF    |
| 29       | MINOR CONCRETE (TYPE A CURB) (8" CURB)   | 10       | LF    |
| 30       | MINOR CONCRETE (TYPE A CURB) (12" CURB)  | 65       | LF    |
| 31       | MINOR CONCRETE (TYPE A CURB) (15" CURB)  | 160      | LF    |
| 32       | MINOR CONCRETE (SIDEWALK)  | 5,900    | SF    |
| 33       | MINOR CONCRETE (DRIVEWAY)  | 1,095    | SF    |
| 34       | MINOR CONCRETE (COBBLES EMBEDDED IN CONCRETE)  | 360      | SF    |
| 35       | RECONSTRUCT VALLEY GUTTER  | 255      | SF    |
| 36       | THERMOPLASTIC PAVEMENT MARKING (WHITE)   | 1,700    | SF    |
| 37       | THERMOPLASTIC TRAFFIC STRIPE (DETAIL 10)   | 6,965    | LF    |
| 38       | THERMOPLASTIC TRAFFIC STRIPE (DETAIL 23)   | 680      | LF    |
| 39       | THERMOPLASTIC TRAFFIC STRIPE (DETAIL 33)   | 2,975    | LF    |

**CITY OF SANTA ROSA  
ESTIMATED QUANTITIES  
BICYCLE AND PEDESTRIAN GAP CLOSURES - PINER RD AND DUTTON AVE**

| Item No. | Description                               | Quantity | Units |
|----------|---|----------|-------|
| 40       | THERMOPLASTIC TRAFFIC STRIPE (DETAIL 37B) | 120      | LF    |
| 41       | THERMOPLASTIC TRAFFIC STRIPE (DETAIL 38)  | 275      | LF    |
| 42       | THERMOPLASTIC TRAFFIC STRIPE (DETAIL 38A) | 145      | LF    |
| 43       | THERMOPLASTIC TRAFFIC STRIPE (DETAIL 39)  | 6,680    | LF    |
| 44       | THERMOPLASTIC TRAFFIC STRIPE (DETAIL 39A) | 700      | LF    |
| 45       | THERMOPLASTIC TRAFFIC STRIPE (DETAIL 40)  | 85       | LF    |
| 46       | REFLECTIVE HYDRANT MARKERS                | 9        | EA    |
| 47       | TRAFFIC SIGNAL MODIFICATION (AIRWAY DR)   | 1        | LS    |
| 48       | INSTALL ADVANCE DETECTOR LOOPS            | 8        | EA    |
| 49       | INSTALL DETECTOR HANDHOLE                 | 4        | EA    |
| 50       | INSTALL BICYCLE LANE DETECTOR LOOPS       | 3        | EA    |
| 51       | RELOCATE BACKFLOW PREVENTER               | 1        | 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 C02198 Bicycle and Pedestrian Gap Closures - Piner Rd and Dutton Ave 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.



DAVID MONTAGUE  
Supervising Engineer

8/7/2019

Date

# **SPECIAL PROVISIONS**

## **General Specifications**

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

#### **BICYCLE AND PEDESTRIAN GAP CLOSURES - PINER RD AND DUTTON AVE**

##### **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 20 sheets entitled Bicycle and Pedestrian Gap Closures - Piner Rd and Dutton Ave, 2019-0015
3. City of Santa Rosa Design and Construction Standards (City Standards)
4. City of Santa Rosa Construction Specifications for Public improvements (City Specifications)
5. State of California Department of Transportation Standard Specifications 2010 (Standard Specifications), and
6. State of California Department of Transportation Standard Plans 2010 (Standard Plans).

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

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

For State of California - the City of Santa Rosa;

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

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

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

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

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

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

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



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

## 2 BIDDING

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

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

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

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

**2-1.33A Bid Forms:** All bids shall be made on bid forms obtained from PlanetBids at [www.srcity.org/bids](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, cashiers or certified check, or bidder's bond is enclosed with the bid. Any bidder's bond shall contain provisions for forfeiture consistent with California Public Contract Code section 20172.

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

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

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

**2-1.48 Competency of Bidders:** No bid will be accepted from or contract awarded to a contractor that is not licensed in accordance with the law, that does not hold a license qualifying it to perform work under this contract, to whom a bid form has not been issued by the Engineer, or that has not

successfully completed projects of similar character, scope and cost to the proposed project. Bidders will be required to provide a list of previous similar jobs with their bids.

### 3 CONTRACT AWARD AND EXECUTION

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

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

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

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

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

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

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

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

**Insurance Requirements:**

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

| Insurance                       | Minimum Coverage Limits                             | Additional Coverage Requirements  |
|---------------------------------|---|---|
| 1. Commercial general liability | \$5 million per occurrence<br>\$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.

**4-2 SB1 Funding Signs:** The Senate Bill 1 (SB1) project funding identification signs (C47C(CA)) must comply with the detail provided and as follows:

Sign must comply with the specifications for Project Funding Identification signs in Section 6F-109(CA) of the California MUTCD and at the MUTCD website. The sign must be a wood-post sign complying with Standard Specification Section 82-3. The sign panels must be framed, single-sheet aluminum panels complying with Standard Specification Section 82-2. The background on the sign must be Type XI retroreflective sheeting. The Type XI retroreflective sheeting must be on the Authorized Material List for signing and delineation materials. The legend must be retroreflective except for the nonreflective black letters and numerals. The blue and fluorescent orange must match the FHWA’s color specifications available at the FHWA MUTCD website. Sign dimensions shall be 96-inch by 60-inch.

Sign may include additional information such as City of Santa Rosa logo, project name, year of completion and/or City website address, if requested by the Engineer. Signs to be removed when directed by Engineer.

**4-2.1 Payment:** **SB1 Funding Sign** shall be paid for at the contract unit price **each**, which price shall include full compensation for furnishing all labor, materials, tools and equipment including mounting hardware and doing all work involved in furnishing, installing and removing the SB1 Funding Signs complete as specified herein, and no additional allowance will be made therefor.

## 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 20 sheets entitled Bicycle and Pedestrian Gap Closures - Piner Rd and Dutton Ave, 2019-0015
3. City Standards
4. City Specifications
5. Standard Specifications
6. Standard Plans

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

mediator and those mediators shall select a qualified neutral third party to mediate with regard to the disputed portion of the Claim. Each party shall bear the fees and costs charged by its respective mediator in connection with the selection of the neutral mediator.

## 6 CONTROL OF MATERIALS

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

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

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

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

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

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

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

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

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

### **6-4 Water Utility**

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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



## 7 LEGAL RELATIONS AND RESPONSIBILITY TO THE PUBLIC

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

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

75 WORKING DAYS

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

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

Contractor, at no expense to the City, may request for Engineer approval for up to three (3) days of "night work," or proposed work outside the hours noted above and in special provisions Section 12, for the grinding and paving operations on Piner Road. This allowance is to reduce the impact to the business driveways on Piner Road; residential driveways are to remain open per Section 12. Provide this request within ten (10) days of the Notice to Proceed date to the Engineer and notify the Engineer ten (10) days prior to scheduled work. Note, business driveway closures are to be coordinated with business hours and deliveries.

All work behind the existing back of walk for the private sidewalk conform for property 810 Piner Road at the southwest corner of the intersection of Piner Road and Range Avenue shall be completed prior to December 31<sup>st</sup>, 2019.

**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.

**CITY OF SANTA ROSA**

**BICYCLE AND PEDESTRIAN GAP CLOSURES  
AT PINER ROAD AND DUTTON AVENUE**

**CONTRACT NO. C02198**

The Technical Specifications contained herein have been prepared under the direction of and approved for use by the following Registered Engineer:



Project Manager: Daniel Carley, P.E.  
Registered Civil Engineer

# 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 7-1.03A, "Maintaining Traffic", 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. Identify message board locations. A minimum of 4 changeable message boards shall be required. Location to be determined by Engineer. The boards shall be installed at a minimum two weeks before any construction activity. The verbiage

on the boards shall be approved by the Engineer and will be changed as determined by the Engineer.

8. 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 and receive permission from the affected businesses and residents. Attention is directed to Section 7-1.03A, "Maintaining Traffic". **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 7-1.03A, "Maintaining Traffic", to Section 5-1.05, "Order of Work," of these Special Provisions.

Exact locations of Project Identification signs and Advance Notice signs (7-1.03A, "Maintaining Traffic") shall be determined in the field by the Engineer.

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

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

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

The Contractor shall notify Sonoma County Transit at (707) 585-7516, Superintendent of Golden Gate Transit at (415) 257-4442, Santa Rosa City Bus at (707) 543-3922, , the local Postal Service at (707) 526-0113 and Recology at 1-(800) 243-0291 5 calendar days prior to any lane closures or restrictions in turning movements.

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

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

Notification shall be as follows:

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

The Contractor shall maintain vehicle access to all homes and other properties along the work zone. During paving operations the Contractor will be allowed to temporarily suspend vehicle access to a limited number of driveways when approved by the Engineer. When approved by the Engineer and at least 72 hours prior to suspending access to any

driveway, the Contractor shall give both written and verbal notice to the affected businesses and residents and place barricades adjacent to the driveways with posted notices stating the specific dates and times of the suspension for that area. The notice shall also indicate an alternate parking location. Suspension of access to driveway will be permitted only as approved by the Engineer and only between the hours of 8:00 am and 4:30 pm.

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

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

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

## **12-7 Temporary Pedestrian Walkways**

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

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

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

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

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

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

# 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 current California Water Quality Control Board, North Coast Region Order No. National Pollutant Discharge Elimination System Municipal Storm Water Permit, 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.

**13-2.04 Payment:** The City Pays you to prepare **Water Pollution Control** Program as the **lump sum** price for **Water Pollution Control** and as follows:

## **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 BMPs at all susceptible storm drain inlets and manholes to prevent paving products and tack coat from entering;
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**;
11. Protect stockpiles with a cover or sediment barriers during a rain event and;
12. 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)**

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

**13-6 Temporary Sediment Control**

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

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

**13-7 Temporary Tracking Control**

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

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

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

**13-10 Temporary Linear Sediment Barrier**

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

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

## 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.

# 15 EXISTING FACILITIES

## **15-1.02 Preservation of Property**

**15-1.02A Protect Existing Access Covers Prior To Slurry:** Prior to slurry, all manhole, valve, rodding inlet, monument, and all other utility access covers shall be protected from the Contractor's slurry operations by applying a sheet of plastic, cut to fit, or placing a plastic bag over the exposed facilities or other methods approved by the Engineer. All traces of plastic and excess surfacing material shall be removed from all access covers as quickly as possible after the application of the slurry and in no case remain in place more than 24 hours. All access covers shall remain locatable at all times. Placing a temporary pavement marker or equal on each cover prior to slurry application is acceptable.

Any slurry material deposited on manholes, valves, rodding inlets, monument, and all other utility covers shall be removed immediately, by the Contractor, at the Contractor's expense.

**15-1.02B Payment:** Protect Existing Access Covers Prior To Slurry shall be considered as included in the various items of work under Section 37-3 "High Volume Traffic Slurry Seal" and shall include full compensation for furnishing all labor, tools, equipment and doing all the work involved including furnishing, installing, and removing plastic sheeting or plastic bags complete in place as specified and no additional compensation will be made therefor.

**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.

**15-1.03B Removing Concrete:** Attention is directed to Section 15-1.03 **Removing Concrete** of the State Standard Specifications. Contractor shall recompact base material or subgrade prior to installation of new facilities.

**15-1.04 Payment: Remove Concrete** shall be paid for at the contract unit price **per square foot**, which price shall include full compensation for furnishing all labor, materials, tools and equipment, and doing all the work involved in removing concrete, including but not limited to, required excavation, and disposing of concrete, as specified herein, and no additional allowance will be made therefor.

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.

**15-2.02B(3) Cold Planing Asphalt Concrete Pavement:**

**15-2.02B(3)(a) General**

Schedule cold planing activities such that not more than 2 days elapses between the time the pavement is cold planed and the HMA is placed.

If you do not complete HMA placement before opening the area to traffic, you must:

1. Construct a temporary HMA taper to the level of the existing pavement.
2. Place HMA during the next work shift.
3. Submit a corrective action plan that shows you will complete cold planing and placement of HMA in the same work shift. Do not resume cold planing activities until the corrective action plan is authorized.

**15-2.02B(3)(b) Materials**

Use the same quality of HMA for temporary tapers that is used for the HMA overlay or comply with the specifications for minor HMA in section 39.

**15-2.02B(3)(c) Construction**

**15-2.02B(3)(c)(i) General**

Do not use a heating device to soften the pavement.

The cold planing machine must be:

1. Equipped with a cutter head width that matches the planing width. If the cutter head width is wider than the cold plane area shown, you may request to use the wider cutter head. Do not cold plane with the wider cutter head unless authorized.
2. Equipped with automatic controls for the longitudinal grade and transverse slope of the cutter head and:
  - 2.1. If a ski device is used, it must be at least 30 feet long, rigid, and a 1-piece unit. The entire length must be used in activating the sensor.
  - 2.2. If referencing from existing pavement, the cold planing machine must be controlled by a self-contained grade reference system. The system must be used at or near the centerline of the roadway. On the adjacent pass with the cold planing machine, a joint-matching shoe may be used.
3. Equipped to effectively control dust generated by the planing operation.
4. Operated such that no fumes or smoke is produced.

Replace broken, missing, or worn machine teeth.

**15-2.02B(3)(c)(ii) Grade Control and Surface Smoothness**

Furnish, install, and maintain grade and transverse slope references.

The depth, length, width, and shape of the cut must be as shown or as ordered. The final cut must result in a neat and uniform surface. Do not damage the remaining surface.

The completed surface of the planed asphalt concrete pavement must not vary more than 0.02 foot when measured with a 12-foot straightedge parallel with the centerline. With the

straightedge at right angles to the centerline, the transverse slope of the planed surface must not vary more than 0.03 foot.

Where lanes are open to traffic, the drop-off of between adjacent lanes must not be more than 0.15 foot.

**15-2.02B(3)(c)(iii) Temporary HMA Tapers**

If a drop-off between the existing pavement and the planed area at transverse joints cannot be avoided before opening to traffic, construct a temporary HMA taper.

Completely remove temporary tapers before placing permanent surfacing.

**15-2.02B(3)(c)(iv) Removal of Planed Material**

Remove cold planed material concurrent with planing activities so that removal does not lag more than 50 feet behind the planer.

**15-2.02B(3)(d) Payment**

Payment for removal of pavement markers, thermoplastic traffic stripe, painted traffic stripe, and pavement marking within the area of cold planing is included in the payment for cold plane asphalt concrete pavement of the types shown in the Bid Item List.

**15-2.02C Remove 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 Section 84 of the Standard Specifications, and the Plans.

Existing traffic stripes and pavement markings shall be removed not more than three (3) days prior to the placement of slurry of the street.

Painted traffic stripes and painted pavement markings are not required to be removed prior to slurry.

All thermoplastic traffic stripes, thermoplastic pavement markings and tape traffic stripes within the limits of slurry are required to be removed prior to slurry.

The Contractor shall provide, install, and maintain temporary reflective traffic stripes and pavement marking on the same day as the permanent stripes and markings are removed and maintain these until final stripes and markings are in place. All temporary stripes and markings shall be removed before final overlay. Temporary stripes and markings on all ground surfaces shall be one coat of paint with reflective glass beads. All ground surfaces shall be cleaned and dust removed prior to applying paint. Attention is directed to Section 84-1.01, "Traffic Stripes and Pavement Markings" of these Special Provisions.

The Contractor shall provide, install, and maintain temporary reflective pavement markings on the same day as the permanent markings are removed or as directed by the Engineer and maintain these until final markings are in place. Attention is directed to Section 84, "Traffic Stripes and Pavement Markings" of these Special Provisions.

**15-2.02C(3) Payment: Remove Thermoplastic Striping** shall be paid for at the contract price per **linear foot**, which price shall include full compensation for furnishing all labor,

materials, tools and equipment and doing all the work involved in removing thermoplastic striping complete in place as specified.

**15-2.02D Remove 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.

**15-2.02D(1) Payment:** Full compensation for removing raised pavement markers is considered as included in the contract prices paid for various contract items of work and no additional allowance will be made therefor.

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

**15-2.10B Adjust Frames, Covers, Grates, and Manholes:** Existing manhole frames and covers, valve boxes, mainline cleanouts, pull boxes, blow-off boxes and monuments adjusted to grade shall conform to City Standards.

The Contractor shall accurately locate and record the location of existing manholes, valve boxes, mainline cleanouts, pull boxes, blow-off boxes 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.

All facilities within the limits of cold plane shall be lowered prior to cold plane operations. Facilities lowered for cold plane operations shall be raised to the final grade and shall conform to City Standards.

After placement of any permanent hot mix asphalt the Contractor shall mark all overlaid manholes, valve boxes, mainline cleanouts, pull boxes, blow-off boxes and monuments, whether new or existing, with white paint by the end of that working day.

All existing manholes, valve boxes, mainline cleanouts and monuments shall be accessible within 48 hours after they are covered.

Final grade adjustments and installation of concrete collars shall be done on the same working day. Final paving around manholes, valve boxes, mainline cleanouts, pull boxes, blow-off boxes 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 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 shear 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. The top of the completed manhole shall contain at least one 3-inch grade adjustment ring.

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

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

New and existing Monuments adjusted shall conform to City Standards.

**Contractor shall coordinate the lowering of PG&E, SBC, AT&T, SONIC, PAC Bell, Monitoring Wells, and other utility structures with outside agencies** so as not to impact the progression and completion of work.

**15-2.10C Adjust Inlet:** Existing inlets (Type II catch basin) adjusted to grade shall conform to Section 15 of the City Specifications, City STD-402 and as directed by the Engineer.

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

**Adjust Existing Manholes to Grade** shall be paid for at the contract unit price **each**, which price shall include full compensation for furnishing all labor, materials, tools and equipment and doing all the work involved in adjusting manholes to grade, including but

not limited to: required excavation and backfill; additional grade rings *if required*; furnishing location of manholes to be adjusted to grade; removing and delivering silent night frames and covers to the City MSC; and transporting new frames and covers to job site, as specified herein, and no additional allowance will be made therefor.

**Remove/Replace and Reset Existing City Facility Boxes and Lids 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 removing, replacing and resetting existing City facility boxes and lids to grade, as specified herein, and no additional allowance will be made therefor.

**Adjust Inlet (Type II Catch Basin)** 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 inlet grate and top to grade, including but not limited to excavation and backfill, forming and placing concrete, reconstructing the inlet top, and resetting the inlet grate, 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.

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

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

Contractor shall investigate, confirm and/or determine the exact locations of existing utilities, including Traffic Signal, Streetlight and Interconnect conduit and identify any conflict with grinding, milling or excavation operations. The Contractor shall determine elevations and alignments of existing utilities, including Traffic Signal, Streetlight and Interconnect conduit, 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:** Full compensation for utility clearance, is considered as included in the prices paid for various contract items of work and no additional allowance will be made 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.

**15-9 Relocate "The Oaks" Sign:** Contractor shall relocate "The Oaks" sign as shown on the plans and as directed by the Engineer. Contractor shall coordinate with the property owner and the Engineer to determine final location of relocated sign. Contractor to provide shop drawings/details for relocated sign foundations for approval by the Engineer prior to construction.

**15-9.01 Payment: Relocate "The Oaks" Sign** shall be paid for at the **lump sum** contract price, which price shall include full compensation for furnishing all labor, materials, tools and equipment, and doing all the work involved in relocating "The Oaks" sign, including but not limited to, required excavation and backfill, coordination, and disposing debris, as specified herein, and no additional allowance will be made therefor.

## 16 CLEARING AND GRUBBING

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

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

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

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

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

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

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

# 19 EARTHWORK

## **19-1 General**

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

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

### **19-1.01A Summary:**

Excavating for trenching

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

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

**19-1.03B(1) Pavement Repair/Digout:** Pavement Repair/Digout shall consist of excavation and removal of unstable areas in the pavement, as determined by the Engineer, and replacement with asphalt concrete base. The exact locations for pavement repair/digout shall be marked in the field by the Engineer. The depth of the subgrade removal shall be 0.35', after grinding and milling operations are complete. Use of a pavement grinder shall be considered an acceptable method of excavation of areas requiring pavement repair/digout. No additional compensation will be made for pavement repair/digout beyond the limits of the areas marked by the Engineer or for pavement repair/digout of locations other than those marked by the Engineer. Any pavement repair/digout 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 excavation shall be filled with asphalt concrete base in accordance with Section 39-1.01 of these Special Provisions.

**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: Pavement Repair/Digout** shall be paid for at the contract price per **square foot** as measured in the field. Price shall include full compensation for asphalt concrete base, compaction, doing all work involved in pavement repair/digout 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 Pavement Repair/Digout, such increase or decrease shall not be considered

an alteration in excess of the 25 percent of the contract amount of such items under provisions of Section 4-1.05 of the Standard Specifications and no adjustment of the contract price for Pavement Repair/Digout will be made.

No additional compensation will be made for pavement repair/digout beyond the limits of the areas marked by the Engineer or for pavement repair/digout of locations other than those marked by the Engineer. Any excavation for pavement repair/digout 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 Pavement Repair/Digout

**19-2 Roadway Excavation:** Attention is directed to Section 19-2, "Roadway Excavation" of the State Standard Specifications, and as supplemented below.

**19-2.03A General:** The Contractor shall note that there are street trees near areas intended for roadway excavation. The Contractor's operation, including the size of the grinding equipment, shall be such, so as to ensure that existing street trees are not damaged. Where limited clearance under the street trees prevents the use of a grinder, excavation shall be performed by an alternate method as approved by the Engineer. Alternate methods may include jack-hammering and removal of existing pavement and base materials by hand, or by use of smaller grinding equipment.

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

**19-2.03B Surplus Material:** Surplus soil from this project has been approved for disposal at the City's Pond 2 Decommissioning and Grading Project at 35 Stony Point Road Santa Rosa, CA.

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

1. Material must be free of asphalt concrete; asphalt and soil grindings associated with roadway excavation and reconstruction;
2. Soil beneath asphalt that was previously oiled for paving is not allowed;
3. Sewer, water or storm drain pipe of any kind or type are not allowed;
4. Concrete; metal; rock greater than 6" in size; vegetation; and other deleterious materials are not allowed;
5. The quantity of trucks and the volume of soil deposited in Pond 2 from this project will be tracked. Truck drivers will be required to sign a log and be subject to periodic inspections to ensure that only soil from this project is deposited in Pond 2
6. The Contractor shall spread and compact all project soils deposited into Pond 2 to 85% relative compaction and testing will be provided and performed by the City's materials Engineering Laboratory. The cost of compaction testing will be borne by the City.
7. Contractor shall comply with all disposal regulations such as City, County, and/or State permits and licenses, as may be required.

8. Soil disposal shall be limited to Monday through Friday between the hours of 7:00 am and 4:30 pm. Advanced, 48-hour notice is required to the City inspector and Water prior to starting.
9. Pond 2 site access is directly affected by weather conditions. You should anticipate no access during and for some time after rain events, unless wet weather site conditions are met at your expense.
10. The haul route shall be through the City Municipal Service Yard. A 15 MPH speed limit shall be observed at all times with stopping at all crosswalks and stop signs. No trucks shall access the site via any other route.
11. Tracking of material from the disposal location onto any and all paved surfaces near the pond is not allowed. Should tracking become evident sweeping will be required at your cost no later than the end of day. Dust control shall be provided at all times in accordance with Section 10.
12. The Idling limits on In-Use Off-Road Diesel Vehicles in section 2449 (d) (3) in Title 13, article 4.8, chapter 9, California Code of Regulations (CCR) shall be effective and enforceable.

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

**19-2.04 Payment: Roadway Excavation (F)** 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, as shown on the plans as "Remove Existing Pavement Section", 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.

## 20-3 IRRIGATION SYSTEM CONSTRUCTION

**20-3 Scope of Work:** Contractor shall inventory the existing irrigation system within the area of proposed construction disturbance and provide documentation of existing irrigation system conditions to the Engineer prior to construction. Contractor is responsible for restoring the irrigation system to pre-construction conditions, to the satisfaction of the Engineer. Contractor shall submit shop drawings for restored irrigation system to City Engineer for approval.

Furnish all labor, materials, supplies, tools, and transportation; and perform all operations in connection with and reasonably incidental to the complete restoration of the irrigation system to pre-construction operations, to the satisfaction of the Engineer.

### **20-3.02M(3) Materials:**

- A. Main lines (constant pressure) 2 inches and larger shall be polyvinyl chloride (PVC) 1120-160 psi with ring-tite connections; ½ inch to 1½ inch shall be PVC 1120 schedule 40.
  - 1. Join lengths of pipe by means of integrally formed bell end on pipe using rubber ring seal. Use schedule 40 PVC coupling on schedule 40 pipe.
  - 2. At changes in direction of branch mains and at QCV and RCV use appropriate schedule 40 PVC rubber ring seal fittings as approved by the Uniform Plumbing Code.
  - 3. At the location of QCV and RCV, asbestos-cement heavy tapped couplings for PVC pipe will be accepted; tapped couplings as manufactured by Johns-Manville.
- B. Lateral lines (non-pressure) shall be 1120-200 psi PVC plastic pipe with schedule 40 Type 1, Grade 1 PVC solvent weld fittings.
- C. Connections between main lines and RCV's shall be of schedule 40 hot-dipped galvanized steel nipples and fittings. Galvanized steel pipe and fittings shall be wrapped with a 40-mil thickness of self-adhesive polyethylene tape and coated with an epoxy material specifically formulated for such use.
- D. Riser stock shall be as follows:
  - 1. Risers connecting QCV's and sprinklers to PVC fitting shall be schedule 40 hot-dipped galvanized steel nipples and 90 degree ells as shown in construction details.
  - 2. Risers shall in no case be of smaller nominal diameter than the IPS size of joint provided on the head or QCV to be installed.
- E. Quick coupler valves (QCV) shall be Buckner 14LC or approved equal.
- F. Controllers
  - 1. Controllers and valves shall be the same manufacturer.
  - 2. Controller shall be Griswold 2300.
  - 3. Provide and install automatic irrigation controller in approximate location shown on the plans. The exact location will be determined on the site by the Engineer. Provide conduit, wire, and connection to 120 volt switch accessible to controller for ease of maintenance.
- G. Remote control valves (RCV)
  - 1. RCV and controllers shall be by the same manufacturer.
  - 2. RCV shall be Griswold 2000.



- H. Control wire shall be copper with UL-approval for direct burial in ground, size #14-1 AWG-UF. Common ground wire shall have white insulating jacket; control wire shall have jacket of color other than white. Splices shall be made with 3-M #3576 Scotchlok seal packs.
- I. Boxes for remote control valves shall be Brooks 37SP or equal. Rubber valve markers shall be Rainbird #63100.
- J. Sprinkler heads.
  - 1. Sprinklers shall be Thompson 186 and 187 or equal.
  - 2. Sprinklers shall be equipped with rubber caps and flange covers.
- K. Irrigation controller enclosure shall be wooden as detailed on the drawings.
- L. 120-volt service and connections shall be provided by the irrigation contractor. Install in conduit with Brooks 3½ pull boxes as required. Concrete pull boxes shall have locking covers marked "electrical".
- M. Gate valves shall be Kennedy 427 or equal. Locate in Brooks 1RB concrete valve box with concrete lid. Use concrete extensions as required.
- N. Drinking fountains shall be Western, Model 35, Steel vandal resistant with standard green scratch resistant epoxy finish. Heights shall be 30 inches with surface mounting.
- O. Vacuum breaker assembly shall be of the pressure type with gate valves. Check valve test cocks and vent to atmosphere. See plans for details of construction.
- P. Miscellaneous Installation Materials
  - 1. Solvent cement for solvent weld joints shall be of make and type approved by manufacturer(s) of pipe and fittings. Cement shall be maintained at proper consistency throughout use.
  - 2. Lubricant for assembling rubber ring seal joints shall be of make and type approved by manufacturer of pipe.
  - 3. Pipe joint compound shall be non-hardening, non-toxic materials designed specifically for use on threaded connections in water carrying pipe. Performance shall be same as teflon tape or approved equal.
- Q. Miscellaneous Equipment
  - 1. Provide all equipment called for by the plans.
  - 2. Provide to the City, at completion of the irrigation installation, three (3) each of all operating and servicing keys and wrenches required for complete maintenance and operation of all heads and valves. Include all wrenches necessary for complete disassembly of all heads and valves.

**20-5.08 Layout of Work:** The Contractor shall stake out the irrigation system to be restored, using a different color flagging for heads, valves, tie-in point and trench. These areas shall be checked by the Contractor and Engineer before construction is started. Any changes, deletions or additions shall be determined at this check. Trenching shall be started only after layout check by the Contractor and approval by the Engineer.

**20-5.09 Installation:**

- A. Preparation. Schedule and coordinate placement of materials and equipment in a manner to effect earliest completion of work in conformance with construction and progress schedule.
- B. Protect work and materials from damage during construction and storage.
- C. Layout:
  - 1. Layout work as accurately as possible in accordance with diagrammatic plans.

2. Where site conditions do not permit locating piping, valves and heads where shown, notify the Engineer immediately and determine relocation in joint conference.
  3. Run pipe lines and automatic control wiring in common trenches wherever practical.
- D. Install water lines in 1120-Schedule 40 PVC plastic sleeves at street crossings.
- E. Excavation and Trenching
1. Excavation shall be in all cases ample in size to permit the pipes to be laid at the elevations intended and to permit ample space for joining.
  2. Make trenches for pipe lines deep enough to provide minimum cover from finish grade as follows:
    - a. 24-inch minimum cover over main lines to control valves and quick coupling valves.
    - b. 24-inch minimum cover over control wires from controller to valves.
    - c. 16-inch minimum cover over RCV-controlled lines to sprinkler heads.
    - d. 48-inch minimum cover over all lines inside street right of way.
  3. Restore surfaces, existing underground installations, etc., damaged or cut as result of excavations to original conditions in manner approved by Engineer.
  4. Where drainage line interferes with irrigation trenching and pipe work, adjust the trench depth as instructed by the Engineer.
- F. Assembling Pipe Lines
1. All pipe shall be assembled free from dirt and pipe scale. Field cut ends shall be reamed only to full pipe diameter with rough edges and burrs removed.
  2. Rubber ring seal joint:
    - a. Use factory-made male end or prepare field-cut male end to exact specifications of factory-made end. Beveling is to be done with a tool specifically designed for that purpose.
    - b. Carefully clean bell or coupling and insert rubber ring seal without lubricant. Position ring carefully, according to manufacturer's instructions.
    - c. Place a reference mark on each male end at the proper distance from the beveled end as indicated by the manufacturer's instructions. Lubricate male end according to manufacturer's instructions and insert male end to specified depth.
    - d. All ring-tite joints are to be left uncovered until after they have been inspected and the pressure test applied.
    - e. Form thrust blocks in such a manner to prevent any concrete from coming in contact with the pipe. Thrust blocks shall be between solid soil and the fitting.
  3. Solvent weld joint:
    - a. Prepare joint by first making sure the pipe end is square, then deburring the pipe end and cleaning pipe and fitting of dirt, dust and moisture.
    - b. Dry-insert pipe fitting to check for mis-sizing. Pipe should enter fitting 1/3 to 2/3 depth of socket.
    - c. Coat the inside socket surface of the fitting and the external surface of the male end of the pipe with P-70 Primer (manufactured by Weld-On). Then without delay, apply Weld-On 711 cement liberally to the male end of the pipe and also apply 711 cement lightly to the inside of the socket. At this time, apply a second coat of the cement to the pipe end.
    - d. Insert pipe immediately into fitting and turn ¼ turn to distribute cement and remove air bubbles. The pipe must seat to the bottom of the socket fitting.

- Check alignment of the fitting. Pipe and fitting shall be aligned properly without strain to either.
- e. Hold joint still for approximately thirty (30) seconds and then wipe excess cement from the pipe and fitting.
  - f. Cure a minimum of thirty (30) minutes before handling and at least six (6) hours before allowing water in the pipe.
4. Threaded joint:
    - a. Field-threading of plastic pipe or fittings is not permitted. Factory-formed threads only will be permitted.
    - b. Factory-made nipples shall be used wherever possible. Field-cut threads in metallic pipe will be permitted only where absolutely necessary. When field-threading, cut threads accurately on axis with sharp dies.
    - c. All threaded joints shall be made up with pipe joint compound. Apply compound to male threads only.
    - d. Where assembling metallic pipe to metallic fitting or valve, no more than three (3) full threads shall show when joint is made up.
    - e. Where assembling to threaded plastic fitting, take up joint no more than one full turn beyond hand tight.
    - f. Where assembling soft metal (brass or copper) to plastic pipe, use strap type friction wrench only; do not use metal jawed wrench.
  5. Cap or plug openings as pipelines are assembled to prevent entrance of dirt or obstruction. Remove caps or plugs only when necessary to continue assembly.
  6. Where pipes or control wires pass through sleeves, provide removable non-decaying plugs at ends of sleeve to prevent entrance of earth.
- G. Remote control valves:
1. Install where shown and group together where practical.
  2. Locate valves no closer than 24 inches from walk edges, buildings, and walls.
  3. Provide 6 inches of pea gravel in bottom of valve box. No soil shall be in contact with RCV.
  4. Support valve box with four (4) bricks (one at each corner). Maintain a minimum of 2 inches clearance between PVC pipe and valve box.
  5. Valve boxes to be located 4 inches below finished grade with a 3-inch clearance between the remote control valve stem in the fully open position and the underside of the valve box lid.
  6. Center rubber valve marker over flow control stem.
- H. Automatic control wiring:
1. Run lines along mains wherever practical. Tie wires in bundles at ten (10) foot intervals. Run wires along the underside of mains and allow slack for expansion and contraction of wire.
  2. Loop a minimum of three (3) feet of extra wire in each valve box; both control wire and ground wire.
  3. Connections shall be made by crimping bare wires with brass connectors and sealing with epoxy resin sealer packs.
  4. No splices shall be permitted between controllers and remote control valves.
  5. Where control lines pass under paving, they shall pass through schedule 40 electrical PVC conduit.
  6. Where control lines do not parallel mains, wires shall be protected by being strapped at ten (10) foot intervals to the underside of 2- by 6-inch redwood boards.
- I. Automatic controller:

1. Locate controllers in general locations shown with exact placement to be determined by the Engineer.
  2. Connect control lines to controller in sequential arrangement according to assigned identification number of valve. Control lines shall be labeled at controller with permanent non-fading labels indicating identification number of valve controlled.
- J. Testing: Perform test as specified. Remake any faulty joints with all new materials. Use of cement or caulking to seal leaks shall not be permitted.
- K. Backfilling:
1. Backfill only after pipe has been inspected and approved.
  2. Main line and lateral line backfill to be a 4-inch minimum sand bed on all sides of the pipe. The remaining backfill material shall be native soil excavated from the trenches.
  3. Place backfill materials in 6-inch layers and compact by jetting or tamping to a relative compaction of 90 percent.
  4. Dress off areas to finish grades and remove excess soil, rocks or debris remaining after backfill is completed.
  5. In existing turf areas, after trenches have been compacted and settled, replace all sod within a 3-foot diameter of all sprinkler heads. Dress off all other trenches and seed with perennial rye grass.
  6. If settlement occurs along trenches, and adjustments in pipes, valves and sprinkler heads, soil, sod, or paving are necessary to bring the system, soil, sod, or paving to the proper level of the permanent grade, the Contractor, as part of the work under this Contract, shall make all adjustments without extra cost to the City.
- L. Sprinkler heads and quick coupler valves.
1. Thoroughly flush lines before installing heads and QCV's.
  2. Locate heads and QCV's as shown in the Drawings and details.
  3. Place heads and QCV's in lawn areas at 2 inches above grade at time of installation. The lowering of the sprinkler heads to finished grade will be done by the Contractor after the turf has become well established.
  4. Adjust sprinkler heads for proper distribution and trim.
- M. Drinking fountains: Construct as shown on the Drawings and connect to new domestic water line.

**20-5.10 Tests:** The Contractor shall:

1. Notify the Engineer at least three (3) days in advance of testing.
2. Perform testing at their own expense.
3. Center load piping with small amount of backfill to prevent arching or slipping under pressure. No fitting shall be covered.
4. Apply the following tests after welded plastic pipe joints have cured at least 24 hours.
  - a. Test live (constant pressure) and QCV lines hydrostatically at 125 psi minimum. Lines will be approved if test pressure is maintained for six (6) hours. The lines shall be restored to the original test pressure and the amount of water required to do so will be measured. Approved tables of allowable loss (Johns-Manville Installation Guide for ring-tite PVC pipe, pages 25 and 26) will be consulted, and the lines will be approved or not approved as such results may indicate. The Contractor shall make tests and repairs as necessary until test conditions are met.

- b. Test RCV-controller lines with water at line pressure and visually inspect for leaks. Retest after correcting defects.

**20-5.11 Inspection:** The Contractor shall be subject to inspections at any and all times by authorized representatives of the City.

**20-5.12 Guarantee:** It shall be the responsibility of the irrigation Contractor to fill and repair all depressions and replace all necessary lawn and planting-loss due to the settlement of irrigation trenches for one year following completion and acceptance of the job.

The Contractor shall also guarantee all materials, equipment, and workmanship furnished by him to be free of all defects of workmanship and materials, and shall agree to replace at his expense, at any time within one year after installation is accepted, any and all defective parts that may be found.

**20-5.13 Record Plans:**

- A. The Contractor shall maintain in good order in the field office one complete set of black line prints of all sprinkler plans which form a part of this Contract, showing all water lines, sprinklers, valves, controllers and stub-outs. In the event that any work is not installed as indicated on the plans, such work shall be corrected and dimensioned accurately from the building walls on these record plans.
- B. All underground stub-outs for future connections shall be located and dimensioned accurately from building walls on all record plans.
- C. Upon completion of the work, obtain reproducible prints from the Engineering Department and neatly correct the prints to show the as-built conditions and return to the Engineering Department.

**20-5.14 Payment: Restore Irrigation System** shall be paid for at the contract **lump sum** price, which prices shall include full compensation for furnishing all labor, materials, tools and equipment, and doing all work involved in restoring irrigation system, including inventory of existing system, staking and layout, installation, testing, and record plans, and conforming to the requirements of the Special Provisions and no additional allowance will be made therefor.

## 26 AGGREGATE BASE

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

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

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

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

**26-1.04 Payment:** **Class 2 Aggregate Base** shall be considered as included in the prices paid for various contract items of work and no additional payment will be made therefor.

# 37 HIGH VOLUME TRAFFIC SLURRY SEAL

## 37-3 HIGH VOLUME TRAFFIC SLURRY SEAL

### 37-3.01 General

**37-3.01A Summary:** High volume traffic slurry shall conform to the applicable provisions of Section 37-3 of the Standard Specifications and these Special Provisions. The mix shall be a “quick traffic system”, meaning that it will be able to accept traffic within 1 hour after placement in +75 degrees Fahrenheit temperature and 50 percent or less humidity.

The performance of the operator shall be reviewed by the Engineer on a daily basis and if performance is found to be unsatisfactory, the Contractor will be required to replace the operator to the satisfaction of the Engineer within two days of direction.

Each crew, at a minimum, shall be composed of a non-working foreman, a coordinator at the project site at all times, a competent mixing operator, a competent driver, traffic control personnel and sufficient personnel to load trucks.

No material shall be placed on wet pavement without the Engineer's consent.

The limits of work shall be marked by the Engineer in the field and as shown on the project plans.

The Contractor shall provide barricades and other traffic control devices as necessary to eliminate traffic on areas of fresh material that might sustain damage from such traffic. Any tracking of emulsion on public or private property will be the responsibility of the Contractor to correct and shall be removed by the method acceptable to the property owners and the Engineer. Sandblasting or soda blasting may be required.

The cost of the repair, cleanup and/or damage caused by vehicles tracking through the material shall be borne solely by the Contractor.

**37-3.01D Mix Design:** The Contractor shall submit for approval a complete mix design prepared and certified by a Laboratory. Compatibility of the aggregate, polymer-modified emulsion, mineral filler, and other additives shall be verified by the mix design. The mix design shall be made with the same aggregate gradation that the Contractor will provide on the project.

### 37-3.02 Materials

#### 37-3.02B(1) General

Water shall be potable, free of harmful soluble salts or reactive chemicals and any other contaminants.

Additives may be added to the emulsion mix or any of the component materials to provide the control of the quick-traffic properties. They must be included as part of the mix design and be compatible with the other components of the mix.

**37-3.02B(2) Aggregate:** The mixture shall be placed at a rate of not less than 16 pounds or more than 18 pounds of aggregate per square yard of pavement surface.

Aggregate for Slurry Seal must be Type II, and have the quality characteristic as specified below:

| Sieve Size | Percentage Passing |
|------------|--------------------|
| 3/8        | 100                |
| No. 4      | 94-100             |
| No. 8      | 65-90              |
| No. 16     | 40-70              |
| No. 30     | 25-50              |
| No. 200    | 5-15               |

|                      |                                      |
|----------------------|--------------------------------------|
| Sand Equivalent      | 65 minimum                           |
| Durability Index     | 65 minimum                           |
| Methylene Blue Value | 10 maximum per AASHTO T330-07 (2001) |

The aggregate shall be a manufactured crushed stone such as granite, slag, limestone, chat, or other high-quality aggregate, or combination thereof. To assure the material is totally crushed, 100 percent of the parent aggregate will be larger than the largest stone in the gradation to be used.

When tested in accordance with AASHTO T27 (ASTM C136) and AASHTO T11 (ASTM C117), the target (mix design) aggregate gradation (including the mineral filler) shall be within the Type II.

The job mix (target) gradation shall be within the gradation band for the desired type. After the target gradation has been submitted, then the percent passing each sieve shall remain within the gradation band. The percent passing shall not go from the high end to the low end of the range for any two consecutive screens.

The aggregate shall be inspected, accepted or rejected at the job location stockpile or when loading into the support units for delivery to the lay-down machine. The stockpile shall be accepted or rejected based on five gradation tests according to ASTM D75 or CTM 202. Sampling of the stockpile material shall be performed in accordance with CTM 125. If the average of the five tests is within the gradation tolerances, then the materials will be accepted. If the tests show the material to be out of specification, the Contractor will be given the choice to either remove the material or blend other aggregate with the stockpiled material to bring it into specification.

**37-3.02B(3) Emulsion:** The emulsified asphalt shall be a quick-traffic polymer modified asphalt emulsion conforming to the requirements specified in AASHTO M208 or ASTM D2397 for CQS-1h. Polymer content shall consist of a minimum of 2-3/4 percent of latex



by weight to create a latex modified emulsion (LMCQS1h). The cement mixing test shall be waived for this emulsion.

The Contractor must submit a certification from the polymer supplier 5 days prior to the product being used.

The five (5) day settlement test may be waived, provided job stored emulsion is used within thirty-six (36) hours from the time of the shipment, or the stored material has had additional emulsion blended into it prior to use.

Each load of emulsified asphalt shall be accompanied with a Certificate of Analysis/Compliance to assure that it is the same as that used in the mix design.

**37-3.02B(4) Mineral Filler:** Mineral filler, if required, shall be any recognized brand of non-air entrained Portland cement or hydrated lime that is free from lumps. It may be accepted upon visual inspection. The type and amount of mineral filler needed shall be determined by a laboratory mix design and will be considered as part of the aggregate gradation. An increase or decrease of less than one percent (1%) may be permitted when the slurry seal is being placed, if it is found to be necessary for better consistency or set times.

### **37-3.03 Construction:**

#### **37-3.03A General:**

Slurry seal shall be of such a mix design and placed in such a manner that in no case shall streets remain closed to traffic for more than 1.5 hours after application, and the mix will not ravel, shove or displace due to traffic.

The Contractor shall submit to the Engineer a slurry seal schedule in addition to the construction schedule in accordance with Section 5-1.05 "Order of Work". The schedule shall clearly show the sequence of slurry sealing specifically detailing each individual lane and shall include the dates, start times, and end times of each lane. The schedule shall include a corresponding map that illustrates all of the items mentioned above. Daily schedules shall not exceed 250,000 square feet of production per day.

The schedule shall be received and accepted by the Engineer a minimum of three weeks prior to slurry sealing.

The Contractor shall adhere diligently to the approved schedule in the production of work.

Any changes in the Contractor's planned sequence or timing of work shall be submitted to the Engineer immediately in writing and accompanied by an updated schedule for the Engineer's approval. Any residents or businesses affected by the approved changes to the Contractor's schedule shall be re-notified a minimum of 72 hours prior to proceeding.

Prior to the slurry sealing operation, the Contractor shall remove all existing thermoplastic striping, legends, and markings in accordance with Section 15-2.02C and all raised pavement markers in accordance with Section 15-2.02D.

The Contractor shall protect all utility access covers in accordance with Section 15-1.02A.

The Contractor shall protect all drainage inlets in accordance with Section 13.

Prior to the application of the slurry seal, pavement surfaces shall be cleaned of all oil, debris, grease spots, and vegetation.

To areas that have been patched with new asphalt within the last 60 days, the Contractor shall apply a tack coat after thoroughly cleaning and before applying the slurry seal. Tack coat shall be SS-1h or SS-1 emulsified asphalt and shall be uniformly applied at an approximate rate of 0.10 to 0.15 gal/sy.

The Contractor shall remove any and all vegetation within the slurry seal limits by an acceptable and approved means, (i.e. manual and/or mechanical), remove dirt and debris from cracks, joints (including asphalt/gutter lip joint) and voids in the road surface within the limits of the project and apply an approved herbicide to the cracks/ joints, voids in the road surface to prevent the re-growth of vegetation through the road surface. The removal of vegetation and application of herbicide shall be performed to the satisfaction of the Engineer.

The Contractor shall comply with all Federal, State and local laws and regulations governing the use of chemicals for control of vegetation. The Contractor shall permit treatment for weed control to be done by qualified, trained personnel under the supervision of a State Licensed Qualified Pesticide Applicator, using recognized and approved methods and materials, in compliance with all Federal, State and local laws and regulations.

Vegetation removed beyond the slurry seal limits will be required to be replaced at the Contractor's expense if requested by the Engineer.

The herbicide shall be applied by the Contractor after vegetation removal and prior to crack sealing. All herbicides shall be submitted by the Contractor for the approval of the Engineer, and shall be certified for use in the State of California for the specific use intended. The application of the herbicide shall be performed in accordance with all applicable regulations. The herbicide shall be applied only on the roadway surface to be sealed and NOT in roadside ditches or drainage facilities. Any and all fines or clean-up costs for unlawful misuse or discarding of herbicides shall be the sole responsibility of the Contractor. Mixtures and spread rates for the herbicides shall be determined by the manufacturer's specifications. Wash down of the equipment or discarding of herbicides shall not enter the catch basins or drainage facilities.

The Contractor shall make his/her own arrangements for temporary stockpile work areas for stockpiling and batching. Prior to beginning construction, the Contractor shall provide the Engineer with a copy of the Temporary Use Permit with the landowner(s) for use of the stockpile area in accordance with Section 5-1.20B(4)(a).

If so desired, the Contractor may utilize Center Drive for staging operations during slurry. All staging areas shall have BMPs in place in accordance with Section 13 and left in a neat orderly appearance as stated above upon completion. Contractor is directed to

section 12 Traffic Control, 12-3.01 General. Traffic Control Plans or proposals for use of Center Drive as a staging area for slurry seal operations shall be submitted for review at least two weeks prior to implementation.

The stockpile areas shall be thoroughly cleaned, removing all excess material and any material contaminated by spilled material, and left with a neat, orderly appearance upon completion of the sealing operations. Paved areas shall be cleaned and repaired to the satisfaction of the Engineer and property owner and striping replaced at the Contractor's expense. Prior to final payment, The Contractor shall provide the Engineer with a letter from the Landowner(s) stating that said areas have been left in a condition satisfactory to the Landowner(s).

The Contractor shall supply the Engineer with licensed weigh master's certificates of the weights of all aggregate and emulsion delivered to the job during the course of each day. The Contractor shall present Weigh Master's certificates for the amounts of such aggregate and emulsion remaining unused at the completion of the contract at no cost to the City. Certified weight tags from a local scale with current CTM 109 certification will be required to establish weight of remaining aggregate and emulsion. The certificates shall be presented to the Engineer on the same day the aggregate and emulsions are delivered.

The Contractor shall schedule and coordinate the delivery of aggregate to the stockpiles such that:

1. Deliveries originate at the plant and arrive at the stockpile site within normal work hours on the same calendar day.
2. Delivery site and project name are explicitly stated on each delivery ticket.
3. Successive deliveries on the same calendar day show the cumulative total for that day.
4. Copies of all delivery tickets are delivered to the Engineer before the end of the working day, any delivery tickets not so delivered may be rejected by the City and no payment made therefor. Any deviation from this process must have the prior approval of the Engineer.

Sanding shall be minimized and only used when absolutely necessary. When necessary at driveways and intersections to accommodate vehicular and pedestrian traffic while the slurry seal cures, sand at intersections shall be swept within 2 hours of placement and within 4 hours at other locations. Sand shall not be applied until slurry seal can withstand pedestrian traffic. Any sand deposited on driveway aprons or sidewalks shall be removed by the end of that day.

The Contractor shall install temporary raised pavement markers in accordance with Section 15-2.02D until the roadway surface is ready for permanent raised pavement traffic delineation.

**37-3.03C Mixing and Spreading Equipment:**

- a. Inspection: The Contractor shall provide the equipment proposed for the project for inspection and demonstration at the site or other location acceptable to the Engineer at least two working days prior to beginning work. Any equipment requiring repair or replacement as determined by the Engineer shall not be used on the work until the Engineer accepts its condition.
- b. Maintenance: All equipment must be maintained and in good state of repair, including no oil leaks that could damage existing asphalt, concrete or landscape areas. All equipment safety guards shall be in place, hydraulic hoses and fittings shall be in good condition.

In the event of equipment failure that the Contractor determines the repair will require more than 24 hours, the Contractor shall (1) notify the Engineer immediately and (2) have a functional replacement piece of equipment on site and ready for work the morning after the determination was made.

Prior to a change of emulsion type or supplier, the Contractor shall notify the Engineer and obtain approval. The Contractor shall thoroughly clean all emulsion tanks and mixing units to prevent any chemical reaction between any differing emulsions.

- c. Trucks: The Contractor shall furnish and continuously operate a minimum of 3 aggregate trucks for each scheduled workday. The number of trucks used each day shall be as shown on the approved schedule unless otherwise approved in advance by the Engineer. Failure by the Contractor to adhere to this requirement will cause the City to sustain additional inspection costs that will be deducted from any compensation due the Contractor. The Engineer shall determine these costs.

Prior to the beginning of operations, the Contractor shall furnish, at no cost to the City, calibration certificates for each individual slurry truck and for the same type of material specified in this section from a certified weighmaster. The certificate shall be dated no more than 6 months prior to the date of start of construction.

All trucks which the Contractor proposes to use, that exceed the legal weight limit, are required to have overweight permits from the City and jurisdictions within which they will be operated.

Flexible drags made of burlap or similar attached to the rear of the spreader box shall not be used and does not constitute a secondary strike-off.

- d. Support Equipment: Support equipment such as front end loaders shall be in good working order and sized to adequately perform the work without interruption.

**37-3.03D Placing**: A minimum of two (2) commercial street sweeping vehicles shall be provided and approved in advance by the Engineer. Sweeping vehicles shall be vacuum assisted power brooms.

Only place slurry seal if both the pavement and air temperature are at least 50 degrees F and rising. Do not place any slurry seal if rain is imminent or the air temperature is expected to be below 36 degrees F within 24 hours after placement.

Immediately prior to the slurry sealing operations, the Contractor shall sweep the entire surface with commercial street sweeping vehicles as required. Debris shall become the property of the Contractor and disposed of at an approved refuse site. Transferring of the debris from the pickup vehicle or temporary stockpiling of debris will not be allowed. The use of a Contractor furnished debris box located at the staging/storage location for the disposal of sweeping debris is acceptable.

At all times during the street sweeping operation, the Contractor shall apply adequate water to control dust. Dust control water shall not create runoff or flow into the gutter.

Streets shall be kept free of "raveling". It will be the Contractor's responsibility to drive completed streets on a daily basis and evaluate whether or not streets require sweeping. The project inspector will also review completed streets and notify the Contractor of streets requiring sweeping.

Slurry seal surfaces shall receive daily maintenance sweeping for a period of 10 days following the application to remove all accumulations of loose material. Maintenance sweeping shall be done by commercial street sweeping vehicles. Where commercial street sweeping vehicles cannot remove loose material, hand sweeping or equal shall be performed.

The slurry seal mixture shall be uniformly spread on the existing road surface within the rate specified without spotting, re-handling, or otherwise shifting the mixture.

The slurry seal mixture shall be of the proper consistency at all times, so as to provide the application rate required by the surface condition. The average single application rate shall be in accordance with the following table:

| Aggregate Type | Location                             | Suggested Application Rate<br>Dry Pounds Per Yard |
|----------------|--------------------------------------|---|
| Type II        | All Street Lanes To Be Slurry Sealed | 16-18 lb/yd <sup>2</sup>                          |

Slurry seal applied around curb ramps shall be squeegeed flush with the gutter lip at the curb ramp.

All incidental work such as surfacing of driveway aprons and returns shall be done concurrently with the surfacing of the street proper. The slurry seal shall be applied from lip of gutter to lip of gutter. If no gutter exists, the slurry seal shall be from edge of pavement to edge of pavement. The edges of the limits of the slurry sealing application on both sides of the street shall be maintained in a neat and uniform line.

The mixture shall be uniform and homogeneous after placing on the surfacing and shall not show separation of the emulsion and aggregate after setting. The completed surface shall be of uniform texture and free from ruts, humps, depressions, or irregularities.

The slurry seal shall be rolled after it has cured sufficiently so as not to pick up on the vehicle tires, but not more than 2 hours after placement. The rollers shall be 5-ton self-propelled pneumatic rollers with tire pressure of 50 p.s.i. and water spray system. There shall be a minimum of two operating rollers on the same newly constructed surface, tandem rolling, during the compaction rolling process. The slurry seal coat shall be given a minimum of three complete passes with the roller or until the material is compacted with a uniform surface. The entire surface of the slurry seal shall be rolled in this manner including bike and parking lanes.

**37-3.04 Payment:**

**Preparation For High Volume Traffic Slurry Seal** shall be paid for at the contract price per **square yard** of street on which roadway preparation was performed and shall include compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in the removal of vegetation, dirt/debris, sweeping, and application of herbicide complete in place, as specified in these Special Provisions and as directed by the Engineer and no additional compensation will be allowed therefor.

**High Volume Traffic Slurry Seal (Type III)** will be paid for at the contract unit price per **square yard**, which price shall include full compensation for furnishing all labor, materials, tools, equipment, and doing all the work involved in constructing the slurry seal complete in place including clean-up sweeping for a period of 10 days and protecting the seal from traffic damage until the mixture has cured sufficiently so that material will not adhere to the tires of vehicles, rolling, and constructing test strip, as specified herein, and no additional allowance will be made therefor.

**37-5 CRACK SEAL**

**37-5.01 General:** This work shall consist of cleaning and filling the cracks with rubber asphalt joint seal as specified in the Standard Specifications and these Special Provisions and as directed by the Engineer. All cracks ¼” or larger on the surfaces to receive slurry shall be filled.

**37-5.02 Materials:**

The crack sealant shall be a mixture of paving asphalt and ground rubber and shall conform to ASTM D 5078, Type II. The crack seal product shall conform to the following requirements:

| <u>Test</u>                                   | <u>Specification Limit</u> |
|---|----------------------------|
| Cone Penetration 77°F(25°C)(ASTM D5329)       | 35-55                      |
| Resilience (ASTM D5329)                       | 40% min.                   |
| Softening Point (ASTM D36)                    | 200°F(93°C) min.           |
| Ductility 77°F(25°C)(ASTM D5113)              | 30 cm min.                 |
| Flexibility ( ASTM D3111 Modified)            | Pass at 20°F (-7°C)        |
| Flow 140°F(60°C)(ASTM D5329)                  | 3 mm max.                  |
| Brookfield Viscosity 400°F(204°C)(ASTM D2669) | 100 Poise max.             |

|                                    |              |
|------------------------------------|--------------|
| Asphalt Compatibility (ASTM D5329) | Pass         |
| Bitumen Content (ASTM D4)          | 60% min.     |
| Tensile Adhesion (ASTM D5329)      | 500% min.    |
| Safe Heating Temperature           | 400°F(204°C) |
| Recommended Pour Temperature       | 380°F(193°C) |

**37-5.03 Construction:**

During all construction operations, the Contractor shall protect cracks cleaned for sealing from intrusions of solid foreign materials into the groove or into the sealant.

All cracks indicating weed growth are to be sprayed and cleaned in accordance with Section 37-3.03A of these special provisions.

Immediately prior to applying the sealant, the cracks shall be cleaned with high pressure air jets to remove all residue and foreign material. Any weed growth shall be physically removed. Water jets will not be allowed. Crack surfaces shall be dry at the time the sealant is applied. Crack seal materials shall be placed in conformance with the manufacturer's recommendations. Crack seal materials shall not be placed when the surface temperature is below 50 degrees Fahrenheit.

The finished crack seal shall be bonded to the crack such that there is no separation or opening between the sealant and the crack edge and there shall be no cracks, separation or other opening in the sealant.

The Contractor shall remove crack seal material that is not placed within the conformance of these provisions, clean cracks as specified herein and then reseal the cracks at his expense.

Before opening to traffic, apply the manufacturer's recommended detackifying agent to tacky crack treatment material on the traveled way.

**37-5.04 Payment:** Crack Seal will be paid for at the contract price per **linear foot**, which price shall include full compensation for furnishing all labor, materials, tools, equipment, and doing all the work involved in placing the crack seal complete in place as specified herein and no additional allowance will be made therefor.

## 39 HOT MIX ASPHALT

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

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

**39-1.01B Definitions:** For these specifications, HMA and asphalt concrete shall be the same.

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.

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. 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.

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.

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. 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 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

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, 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, and 2) where it is significantly tracked (removed) from the surface.

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 retro reflectorized signs and delineators, as required for night time use in accordance with the Standard Specifications and Section 12 of these Special Provisions to warn the public of the existing conditions.

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

Edge Grind shall be in accordance with City STD-209, the modified detail on the Plans or as specified herein. Longitudinal edge grinds shall be 6' in width.

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

**39-1.02 Materials**

**39-1.02B Tack Coat:** Tack coat must comply with the specifications for asphaltic emulsion or asphalts. Tack coat shall be diluted SS1 or SS1h.

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

**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

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.

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

**Aggregate Gradation**

**(Percentage Passing)  
HMA Types A**

3/4-inch HMA Type A

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

1/2-inch Coarse HMA Type A

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

1/2-inch Medium HMA Type A

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

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

| Quality characteristic  | Test method         | HMA Type A      |
|---|---------------------|-----------------|
| Percent of crushed particles<br>Coarse aggregate (% min.)<br>One fractured face                       | California Test 205 | 90              |
| Two fractured faces   |                     | 75              |
| Fine aggregate (% min)<br>(Passing no. 4 sieve<br>and retained on no. 8 sieve.)<br>One fractured face |                     | 70              |
| Los Angeles Rattler (% max.)<br>Loss at 100 rev.  | California Test 211 | 10              |
| Loss at 500 rev.  |                     | 45              |
| Sand Equivalent (min.) <sup>a</sup>   | California Test 217 | 50 <sup>b</sup> |

|  |                     |    |
|--|---------------------|----|
| Fine aggregate angularity<br>(% min.)                    | California Test 234 | 45 |
| Flat and elongated particles<br>(% 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 weigh hopper 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)**

**39-1.08 Production**

**39-1.08A General:** During production, with approval of the Engineer, you may adjust hot or cold feed proportion controls for virgin aggregate and RAP.

**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.

**39-1.09C Tack Coat:**

Tack coat shall be a non-tracking hot asphalt product applied to all existing asphalt concrete surfaces to receive an asphalt concrete overlay. Tack coat shall be applied hot at elevated temperature, with a recommended minimum application temperature of 325 degrees Fahrenheit. The non-tracking hot asphalt product shall meet or exceed the following requirements:

| <b><u>Test on Original Asphalt Specifications</u></b> | <b><u>Test Method</u></b> |          |
|---|---------------------------|----------|
| Viscosity, @ 329°F, Pa.S                              | AASHTO T316               | 3.0 max  |
| Viscosity, @ 347°F, Pa.S                              | AASHTO T316               | 0.5 max  |
| Penetration @ 25°C, 100g, 5-sec, dmm                  | AASHTO T49                | 6 - 20   |
| Solubility in TCE, % min                              | AASHTO T44                | 97.5 min |
| Flash Point, C.O.C., °F                               | AASHTO T48                | 446 min  |
| Softening Point, °F                                   | AASHTO T53                | 160 min  |
| Tire Rubber Content*, wt. %                           |                           | 1 - 5    |

\*Tire rubber used shall be 100% soluble in the hot asphalt.

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

**39-1.09D Geosynthetic Pavement Interlayer:** Geosynthetic Pavement Interlayer shall be Pavement Grid consisting of knitted or woven fiberglass reinforcement with modified polymer coating and pressure sensitive adhesive backing that meets or exceeds the physical properties below:

| <b>Specification</b>   | <b>Requirement</b> |
|--|--------------------|
| Weight, ounces per square yard, minimum, ASTMD5261-92          | 12.0               |
| Tensile strength, pounds per inch (width & length), ASTM D6637 | 560                |
| Elongation at break, percent maximum, ASTM D6637               | <3%                |
| Melting point, degrees Fahrenheit, ASTM D276                   | >450° F            |

As part of the approval process, the manufacturer's representative shall demonstrate a minimum of 3 successful installations within a 250-mile radius of the job site.

Pavement grid shall be placed at locations shown on the plans, at the approach and departure of bus stops, and as directed by the engineer. Transverse and longitudinal joint overlap shall be in accordance with the manufacturer's recommendations. The grid shall be laid by mechanical means or by hand with sufficient tension to eliminate wrinkles and as recommended by the manufacturer's recommendation. Following laydown, the grid adhesion shall be field tested to a minimum 15 pounds per square yard of adhesive force. A manufacturer's representative shall be present during placement of the grid and until all paving operations related to the grid are completed.

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

A minimum 0.08 gal / square yard **non-tracking** asphalt tack coat (see 39-1.09C) shall be applied prior to placement of the grid. Turning of the paving machine or other vehicles should be gradual and shall be kept to a minimum to avoid damage to the membrane. Should equipment tires tend to stick to the material during pavement operations, small quantities of asphalt concrete shall be broadcast ahead of the paving operation to prevent sticking.

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

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

The grid shall be paved with the specified thickness of asphalt concrete as per the detail sheets the same day the grid is installed.

Construction and emergency traffic may run on the grid after being placed. However, it must be ensured that damage is not caused by this traffic. Any damaged areas or areas where adhesion is not apparent on the grid must be fixed.

**39-1.09E MEASUREMENT:** Quantities of pavement reinforcement grid to be paid for shall be computed on the basis of the exact amount of road surface area covered in the field.

**39-1.09F PAYMENT:** **Pavement Grid** shall be paid for at the contract price per **square yard**, which price shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals of doing all work involved in placing pavement grid including, sweeping, surface preparation, furnishing and placing pavement grid, supplying and applying trackless asphalt tack coat, cutting around utility covers, removing raised air pockets, as shown on the plans, as specified in these Special Provision and as directed by the Engineer and no additional allowance will be made therefor.

**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.

**39-1.13 Hot Mix Asphalt On Bridge Decks:** The aggregate grading of the asphalt concrete shall be as directed by the Engineer.

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

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

### **39-1.15 Minor Hot Mix Asphalt: (Not Applicable)**

**39-3.02 Acceptance Criteria**

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

| Aggregate Micro-Deval (ASTM D6928-10) <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 an aggregate Micro-Deval loss greater than 21.0% shall be removed and replaced at the Contractor's expense. In addition, no single source of asphalt concrete aggregate shall have a Micro-Deval loss greater than 21.0%.

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

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

A single TSR test shall not represent more than 750 tons of asphalt concrete. Asphalt concrete not meeting the above requirements shall be removed and replaced at the Contractor's expense.

**39-3.04 Transporting, Spreading, and Compacting:** Numbers of coverages.

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

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

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

**0.17' Cold Plane/HMA Overlay** shall be paid for at the contract price per **square foot**, which price shall include full compensation for furnishing all labor, materials, tools, and equipment and doing all work involved in grinding, including but not limited to drop-offs



and tapers, tack coat, and installing HMA, as specified herein, and no additional allowance will be made therefor.

**0.40' Cold Plane/HMA Overlay** shall be paid for at the contract price per **square foot**, which price shall include full compensation for furnishing all labor, materials, tools, and equipment and doing all work involved in grinding, including but not limited to drop-offs and tapers, tack coat, and installing HMA, as specified herein, and no additional allowance will be made therefor.

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

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

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

## 51 CONCRETE STRUCTURES

**51-1.01A Summary:** Concrete Structures shall be constructed in accordance with the applicable sections of the City Standards, Section 51-1 of the Standard Specifications, the details shown on the plans, and these Special Provisions.

Reinforcement for concrete structures must comply with Section 52.

**51-1.03E Drill and Bond Dowels:**

For drill and bond dowels, drill the holes without damaging the adjacent concrete. Holes for bonded dowels must be 1/2 inch larger than the nominal dowel diameter.

If reinforcement is encountered during drilling before the specified depth is attained, notify the Engineer. Unless coring through the reinforcement is authorized, drill a new hole adjacent to the rejected hole to the depth shown.

Coat the surface of any dowel coated with zinc or cadmium with a colored lacquer. Allow the lacquer to dry thoroughly before installing the dowel.

Each drilled hole must be clean and dry when placing the bonding material and dowel. The bonding material and dowel must completely fill the drilled hole. The surface temperature must be at least 40 degrees F when magnesium phosphate concrete is placed.

Thoroughly dry finishing tools cleaned with water before working magnesium phosphate concrete.

Leave dowels undisturbed for 3 hours or until the dowels can be supported by the concrete.

Cure modified high-alumina-based concrete and portland-cement-based concrete using the curing compound method. Do not cure magnesium phosphate concrete.

Replace dowels that fail to bond or are damaged.

**51-1.04 Payment:** Full compensation for drill and bond dowels, is considered as included in the prices paid for various contract items of work and no additional allowance will be made therefor.

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

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

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

Placing of concrete under water will not be permitted.

**51-7.01D Payment:** Full compensation for minor structures, is considered as included in the prices paid for various contract items of work and no additional allowance will be made therefor.

## 52 REINFORCEMENT

**52-1.01A Summary:** This work shall consist of fabricating and placing reinforcement, 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 52 of the State Standard Specifications and these Special Provisions.

**52-1.04 Payment:** Full compensation for bar reinforcement, is considered as included in the prices paid for various contract items of work and no additional allowance will be made therefor.

## SECTION 56 SIGNS

**56-2.01A(1) Summary:** This work shall consist of installation, removal, and relocation of roadside signs and posts, as shown on the plans, where directed by the Engineer, and shall conform to the City Specifications.

Signs and hardware which are not to be mounted on traffic signal poles or mastarms shall be provided and installed by the Contractor at the locations shown on the plans per Part II of the City Traffic Standards.

Existing signs which are not on traffic signal poles or mastarms shall be relocated as shown on the plans by the Contractor.

New signs and brackets to be mounted on traffic signal poles and mastarms shall be provided and installed by the City.

Existing signs on traffic signal poles and mastarms will be relocated by the City.

All signs being removed shall be salvaged and returned to the City of Santa Rosa Sign Shop at 55 Stony Point Road.

All poles being removed shall become the property of the Contractor.

Contractor is also directed to Section 15-9 Relocate "The Oaks" Sign.

**56-2.02D Payment: Roadside Sign (Existing Post) and Roadside Sign (Metal Post)** shall be paid for at the contract unit price **each**, which price shall include full compensation for furnishing all labor, materials, tools and equipment and doing all work involved in providing and installing signs, and sign mounting hardware, including extensions and no additional allowance will be made therefor.

**Relocate Sign and Post** shall be paid for at the contract unit price **each**, which price shall include full compensation for furnishing all labor, materials, tools and equipment and doing all work involved in relocating sign and post, including excavating, coring sidewalk, backfill, concrete, and replacing landscaping as specified herein, and no additional allowance will be made therefor.

## 73 CONCRETE CURBS AND SIDEWALKS

**73-1.01A Summary:** This work shall consist of curbs, gutters, sidewalks, driveways, island paving, curb ramps, and gutter depressions 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 to 2 pounds per cubic yard of concrete, or L. M. Scofield color #SG860 applied in a dosage to produce an equivalent color, or an approved equal.

**73-1.02B Detectable Warning Surface:** A detectable warning surface must be on the State's Authorized Material List for detectable warning surfaces and must match yellow color no. 33538 of FED-STD-595, or as approved by the Engineer.

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

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

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

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

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

Curb and gutter and median curb shall be cured in accordance with the requirements of Section 90-1.03B of the Standard Specifications except that the Contractor may substitute other than a pigmented sealer upon the approval in writing of such substituted sealer by the Engineer.

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

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

detectable warning surface shall be paid for at the contract price per square foot of curb ramp.

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

**73-3.03 Sidewalk, Gutter Depression, Island Paving (Median Curb), Curb Ramp, and Driveway Construction:** Sidewalk, gutter depression, median curb, curb ramp, and driveway shall be constructed in accordance with the details and at the location shown on the plans and in conformance to the requirements of Section 73-1.07 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.

Sidewalks, gutter depression, median curb, curb ramps, and driveways shall be cured in accordance with the requirements of Section 90-1.03B 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 Sidewalks, gutter depression, median curb, curb ramps, and driveways by sandblasting prior to acceptance by the Engineer. Cement mortar will not be an acceptable substitute for sandblasting. Vandalism to uncured concrete surface shall be removed. If it cannot be removed from the surface, then the vandalized concrete shall be removed and replaced to the nearest scoremark.

Curb Ramp shall be constructed in accordance with the details and at the locations shown on the plans per City STD.-232. Curb ramps shall be measured and paid for as Minor Concrete (Sidewalk).

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

Cobbles embedded in concrete shall be set in four inches of class A, six sack, pea gravel concrete. Cobbles shall be four to six inches in size, with 1/3 exposed above the top of curb, per Caltrans Specifications. Base for concrete shall be Class II, 3/4 inch aggregate base.

**73-3.04 Payment: Detectable Warning Surface** shall be paid for at the contract price **square foot**, which price shall include full compensation for furnishing and applying curing materials, furnishing all labor, materials, tools and equipment and doing all the work involved in installing detectable warning surface complete in place as specified.

**Minor Concrete (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.

**Minor Concrete (Type A Curb) (4", 6", 8", 12" Curb)** 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 (Type A), including aggregate base, complete in place as specified, including furnishing and placing expansion joint filler, constructing weakened plane joints, excavating, and backfilling.

**Minor Concrete (Type A Curb) (15" Curb)** 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 (Type A) (15" Curb), include reinforcement and aggregate base, complete in place as specified, including furnishing and placing expansion joint filler, constructing weakened plane joints, excavating, and backfilling.

**Minor Concrete (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 and curb ramps complete in place as specified, including furnishing and placing expansion joint filler, constructing weakened plane joints, drill and bond dowels, reinforcement, excavating, and backfilling.

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

**Minor Concrete (Cobbles Embedded in Concrete)** 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 cobbles embedded in concrete complete in place as specified, including furnishing and placing expansion joint filler, aggregate base, cobbles, constructing weakened plane joints, excavating, and backfilling.

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



## 84 TRAFFIC STRIPES AND PAVEMENT MARKINGS

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

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

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

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

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

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

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

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

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

All thermoplastic, sprayed and extruded, shall be white.

Full compensation for temporary markings shall be considered as included in the price paid for various contract items of work involved and no additional compensation will be allowed therefor.

Extruded Thermoplastic material shall be applied at a minimum thickness of 0.090 inch.

Sprayable Thermoplastic material shall be applied at a minimum thickness of 0.060 inch.

Median Island Treatment shall be per City standard 721, except the island nose shall be painted yellow (note 1).

**84-2.03B Extruded Thermoplastic: 12 Inch, and 24 inch Thermoplastic Line, 8 Inch Thermoplastic Line, Thermoplastic Legend, Thermoplastic Arrow, Thermoplastic Bike Lane Marking, Thermoplastic Bicycle Detector Marking, and Thermoplastic Yield Limit Line** shall be extruded thermoplastic. Extruded thermoplastic material shall be PTH-02ALKYD.

**84-2.03C Sprayable Thermoplastic: 6 Inch Thermoplastic Line and 4 Inch Thermoplastic Line** shall be, sprayed white thermoplastic with enhanced wet-night visibility. Sprayed thermoplastic material shall be PTH-02SPRAY. Placement of the sprayable thermoplastic shall meet the minimum days per manufacture to avoid tracking.

At the Engineer's discretion, within 3-7 days of applying a thermoplastic traffic stripe or pavement marking with enhanced wet-night visibility, the Contractor shall test the retroreflectivity using a reflectometer in the presence of the Engineer under ASTM E1710. For continuous lines, reflectance measurements must be made at approximately 20 feet intervals. For skip lines, measurements must be taken at two random locations on each skip. The Contractor shall provide all equipment necessary to conduct field tests.

The quantity of thermoplastic traffic stripes (Enhanced Wet-Night Visibility) to be paid for will be determined by measuring the length of traffic stripes applied. No deductions will be made for gaps in traffic striping. A 4 inch traffic stripe is measured as one traffic stripe. A 6 inch traffic stripe is measured as one traffic stripe. An 8 inch traffic stripe is measured as one traffic stripe.

**84-1.04 Payment: Thermoplastic Pavement Marking (White)** will be paid for at the contract price per **square foot** which price shall include furnishing all thermoplastic pavement marking material, glass beads, and furnishing all equipment, tools, and labor, and doing all the work involved as herein specified, including eradication of existing traffic stripes and pavement markings and replacement of damaged stripes and markings, and no additional allowance will be made therefor.

**Thermoplastic Traffic Stripe (Detail 10, 23, 33, 37B, 38, 38A, 39, 39A, 40)** will be paid for at the contract price per **lineal foot** which price shall include furnishing all thermoplastic pavement marking material, glass beads, pavement markers, and furnishing all equipment, tools, and labor, and doing all the work involved as herein specified, including 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.

## 85 PAVEMENT MARKERS

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

**85-1.02 Materials:** All raised pavement markers (RPMs) shall conform to the most current State Specifications.

**85-1.02B Nonreflective Pavement Markers:** All non-reflective pavement markers shall be ceramic.

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

**85-1.03 Construction:** Existing raised pavement markers to remain, which are damaged by the Contractor, shall be replaced as determined by the Engineer, at the Contractor's expense. This includes areas outside the immediate project limits. The exact locations and limits of raised pavement markers will be determined in the field by the Engineer.

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

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

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

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

**85-1.04 Payment:** Full compensation for pavement markers, except Reflective Hydrant Markers, retroreflective and non-reflective, 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.

**Reflective Hydrant Markers** shall be paid for at the contract unit price **each**, which price shall include full compensation for furnishing all labor, materials, tools and equipment, and doing all work involved in placing raised pavement markers, complete in place, including adhesives, removing existing pavement markers, and no additional allowance will be made therefor.

## 86 ELECTRICAL SYSTEMS

### **86-1 General**

**86-1.01 Description:** The Contractor shall furnish and install or modify traffic signal system(s) and street lighting system(s) at the location(s) shown on the plans in conformance with the applicable provisions of Section 86, "Electrical Systems", of the Standard Specifications, Standard Plans, the City Traffic Standards, these special provisions, and as directed by the Engineer.

**86-1.07 Scheduling of Work:** Scheduling of work shall conform to Section 86-1.07 of the Standard Specifications except that no traffic signal system turn-on shall be scheduled for Monday, Friday, or the day before or after a legal State holiday.

### **86-2 Materials and Installation**

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

All concrete to be removed shall be disposed of by the Contractor away from the site of the work. Burying of broken concrete within the limits of the project will not be allowed.

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

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

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

All pull boxes within the limits of curb ramp and sidewalk replacement, as identified on the plans, shall be adjusted to grade or replaced as determined by the Engineer. The Contractor is responsible for providing and installing new replacement pull boxes for the pull boxes damaged by his activities. New replacement pull boxes for pull boxes damaged prior to construction will be provided by the City to the Contractor for installation. A replaced pull box shall become the Contractor's property for proper disposal and a new pull box shall be installed by the Contractor in accordance with City Standard 730.

Any installation or modification of conduits and/or wiring shall be performed by a licensed electrical contractor retained by the general contractor.

**86-2.03 Foundations:** The Contractor shall construct foundations for traffic signal standards per Caltrans Standard Specifications.

The Contractor shall construct foundations for street lights at the locations shown on the plans per City STD.-620A and the applicable provisions of Section 86-2.03, "Foundations", of the Standard Specifications and these special provisions.

The street light bolt circle shall be an 11-inch diameter pattern when measured from center to center of the bolts.

Minor Portland cement concrete shall be produced from commercial quality aggregates and cement and shall contain not less than six sacks of cement per cubic yard and with a minimum 28 day compressive strength of 3000 psi.

#### **86-2.04 STANDARDS, POLES, STEEL PEDESTALS, AND POSTS**

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

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

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

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

Existing pull boxes identified to be adjusted to grade on the plans shall be cleaned out, all existing grout removed, and the bottoms re-grouted with a drain hole. If an adjusted pull box is determined unsatisfactory by the Engineer, the pull box shall be replaced with new and installed to meet current City Standards.

#### **86-2.08 Conductors and Cables**

**86-2.08A General:** All conductors for traffic signal or street lighting systems shall conform to Section 86 of the Standard Specifications, Part IV-G of the City Traffic Standards, as shown on the plans, or as specified herein.

Interconnect cable shall consist of 25-pair twisted, shielded #19 A.W.G. solid copper wire and in accordance with IMSA 40-2 specifications. 12-pair twisted cable may be used on end runs as determine by the Engineer. Cable shall be shielded with corrugated copper tape, have polyethylene insulation, and be color coded or numbered by pairs. The color coding or numbering by pairs shall match and be consistent with terminal point numbering throughout the project. The interconnect cable jacket shall be black polyethylene. Cables shall be installed with no splices. Cables shall be pulled by hand and the use of winches or other power actuated pulling equipment will not be permitted. Six feet of slack shall be left in each pullbox.

**86-2.09 Wiring:** Wiring shall conform to the Standard Specifications and PART IV-G of the City Traffic Standards.

Exception: Part IV-G of the City Traffic Standards, paragraph 3. Pedestrian push button commons shall not be spliced.

**86-2.09B Installation:** In some cases, there is potential for less than minimum clearance in elevation between existing conduits, electrical wires and pull box lids of pull

boxes that have been adjusted to grade when new ramps are constructed. In these cases, the Contractor will be required to excavate down to the conduit sweep entering the box, install new conduits and re-pull wires to achieve the required clearance.

Any planned loss of normal signal function or indications shall be coordinated with the Engineer 72 hours prior to the planned outage.

Final Inspection of all pull box modifications/improvements or electrical modifications/improvements shall be conducted by the City Public Works Electrical Department.

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

**86-2.14C Functional Testing:** The functional test for each traffic signal system and lighting system shall consist of not less than 48 hours of continuous, satisfactory operation. If unsatisfactory performance of the system develops, the conditions shall be corrected and the test shall be repeated until the 48 hours of continuous, satisfactory operation is obtained.

#### **86-4 Traffic Signals and Fittings**

**86-4.01 Vehicle Signal Faces:** Red signal faces shall be 12-inch LEDs furnished and installed by the Contractor. Circular modules shall be GE Part No. DR6-RTFB-VLA-032 or approved equal. Arrow modules shall be GE Part No. DR6-RTAAN-VLA or approved equal.

Green signal faces shall be 12-inch LEDs furnished and installed by the Contractor. Circular modules shall be GE Part No. DR6-GCFB-VLA-032 or approved equal. Arrow modules shall be GE Part No. DR6-GCAAN-VLA or approved equal.

Yellow signal faces shall be 12-inch LEDs furnished and installed by the Contractor. Circular modules shall be GE Part No. DR6-YTFB-LVA-032 or approved equal. Arrow modules shall be GE Part No. DR6-YTAAAN-VLA or approved equal.

**86-4.01A Signal Sections:** Each signal-section housing shall be either die-cast or permanent mold-cast aluminum conforming to ANSI Standard D-10.1 and shall conform to the requirements of the Standard Specifications. Structural plastic shall not be accepted.

**86-4.01C Visors:** Visors shall be full circle type, flat black.

**86-4.03 Pedestrian Signal Faces:** Pedestrian signal heads shall be countdown LED in accordance with Part IV-E.1 of the City of Santa Rosa Traffic Standards. GE PS7-CFF1-VLA are known to meet this specification.

**86-4.04 Signal Mounting Assemblies:** Terminal compartments shall be cast bronze.

**86-4.03H Audible Pedestrian Signals:** The audible pedestrian signals shall be Polara Navigator Accessible Pedestrian Signals, IN2 2-wire unit, with a rack mounted CCU. This equipment shall be installed at the locations shown on the plans and in accordance with the manufacturers' recommendations.

[http://www.polara.com/docs/IN2-OPERATION\\_r121023.pdf](http://www.polara.com/docs/IN2-OPERATION_r121023.pdf)

The minimum volumes will be adjusted by the Contractor as directed by the Engineer.

The body housing and button shall be powder coated the color green.

The face plate for the pedestrian push button shall be a R10-3e (MUTCD 2014 Edition) with the appropriate (left or right) arrow representing the direction of the pedestrian crossing that the push button serves. Size of the sign shall be 5" x 7 ¾

### **86-5 Detectors**

**86-5.01A Inductive Loop Detectors:** Inductive loop detectors shall conform to Part IV-H of the City Traffic Standards.

Detector handholes shall be installed per State STD.-ES-5D.

Advance detector loops shall be Type B per Caltrans Std Plans.

Bicycle lane detector loops shall be Type D per Caltrans Std Plans.

Any existing traffic signal detectors shown on the plans to remain that are damaged shall be replaced at the Contractor's expense within five working days or as directed by the Engineer.

**86-8.10 Payment: Traffic Signal Modification (Airway Dr)** shall be paid for at the contract **lump sum** price, which price shall include full compensation for furnishing all labor, materials, tools and equipment to construct the traffic signals complete in place, including but not limited to all excavation and backfill, foundations, standards, steel pedestals and posts, conduit, conductors, wiring, traffic signals and fittings, electrical components, pedestrian signal faces, pedestrian push buttons, audible pedestrian signals and testing, as shown on the plans, as specified, and no additional allowance will be made therefor.

Compensation for removing and replacing existing improvements including curb and gutter and sidewalk in areas not shown as being replaced on the project plans shall be considered as included in the contract prices paid for the appropriate contract item, and no additional allowance will be made therefor.

Compensation for removal of existing traffic signal equipment, including delivery to the Municipal Services Center at 55 Stony Point Road and including abandoning existing foundations shall be considered as included in the contract price paid for traffic signal installation and no additional allowance will be made therefor.

**Install Advance Detector Loops** to be installed as shown on the plans shall be paid for at the contract unit price **each**, which price shall include full compensation for furnishing

all labor, material, tools, equipment, and doing all work involved, including sawcutting the pavement, furnishing and installing cable and epoxy sealant, connecting to the traffic signal controller and testing, and no additional allowance will be made therefor.

**Install Detector Handhole** shall be paid for at the contract unit price **each**, which price shall include full compensation for furnishing all labor, material, tools, equipment, and doing all work involved including excavation and backfilling and connecting to the detector lead-in cable, and no additional allowance will be made therefor.

**Install Bicycle Lane Detector Loops** to be installed as shown on the plans shall be paid for at the contract unit price **each**, which price shall include full compensation for furnishing all labor, material, tools, equipment, and doing all work involved, including sawcutting the pavement, furnishing and installing cable and epoxy sealant, connecting to the traffic signal controller and testing, and no additional allowance will be made therefor.



## 111 TREE SURGERY (SIDEWALK MAINTENANCE)

**111-1.01 General:** Tree work may be necessary, requiring work ranging from minor root pruning and top thinning to complete removal. Each tree will be evaluated and the necessary work determined by the Engineer.

The successful bidder or the successful bidder's subcontractor must be able to demonstrate knowledge and abilities to perform the required work by possessing a valid California D49 Tree Service Contractor's License and possess the tools and equipment necessary to perform the required work.

Tree pruning and trimming work will be necessary prior to the placement of slurry seal. Tree pruning and trimming shall be consistent with American National Standards Institute (ANSI) A300-1995, "Tree, Shrub and Other Woody Plant Maintenance Standard Practices" and "Tree-pruning Guidelines" published by the International Society of Arboriculture (ISBN 1-881956-07-5).

All debris from tree pruning and trimming shall become the property of the contractor and shall be disposed of by him at a site away from the work area.

The extent of pruning and trimming required shall be sufficient to allow for truck mounted mixer spreaders access during the placement of slurry. Truck mounted mixer spreaders will typically require unobstructed access from the lip of gutter or edge of pavement on the street to a height of 12 feet. In no case shall hand working of the slurry mixture be allowed in order to negate the need for tree trimming except as stated below.

No tree branches in excess of 6 inches in diameter are to be trimmed unless prior approval is granted by the Engineer. Tree branches in excess of 6 inches in diameter shall be marked in the field by the Contractor for approval by the Engineer.

Contractors shall provide all safety devices, traffic control, and be totally responsible for the safe execution of all required tree work.

Attention is directed to Section 7-1.03A "Maintaining Traffic" of these Special Provisions.

All debris from tree and stump removal, root pruning and top thinning shall become the property of the contractor and shall be disposed of by him at a site away from the work area.

The actual quantity of tree and stump removals, root pruning with top thinning, and root work only to be paid for will be determined in the field by the Engineer. The bid quantity (one each) Alternate A, Items 11 - 26 is provided to establish a unit price only. No adjustment shall be made in this contract unit price for increases in the quantities or for deletion of the entire item.

Attention is directed to Section 5-1.36A "Property and Facility Preservation" of these Special Provisions.

**111-1.02 Method of Measurement:** For the purposes of this contract, all trees requiring removal, root pruning, top thinning, stump removal or root work only will be measured as set forth below.

Trees requiring work under the terms of this contract shall be measured at a point 1.0 foot above top of curb to determine trunk diameter. Where tree limbs or projections are located in such a manner as to interfere with the measurement of the tree circumference, then, at the discretion of the Engineer, the measurement of the tree circumference will be taken at a lower point to be determined by the Engineer. Trunk diameter shall be determined by the following formula:

$$D = \frac{C}{3.1416} \text{ where } D = \text{trunk diameter at 1.0 foot above top of curb or as directed.}$$

$C = \text{trunk circumference at 1.0 foot above top of curb or as directed.}$

Trees will be grouped as follows:

|     |   |          |                    |
|-----|---|----------|--------------------|
| 2"  | - | 6"       | Diameter = Group A |
| 7"  | - | 12"      | Diameter = Group B |
| 13" | - | 24"      | Diameter = Group C |
|     |   | Over 24" | Diameter = Group D |

Any fractional measurement will be rounded down to the next lower group.

**111-1.03 Tree and Stump Removal:** The workmanship shall be performed to the best general standards in the industry. All precautions shall be taken to ensure the protection of existing adjacent public or private property.

The trees and stumps to be removed will be designated in the field by the Engineer.

Roots in the sidewalk area shall be removed to clear a full 6-inch depth below top of sidewalk. Stumps and roots in the planter area shall be removed to a full 16-inch depth below the top of curb or finish grade, whichever is applicable.

In areas of curb and gutter removal, tree roots shall be removed to a full 12-inch depth below the lip of gutter.

The stump and root holes shall be backfilled and compacted with approved fill material.

**111-1.04 Root Pruning with Top Thinning or Pollarding:** The workmanship shall be performed to the best general standards in the industry. Materials shall be of first quality. All precautions shall be taken to ensure the protection of existing adjacent public or private property.

All root pruning shall be accomplished by use of sharp tools appropriate for the size of root to be cut. Each cut shall be clean with no torn bark or splintered wood remaining on the tree. All cuts shall be sealed with an approved wound dressing.

In all cases where root pruning is done, symmetrical top pruning shall be done so as to maintain a balance between root system and above ground branching. Above ground cuts do not require sealing.

**111-1.05 Root Work Only:** The workmanship shall be performed to the best general standards in the industry. All precautions shall be taken to ensure the protection of existing adjacent public or private property.

Where no top thinning is required, or where prior tree removal has been done, the contractor shall prune roots, or remove roots per applicable provisions of Sections 100-11.02 and 100-11.03 of these Special Provisions.

**111-1.06 Payment:** Full compensation for tree pruning, trimming, and root work, including repair of any damage to existing adjacent public or private property caused by the tree or root trimming operation, and disposal of tree trimming debris 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.

# 112 TREE PROTECTION

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

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

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

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

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

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

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

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

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

## 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.

## 132 WATER DISTRIBUTION SYSTEM

**132-1.01 Description:** Water Distribution System and related appurtenances shall conform to the requirements as specified in the City of Santa Rosa Water Distribution System Construction Standard Specifications Section 132, the Project Plans, and modifications herein.

The contractor shall provide documentation that the check valve(s) have been certified after relocating the existing backflow device. Certification must be completed by a certified tester off the "City of Santa Rosa Approved List of Backflow Testers" (list enclosed). All necessary paperwork shall be completed by the Tester and a copy given to the property owner and the Water Quality Section of the City of Santa Rosa Water Department within 72 hours of relocation.

**132-1.11 Excavation, Backfill, and Resurfacing:** 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.

**132-1.12 Laying and Handling Pipe Materials:** If the Contractor installs a highpoint in the water system not shown on the Project Plans the Engineer may require the installation of a new combination air and vacuum valve, per City Standards, at no additional cost to the City.

132-1.30 Payment: **Relocate Backflow Preventer** shall be paid for at the contract price **each** for the specified types and sizes, which price shall include full compensation for furnishing all labor, materials, tools, equipment, incidentals, and doing all work involved in backflow device installation, including but not limited to: excavation and disposal of excavated material; dewatering and disposal of trench groundwater; contamination awareness; removing and replacing concrete as *required*; removal and disposal of old backflow and tubing; backflow device includes testing and certifying; fittings as *required*; enclosure if *required*; insulated cover if *required*; placing and compacting all required bedding and backfill; coordination, notification, preparatory work, testing, all paperwork and chlorination; restoration/reconstruction of landscaping/irrigation as *needed*; as specified herein, and no additional allowance will be made therefor.

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

|  |  |   |
|--|--|---|
| <p><b>AAA (JV) PLUMBING &amp; BACKFLOW*/JORGE VALENCIA</b><br/>2911 MONTECITO AVE.<br/>SANTA ROSA, CA 95404<br/>PHONE: (707) 799-2692<br/>LICENSE #: 955698</p>              | <p><b>ACCO ENGINEERED SYSTEMS</b><br/>1111 ALADDIN AVE.<br/>SAN LEANDRO, CA 94577<br/>PHONE: (510) 346-4300<br/>LICENSE #: 120696</p>                        | <p><b>ALL PRO BACKFLOW</b><br/>P.O. BOX 2193<br/>FOLSOM, CA 95763<br/>PHONE: (916) 276-7162<br/>FAX: (916) 435-4167<br/>LICENSE #: 934557</p>                         |
| <p><b>A.S.T.I SERVICES/M.DESCHLER</b><br/>102 COUCH ST.<br/>VALLEJO, CA 94590<br/>PHONE: (707) 645-1782<br/>FAX: (707) 645-1807<br/>LICENSE #: 742693</p>                    | <p><b>BANNER ENTERPRISES</b><br/>P.O. BOX 1457<br/>SANTA ROSA, CA 95402<br/>PHONE: (707) 523-1244<br/>LICENSE #: 376828</p>                                  | <p><b>BARTLEY PUMP INC.</b><br/>4000 S. MOORLAND AVE.<br/>SANTA ROSA, CA 95407<br/>PHONE: (707) 584-9191<br/>FAX: (707) 584-9198<br/>LICENSE #: 200068</p>            |
| <p><b>BRODERICK GENERAL ENG.</b><br/>21750 8<sup>TH</sup> ST. EAST, SUITE B<br/>SONOMA, CA 95476<br/>PHONE: (707) 996-7809<br/>FAX: (707) 996-2028<br/>LICENSE #: 750809</p> | <p><b>C.V. PLUMBING/CHRIS VINE</b><br/>P.O. BOX 219<br/>CLOVERDALE, CA 95425<br/>PHONE: (707) 894-8580<br/>FAX: (707) 894-9642<br/>LICENSE #: 843366</p>     | <p><b>CAGWIN &amp; DORWAN</b><br/>P.O. BOX 1600<br/>NOVATO, CA 94948-1600<br/>PHONE: (800) 891-7710<br/>FAX: (415) 897-7864<br/>LICENSE #: 202399</p>                 |
| <p><b>CARRIER CORPORATION</b><br/>600 MCCORMICK ST., SUITE B<br/>SAN LEANDRO, CA 94577<br/>PHONE: (510) 347-2000<br/>FAX: (510) 347-2099<br/>LICENSE #: 499642</p>           | <p><b>CHECKRITE BACKFLOW SERV.</b><br/>3618 CHANATE RD.<br/>SANTA ROSA, CA 95404<br/>PHONE: (707) 575-5296<br/>FAX: (707) 578-6595<br/>LICENSE #: 836022</p> | <p><b>DEVOTO PLUMBING*</b><br/>1345 TRIPLE OAK WAY<br/>FULTON, CA 95439<br/>PHONE: (707) 545-0734<br/>LICENSE #: 824608</p>   |
| <p><b>ECONOMY PLUMBING</b><br/>P.M.B. #287, 1275 4<sup>TH</sup> ST.<br/>SANTA ROSA, CA 95404<br/>PHONE: (707) 545-4455<br/>FAX: (707) 543-8111<br/>LICENSE #: 748220</p>     | <p><b>GROUND HOG CONSTRUCTION</b><br/>5353 HESSEL RD.<br/>SEBASTOPOL, CA 95472<br/>PHONE: (707) 529-2085<br/>FAX: (707) 823-9389<br/>LICENSE #: 723766</p>   | <p><b>LEDUC &amp; DEXTER PLUMBING</b><br/>2833 DOWD DR., SUITE A<br/>SANTA ROSA, CA 95407<br/>PHONE: (707) 575-1500<br/>FAX: (707) 527-0281<br/>LICENSE #: 651401</p> |
| <p><b>NORTHBAY BACKFLOW</b><br/>P.O. BOX 2765<br/>PETALUMA, CA 94953<br/>PHONE: (707) 484-3949<br/>LICENSE #: 878332</p>   | <p><b>NORTHWOOD BACKFLOW</b><br/>911 LAKEVILLE ST., #369<br/>PETALUMA, CA 94952<br/>PHONE: (800) 750-4547<br/>LICENSE #: 749187</p>                          | <p><b>ONGARO AND SONS PLUMBING</b><br/>2995 DUTTON AVE.<br/>SANTA ROSA, CA 95407<br/>PHONE: (707) 579-3511<br/>LICENSE #: 215233</p>                                  |
| <p><b>RH &amp; SONS WATER SERVICES</b><br/>225 GOLDEN RIDGE AVE.<br/>SEBASTOPOL, CA 95472<br/>PHONE: (800) 675-3569<br/>LICENSE #: 698774</p>                                | <p><b>ROBERTS MECHANICAL &amp; ELECTRICAL, INC.</b><br/>4649 DOWDELL AVE.<br/>SANTA ROSA, CA 95407<br/>PHONE: (707) 584-5880<br/>LICENSE #: 556014</p>       | <p><b>ROBERTSON'S BACKFLOW</b><br/>6229 SPECKLED RD.<br/>POLLOCK PINES, CA 95726<br/>PHONE: (530) 306-1056<br/>FAX: (530) 303-1497<br/>LICENSE #: 972547</p>          |
| <p><b>ROTO ROOTER/JERRY BRISTOL</b><br/>1244 CENTRAL AVE.<br/>SANTA ROSA, CA 95401<br/>PHONE: (707) 578-5885<br/>FAX: (707) 578-1190<br/>LICENSE #: 803644</p>               | <p><b>SCOTT CRAMER PLUMBING</b><br/>P.O. BOX 750084<br/>PETALUMA, CA 94975<br/>PHONE: (707) 778-8789<br/>FAX: (707) 658-1043<br/>LICENSE #: 889152</p>       | <p><b>STEAD BACKFLOW PREVENTION</b><br/>2715 W. KETTLEMAN LN., #203-321<br/>LODI, CA 95242<br/>PHONE: (209) 327-3900<br/>LICENSE #: 848490</p>                        |

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

*\*Spanish speaking*

(Updated List Only: 9/25/2018)

## A4 MATERIALS

Attention is directed to Section 6 of the Standard Specifications.

All materials required to complete the work under the attached contract shall be furnished by the Contractor.

Upon approval of the contract, the Contractor shall notify the Engineer of the proposed source of supply of all materials to be used in the work and shall furnish samples of such materials as may be required by the Engineer for testing.

**Beads:** Beads used for reflectorized lines will conform to the following:

- A. Beads shall be colorless and free from milkiness.
- B. 85 percent of the beads shall be .015 inch to .037 inch in diameter.
- C. Beads shall be kept in a dry storage to prevent moisture absorption.
- D. Beads shall be applied uniformly at the rate of six pounds of beads per gallon of paint.
- E. Beads shall be uniformly heated to not less than 80 degrees Fahrenheit when applied.

**Application:** Paint and beads shall be applied at the following rates and in conformance with the following requirements:

- A. All stripes, except solid single berm lines, shall be the width designated, plus or minus 1/8-inch, unless otherwise directed by the Engineer.
- B. Broken single stripes shall have a pattern of seven feet; 17 feet; seven feet; in which 7-foot sections are painted and the 17-foot sections are unpainted.
- C. Solid single berm lines shall be 4 inches in width, unless otherwise required by the Engineer.
- D. The rate of application of paint and beads:
  - 1. Broken single stripes; five to eight gallons per mile.
  - 2. Solid single stripes; 16 to 17 gallons per mile.
  - 3. Solid single berm lines; seven to eight gallons per mile.
  - 4. Six pounds of beads per gallon of paint.
  - 5. The Engineer reserves the right to request the highest limits where conditions so warrant.
- E. All lines shall be clean and sharp as to dimensions. Ragged ends of segments, fogginess along the sides, or objectionable dribbling along the unpainted portions of the stripe shall not be permitted.
- F. The finished product shall have an opaque, well-painted appearance with no black or other discoloration showing through.
- G. Any smears shall be eradicated by sandblasting or grinding to the satisfaction of the Engineer.
- H. The Contractor shall take all reasonable precautions to protect the paint during drying time and may be required to eradicate all objectionable tracking.
- I. No work shall be done when fog restricts visibility to less than one mile or when the pavement is appreciably damp.



**Spotting and Alignment:** Existing lines shall be followed in such a manner as to present a uniform, pleasing appearance, and misalignment or disregard to previous painting will not be permitted. All preliminary spotting will be done by the City.

Abrupt breaks in alignment between broken segments will not be permitted.

The Engineer shall be the sole judge on the accuracy and acceptability of the alignment of the work.

**Inspection:** The Engineer shall inspect completed lines as conditions may require and may inform the Contractor of any faulty methods or unsatisfactory results.

BID FORMS

**CITY OF SANTA ROSA**

**STATE OF CALIFORNIA**

BICYCLE AND PEDESTRIAN GAP CLOSURES - PINER RD AND DUTTON AVE

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  
BICYCLE AND PEDESTRIAN GAP CLOSURES - PINER RD AND DUTTON AVE**

| Item No. | Description  | Quantity | Units | Unit Price | Total Price |
|----------|--|----------|-------|------------|-------------|
| 1        | SB1 FUNDING SIGN   | 2        | EA    | \$ _____   | \$ _____    |
| 2        | TRAFFIC CONTROL  | 1        | LS    | \$ _____   | \$ _____    |
| 3        | WATER POLLUTION CONTROL  | 1        | LS    | \$ _____   | \$ _____    |
| 4        | REMOVE CONCRETE  | 5,850    | SF    | \$ _____   | \$ _____    |
| 5        | REMOVE THERMOPLASTIC STRIPING  | 900      | LF    | \$ _____   | \$ _____    |
| 6        | ADJUST EXISTING VALVE BOXES, MAINLINE CLEANOUTS, PULL BOXES, BLOW-OFF BOXES AND MONUMENTS TO GRADE | 9        | EA    | \$ _____   | \$ _____    |
| 7        | ADJUST EXISTING MANHOLES TO GRADE  | 11       | EA    | \$ _____   | \$ _____    |
| 8        | REMOVE/REPLACE AND RESET EXISTING CITY FACILITY BOXES AND LIDS TO GRADE                            | 16       | EA    | \$ _____   | \$ _____    |
| 9        | ADJUST INLET (TYPE II CATCH BASIN)   | 3        | EA    | \$ _____   | \$ _____    |
| 10       | RELOCATE "THE OAKS" SIGN   | 1        | LS    | \$ _____   | \$ _____    |
| 11       | CLEARING AND GRUBBING  | 1        | LS    | \$ _____   | \$ _____    |
| 12       | PAVEMENT REPAIR/DIGOUT   | 2,940    | SF    | \$ _____   | \$ _____    |
| 13       | ROADWAY EXCAVATION (F)   | 40       | CY    | \$ _____   | \$ _____    |
| 14       | RESTORE IRRIGATION SYSTEM  | 1        | LS    | \$ _____   | \$ _____    |
| 15       | PREPARATION FOR HIGH VOLUME TRAFFIC SLURRY SEAL  | 22,700   | SY    | \$ _____   | \$ _____    |
| 16       | HIGH VOLUME TRAFFIC SLURRY SEAL (TYPE III)   | 22,700   | SY    | \$ _____   | \$ _____    |
| 17       | CRACK SEAL   | 31,200   | LF    | \$ _____   | \$ _____    |
| 18       | PAVEMENT GRID  | 3,990    | SY    | \$ _____   | \$ _____    |
| 19       | HOT MIX ASPHALT (TYPE A)   | 64       | TON   | \$ _____   | \$ _____    |
| 20       | 0.17' COLD PLANE/HMA OVERLAY   | 5,050    | SF    | \$ _____   | \$ _____    |
| 21       | 0.40' COLD PLANE/HMA OVERLAY   | 53,730   | SF    | \$ _____   | \$ _____    |
| 22       | ROADSIDE SIGN (EXISTING POST)  | 13       | EA    | \$ _____   | \$ _____    |
| 23       | ROADSIDE SIGN (METAL POST)   | 3        | EA    | \$ _____   | \$ _____    |

**CITY OF SANTA ROSA  
UNIT PRICE SCHEDULE  
BICYCLE AND PEDESTRIAN GAP CLOSURES - PINER RD AND DUTTON AVE**

| Item No. | Description                                   | Quantity | Units | Unit Price | Total Price |
|----------|---|----------|-------|------------|-------------|
| 24       | RELOCATE SIGN AND POST                        | 1        | EA    | \$ _____   | \$ _____    |
| 25       | DETECTABLE WARNING SURFACE                    | 270      | SF    | \$ _____   | \$ _____    |
| 26       | MINOR CONCRETE (CURB AND GUTTER)              | 395      | LF    | \$ _____   | \$ _____    |
| 27       | MINOR CONCRETE (TYPE A CURB) (4" CURB)        | 110      | LF    | \$ _____   | \$ _____    |
| 28       | MINOR CONCRETE (TYPE A CURB) (6" CURB)        | 350      | LF    | \$ _____   | \$ _____    |
| 29       | MINOR CONCRETE (TYPE A CURB) (8" CURB)        | 10       | LF    | \$ _____   | \$ _____    |
| 30       | MINOR CONCRETE (TYPE A CURB) (12" CURB)       | 65       | LF    | \$ _____   | \$ _____    |
| 31       | MINOR CONCRETE (TYPE A CURB) (15" CURB)       | 160      | LF    | \$ _____   | \$ _____    |
| 32       | MINOR CONCRETE (SIDEWALK)                     | 5,900    | SF    | \$ _____   | \$ _____    |
| 33       | MINOR CONCRETE (DRIVEWAY)                     | 1,095    | SF    | \$ _____   | \$ _____    |
| 34       | MINOR CONCRETE (COBBLES EMBEDDED IN CONCRETE) | 360      | SF    | \$ _____   | \$ _____    |
| 35       | RECONSTRUCT VALLEY GUTTER                     | 255      | SF    | \$ _____   | \$ _____    |
| 36       | THERMOPLASTIC PAVEMENT MARKING (WHITE)        | 1,700    | SF    | \$ _____   | \$ _____    |
| 37       | THERMOPLASTIC TRAFFIC STRIPE (DETAIL 10)      | 6,965    | LF    | \$ _____   | \$ _____    |
| 38       | THERMOPLASTIC TRAFFIC STRIPE (DETAIL 23)      | 680      | LF    | \$ _____   | \$ _____    |
| 39       | THERMOPLASTIC TRAFFIC STRIPE (DETAIL 33)      | 2,975    | LF    | \$ _____   | \$ _____    |
| 40       | THERMOPLASTIC TRAFFIC STRIPE (DETAIL 37B)     | 120      | LF    | \$ _____   | \$ _____    |
| 41       | THERMOPLASTIC TRAFFIC STRIPE (DETAIL 38)      | 275      | LF    | \$ _____   | \$ _____    |
| 42       | THERMOPLASTIC TRAFFIC STRIPE (DETAIL 38A)     | 145      | LF    | \$ _____   | \$ _____    |
| 43       | THERMOPLASTIC TRAFFIC STRIPE (DETAIL 39)      | 6,680    | LF    | \$ _____   | \$ _____    |
| 44       | THERMOPLASTIC TRAFFIC STRIPE (DETAIL 39A)     | 700      | LF    | \$ _____   | \$ _____    |
| 45       | THERMOPLASTIC TRAFFIC STRIPE (DETAIL 40)      | 85       | LF    | \$ _____   | \$ _____    |
| 46       | REFLECTIVE HYDRANT MARKERS                    | 9        | EA    | \$ _____   | \$ _____    |
| 47       | TRAFFIC SIGNAL MODIFICATION (AIRWAY DR)       | 1        | LS    | \$ _____   | \$ _____    |
| 48       | INSTALL ADVANCE DETECTOR LOOPS                | 8        | EA    | \$ _____   | \$ _____    |

**CITY OF SANTA ROSA  
UNIT PRICE SCHEDULE  
BICYCLE AND PEDESTRIAN GAP CLOSURES - PINER RD AND DUTTON AVE**

| Item No.               | Description                         | Quantity | Units | Unit Price | Total Price     |
|------------------------|-------------------------------------|----------|-------|------------|-----------------|
| 49                     | INSTALL DETECTOR HANDHOLE           | 4        | EA    | \$ _____   | \$ _____        |
| 50                     | INSTALL BICYCLE LANE DETECTOR LOOPS | 3        | EA    | \$ _____   | \$ _____        |
| 51                     | RELOCATE BACKFLOW PREVENTER         | 1        | EA    | \$ _____   | \$ _____        |
| <b>GRAND TOTAL BID</b> |                                     |          |       |            | <b>\$ _____</b> |

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

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

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

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

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

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

## LIST OF SUBCONTRACTORS

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

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

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

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





NONCOLLUSION DECLARATION  
TO BE EXECUTED BY BIDDER AND SUBMITTED WITH BID

The undersigned declares:

I am the \_\_\_\_\_ of \_\_\_\_\_, the party making the foregoing bid. The bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation. The bid is genuine and not collusive or sham. The bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid. The bidder has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or to refrain from bidding. The bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder. All statements contained in the bid are true. The bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof, to effectuate a collusive or sham bid, and has not paid, and will not pay, any person or entity for such purpose.

Any person executing this declaration on behalf of a bidder that is a corporation, partnership, joint venture, limited liability company, limited liability partnership, or any other entity, hereby represents that he or she has full power to execute, and does execute, this declaration on behalf of the bidder.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this declaration is executed on \_\_\_\_\_ [date], at \_\_\_\_\_ [city], \_\_\_\_\_ [state].

NOTE: The above Noncollusion Declaration is part of the Contract Bid. Signing this Bid on the signature portion thereof shall also constitute signature of this Noncollusion Declaration.

BID BOND AFFIDAVIT AND BIDDER'S SIGNATURE PAGE

Accompanying this bid is a guaranty in the form of (Notice: Insert the words "cash \$," "Cashier's Check," "Certified Check," or "Bidder's Bond" as the case may be):

\_\_\_\_\_

in an amount equal to at least ten percent of the total of this bid.

The undersigned further agrees that if Contractor does not execute the Contract and deliver the necessary bonds to the City within the period of time specified in this Invitation for Bids, the proceeds of the security accompanying this bid shall become the property of the City of Santa Rosa, California, and this bid and the acceptance thereof may, at the option of the City, be considered null and void.

The undersigned is licensed in accordance with an act providing for the registration of Contractors, License No. \_\_\_\_\_, Class \_\_\_\_\_, expiration date \_\_\_\_\_.

The undersigned in registered with the Department of Industrial Relations, Registration No. \_\_\_\_\_.

**IMPORTANT NOTICE:** If bidder or other interested person is a corporation, state legal name of corporation, also names of the president, secretary, treasurer, and manager of the corporation; if a partnership, state true name of partnership, also the names of all partners in the partnership; if the bidder is a sole proprietor, state the business name and the proprietor's name in full.

Secretary of State Business Entity Number: \_\_\_\_\_.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Business Address

\_\_\_\_\_

Telephone Number

I declare under penalty of perjury that the foregoing is true and correct.

BIDDER'S SIGNATURE: \_\_\_\_\_

TITLE: \_\_\_\_\_

DATE: \_\_\_\_\_

**CONTRACT**

**CITY OF SANTA ROSA**

CALIFORNIA

CONTRACT NO. C02198

BICYCLE AND PEDESTRIAN GAP CLOSURES - PINER RD AND DUTTON AVE

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 20 sheets entitled, Bicycle and Pedestrian Gap Closures - Piner Rd and Dutton Ave, File Number 2019-0015, 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: \_\_\_\_\_